

Re-thinking, re-inventing and co-inventing innovation

Elisabeth Gulbransen,
Norway Research Council, BTH

INTRO

Thank you for the possibility to speak to - and with - you here today. The topic - **rethinking innovation** - is challenging. And I want to remind us all - up front – that rethinking innovation is **not** innovation rethought. Innovation also has to be reinvented. As I see it, we are in a certain sense **between** the no longer and the not yet – as Patti Lather suggests that we designate our situation – as feminists in today's non-feminist world.

But this is also where we have the possibility **to get smart**, Patti Lather claims – because we have to learn how to ask for help. And I want to take this chance to ask you for help – on our ways **towards more sustainable futures** – which most of all entails both rethinking and reinventing as well as co-inventing innovation.

I have been involved in **rethinking innovation** for more than 15 years – both as affiliated with BTH here at Campus Karlshamn as well as in my work as a special adviser to The Research Council of Norway – working to promote what we talk about as **responsible research and innovation**, or RRI, these days. You may have come across this acronym – it is a cross-cutting theme in **Horizon 2020** – the European Union and the world's - largest research and innovation programme. In my organisation, the RCN, **we see RRI as a new paradigm for innovation policy**. As we are not only a funding organisation, but also the main policy adviser to the government on science and innovation **policy**, we have embraced the directionality that is embedded in RRI – Responsible Research and Innovation.

I will draw on experiences from these two arenas or "situations" in my intervention here today. As I have said already - there are challenges here and I think – from trying to read up on the WINNET-history – that you have valuable experiences to relate – you have contributions that can help further our struggles towards more societally responsible and sustainable innovation.

What really made me curious was reading Malin Lindberg's article with the heading: "Women's Resource Centres: A Swedish model being internationalized". To be a bit more specific; Lindberg states that:

... existing research highlights how WRCs challenge the pattern of prioritization in innovation policy and research due to the horizontally segregated labour market. They (WRCs) prove that additional actors and areas are important for creating innovation and growth, not least women and areas employing many women as the services sector.

As Lindberg constructs the storyline in her article, WRCs furthers the **Quattro Helix innovation system model**:

The conclusion that WRCs can be classified as innovation systems – but thereto (dertil) reach **beyond the limiting understanding** characterizing the concepts of innovation system, cluster and Triple Helix – calls for further development of existing theories on how innovation is promoted by joint action networks (Lindberg 2010).

And this is what I would like to know more about: How do you **do** that; how do you (manage to) invite and mobilize **across** traditional/established boundaries/ sectors, professions and disciplines? What do you do to get industry/business, regional authorities, research institutions AND civil society organisations ... to work across established boundaries **and to thrive and flourish together**? How do you coinvent?

I see this as a – if not **the** - vital ingredient in our struggles – and I hope we can talk about ways of working **across established boundaries** after my intervention.

15 years ago – at the turn of the millennium - here at BTH – as well as in Stockholm and in Brussels – we talked about the working across such boundaries as **mainstreaming** (ref boundary objects) – as a much needed **supplement** to positive or affirmative action. Our struggles were focused on **how** to make more sustainable change happen. How to promote, how to further **structural** and **cultural** transformations and (more) long term effects when it comes to gender in science, research and innovation.

So much said – as an introduction - I will go on to draw up some vital challenges in rethinking innovation – for 30-35 minutes - so as to leave some time for you to comment and us to discuss.

RETHINKING INNOVATION AT THE RCN

I do not think I have to argue about how important **rethinking innovation** is - relevant to our predicaments today – but allow me to cite a colleague in these struggles from one of the Research Council's collaborating institutions; **SPRU** – which is the *Science Policy Research Unit* at the University of Sussex in UK. I present this quote as often as I can:

"Innovation policy (is) a key arena for democratic struggle and social choice".

I have already pointed out that RCN is both a funder and a policy advisor – to the government, but also to the institutions in the research and innovation system in Norway – and here I include business and industry (private sector). This is quite unusual – and I think I need to add a few remarks relating to this assignment or mission.

RCN is what our evaluators called **a singular council**: Since January 1st 1993 we have just one research council in Norway. I will emphasize that we also are singular in another meaning; the RCN not only has a division for science and two divisions for strategic priorities, RCN also has **a division for innovation relating to research and innovation in business and industry**. Again – according to our evaluators – this is a **unique** construction. And it makes *innovation* and *innovation policy* – also in the traditional sense - vital areas for us. This responsibility for developing innovation policy – turned out to be a good starting point for quite remarkable developments these last 4-5 years – culminating in the publication of a new overall strategy – with the heading: *Research for innovation and sustainability*.

The process that the RCN has been through while evolving this new overall strategy – represents in many ways a break compared to former overall strategy-processes. This break has first of all been spurred on by some intense discussions about the council's role as a **societal actor** addressing the grand **societal challenges of our times**. In other words: **Societal innovation** has come into focus and has given directionality to the development of the research council's new **overall** strategy.

As I am sure you can imagine, this shatters received notions of innovation as it pushes innovation **from** being directed towards **productivity** and **economic growth** over to consider innovation for sustainable development and societally responsibility – which turns out to require other/new competences, skills as well as another knowledge base for policy-development.

I want to underline that working out a new main strategy is an opportunity to mark the **direction** for the coming years (period 2015-2020). The strategy singles out **sustainability** and **innovation** as guiding principles for RCN's activities in the future. RCN is through this strategy - firmly situated between the no longer and the not yet. The background (argument as well as evidence) for the **choice of direction** was described in terms like these – and I quote:

*Our livelihoods are under pressure as a result of the climate crisis, the destruction of nature and a growing demand for energy in the world". ... Greater sustainability in economic and social development, and safeguarding the planet's climate and environment, are the future big challenge in **all** areas.*

The RCN already has considerable efforts related to climate, environment and renewable energy. The task ahead is to strengthen these efforts, but also to bring out the sustainability-perspective in other priority areas. The main thrust will be on challenges related to the development of **sustainable** (or green) **businesses and industry – rethinking and reinventing innovation in this direction is the task ahead**. Texts from the drafting process motivated the rethinking in quite strong ways – I quote again:

*Research and innovation have significant power to transform society. This means that the Research Council has a responsibility for what kind of society the research will contribute to. RCN must take greater responsibility by promoting research that in the long term should be for the benefit of society. This means not only to emphasize that research should be performed in an ethical and honest manner and that equality must be safeguarded, but also that **all research council funding** must be assessed in light of their contribution to a sustainable society in the long run.*

The new vision is not presenting us with an easy task, but with an important and inspiring **figuration** - as our friend Donna Haraway would put it - . In other words, the vision presents us with a stretch goal – et **fremkast** in Norwegian - for learning and development. In the **experiments** that we have carried out so far we feel greatly helped by international developments – foremost among them the **Responsible Research and Innovation struggles** - or **RRI-struggles** for short - as furthered by one of our sister research councils; UK's

Engineering and Physical Sciences Research Council (EPSRC) as well as by the Commission – as I have already indicated – designating RRI as a cross-cutting issue in Horizon 2020.

This is to underline that there is a widespread acknowledgement at present – not only in the Research Council of Norway - but internationally - of the **directionality** that the grand societal challenges of our times provide. (You know the headings; energy, climate, poverty, health, water and food, education, ...)

Here we are grateful to the Swedes – as they – during their European Union Presidency period back in 2009 – launched the THE LUND DECLARATION calling on Europe to focus on the grand challenges of our time.

However - as it soon turned out - the complexity and the dynamics of these grand challenges – they may even be so-called **wicked** problems – invite a re-thinking as well as a re-inventing of established research and innovation policies. I think it is fair to say that the recent demand for re-thinking and re-inventing is a **reaction** - growing out of a diversity of experiments and attempts that have been going on in our research and innovation systems these last years – more explicitly than before following up on the Lund Declaration from 2009.

We have been attempting to contribute to solutions concerning the grand societal challenges, but these attempts have for the most part been conducted **without** acknowledging the possibility that we ourselves “in here” /our established research & innovation systems may be part of the problem/ - **that we ourselves and our institutions are implicated in the development** of, the production of the grand societal challenges of our times.

Now we need to pose questions like: What kind of challenge is a grand challenge? And how is the research and innovation system **positioned** in relation to them? Are the challenges only "out there" in society – or are they "in here" in our research and innovation systems - as well? This re-thinking is a daunting task – and we have only just begun. RCN will obviously need a lot of help.

Following this turn, we consider **Responsible Innovation** as a **wake-up call** to a reality where science, technology and innovation are **always already** embedded in society. **Not** encapsulated apart it – not ready to deliver **solutions** to the grand challenges of society "out there". Allow me to point back to the RCN's strategy draft: Research and innovation not only **have** significant power to transform society –*they also **already** have transformed our societies.*

This is where **Responsible Research and Innovation** comes in (with its wake-up call) and indicates that our diagnoses have been too simplistic - they have been one-dimensional, even naïve. In the RRI-experiments and discussions that I value and follow closely, the focus is being redirected towards the research and innovation system itself – its competencies and skills – **not least when it comes to diagnostic and prospective capacities**. This turn can be experienced as rather unsettling – individually (threatening our professional identities) as well as institutionally as it entails **not** respecting established divisions of labor – for example

and perhaps most unsettling: RRI is not respecting the border between research, innovation and **politics**.

Allow me also to mention – even if it may not be directly relevant to your situations: To some the RRI-wake-up call rings so loudly it may even disturb our received notion of **excellence in research**. Reference here to another EU declaration from November last year – under the Italian presidency - the **Rome Declaration on Responsible Research and Innovation in Europe**, stating – and I quote:

... excellence today is about more than ground-breaking discoveries – it includes openness, responsibility and the **co-production** of knowledge.

Such a turn from **outreach** (working to convince the public about the value of research and innovation) to **inreach** (presenting expectations about learning and development to ourselves and to the research and innovation communities) no doubt takes RCN far out of the comfort zone.

The engagement of the Engineering and Physical Sciences Research Council in developing an **RRI-policy** presenting expectations for development and learning both to themselves as well as the communities they are funding, has been a constant source of inspiration for me and my colleagues these last 4-5 years. Visits from key actors involved in developing the RRI-policy as well as the EPSRC's assistance and support regarding our own experiments with new policy designs continue to be important.

It was a geoengineering project – the so-called SPICE-project – that played a central role motivating the EPSRC's RRI-activities. Geoengineering has **translational value** and is very illuminating concerning our present predicament (situation/challenges).

Books are now being written about this collective experimentation: *Experiment Earth* by Jack Stilgoe. Films are also made. There is a very short on available on YouTube . The film is funded by EPSRC – the SPICE-project playing the lead role:

<http://wp.me/p52EQZ-R>

As partakers in research and innovations systems, we are implicated in producing the grand societal challenges. We are we are implicated in changing the terrain. We are not just bringing new understandings to the world, new maps. ICT is an excellent example of research involved in terrain changing activities. More generally speaking - **technoscientists** are very close to understanding the societal responsibilities that are raised by their activities. This was where we choose to situate our engagement for mainstreaming gender – more than 15 years ago - back at the turn of the millennium. We invested our efforts - at The Technical University of Luleå and soon also - at BTH, campus Karlshamn.

Back casting to the turn of the millennium:

RETHINKING INNOVATION AT THE TURN OF THE MILLENNIUM

For those of you who are here today and were involved in our mainstreaming struggles 15 years ago – I think it is fair to say that it is the development (or de-development) that has finally caught up with us. Our struggles back then are quite well documented in English – so I will be brief. You can find documentation in a report from a conference in Brussels back in November 2001 on GENDER AND RESEARCH – where both Lena Trojer and myself presented experiments in mainstreaming or integration that we were involved in - at the time. There are several publications in Swedish as well. Coming here yesterday I re-read one that I still think holds potential. The title was "Gender research at a faculty of technology: Challenging the politics of knowledge" – we co-produced this article back in 2006 – with Pirjo Elovaara and Christina Björkman.

In our engagements for **mainstreaming** back then, we conceptualized /understood gender equality as a **societal challenge** to be met with **societal innovation**. As I have said several times already: mainstreaming concerns structural and cultural change. Working at the level of mainstreaming back then seemed to provoke our identity as statefeminists in several ways. Statefeminism, as we had developed it in Norway, was based on a kind of contract between women's researchers and policymakers. It was expected that researchers worked up the knowledge base for delivery to the policymakers - who **then** worked out the policies.

We began to suspect that this fairly strict **division of labour** between **research and politics** **might** not be effective when mainstreaming (or integration) was chosen as strategy level. When focusing the knowledge base we were struck by how much effort had been invested in identifying flaws, biases and barriers in the research and innovation system, as well as uncovering and unveiling the deep causes of these flaws.

Such knowledge functions well as background for appealing to the state to devise and implement positive action measures to correct the flaws and combat the barriers. And of course we need this dimension of the knowledge base as well as we still need the positive action measures. That cannot be stated enough – even today.

But I must also underline that representing science and innovation as "masculine", "pale, male and exploitative of nature", "misogynist" and so on, easily invited short circuits.

If and when we want to develop strategies at the level of mainstreaming **or integration** aiming at structural and cultural transformations and long term effects, we need to focus on where we are **heading** as well as on what we want to be **emancipated from**, what we want freedom from. This turned out to be quite provocative in relation to the contract of statefeminism with its division of labour between research and politics. It also represented a paradigm shift concerning the knowledge base for developing policies.

In order to illustrate this turn, we pointed to a new report from the Commission - the ETAN-report with the title *Promoting excellence through mainstreaming gender equality* and its listing of principles of mainstreaming. Principle no. 5, visioning, was explained as gendering apparent gender neutral procedures and practices: "It involves recognising the ways in which our current systems and structures, policies and programmes, in effect, discriminate." (page 67)

Our work suggested that we needed to extend this principle to include visioning *future solutions* as well as past and present patterns of gender segregation causing discrimination. While building on the more traditional knowledge base, we seemed condemned to always running late while pointing to flaws, biases and barriers. While we should have been up front facilitating and fostering alternatives, new stories and meanings as well as developing strategies for struggling towards them.

At the same time, we noticed that we also needed to take care **not to buy into readymade solutions**. It was (and is) very easy, inadvertently, to end up being read as suggesting that bringing more women in, will meet most challenges and solve most of your troubles. When questioning what we want to be equal to, we are also invited to consider many other broad questions, besides horizontal and vertical gender segregation, confronting and troubling our research and innovation systems at present.

What would it mean to work in a mainstreamed institution? In her book *Mainstreaming Equality in the European Union* (1998) Teresa Rees had pointed out how we were stuck with mostly negative definitions of mainstreaming. To paraphrase Donna Haraway: We needed to develop performative images of mainstreaming that can be inhabited (Haraway 1997). We needed to become skilled and competent at developing of new inspiring **figurations**.

There are many big questions, relating to horizontal and vertical gender segregation, confronting our research and innovation systems. One way to broaden the ownership of equality issues, of making sense of these issues to a broader constituency, was (and is) to connect them to questions of leadership in knowledge organisations, to questions concerning accountability, responsible universities, to questions of governance, citizenship and social contact – and of course - sustainability.

Building ownership is a central tool of mainstreaming, and the knowledge base must also include competencies for opening up in order to let new voices and alternatives flourish. Readymade solutions need to be banned for this reason as well.

RRI AS IT IS EMERGING these days – 2 – 3 dimensions

If you have been exposed to the growing RRI-literature – – you may have noticed that of the RRI-dimensions now emerging from a diversity of experiments and discussions – the first one is always **anticipation**. Anticipation must be a characteristic our innovation-processes – if they are to qualify as RRI.

This is not anticipation in the meaning of forecasting or using different foresight techniques trying to predict what the future will be like. The future does not exist – but our expectations and dreams about the future **exist** and should be taken seriously – especially as they are driving developments in science, technology and innovation.

Thus it is the **quality** of the images /imaginaries of the future – it is the quality of our **figurations** - that becomes really important and decisive. The vital RRI-question spurring us on in our struggles to become more societally responsible has been – and still is;

*How can we collectively engage with and shape, **the futures** that science, technology (technoscience) and innovation are implicated in making?*

I might mention the title of my licentiate thesis from the middle nineties back in Luleå; *The reality of our fictions; notes towards accountability in technoscience*. This was in 1995 - in 2015 I would definitely have chosen the term responsibility. But the point is the same: never before in history have our fictions – our **imaginaries/ our figurations** – been more important/carried greater weight.

As you may have guessed by now: My work at the time was greatly inspired by the – among other things – historian of biology: Donna Haraway. And Haraway's "responsibility - or RRI - question" runs rather deep: *How to become responsible for what we learn how to see?*

Haraway's RRI-question concerns not only single loop learning: Are we doing things right? Or double loop: Are we doing the right things? It is all about **triple loop reflexivity**: How do we **know** that we are doing the right things right?

Reflexivity is the second dimension of RRI – as it emerges these days and as it is presented by EPSRC in their RRI-policy published late 2013.

The third dimension that seems to be generic emerging from a diversity of experiments - is **inclusion** – Back then we talked about this as "building ownership".

Still – and summing up: RRI - more easily said than done – so what do we **do** then? OR: *How to get from nice words to meaningful action* – to quote one of RCN's collaborators in our RRI-struggles; Richard Owen.

I am back at the start:

(So what do we do?) – How do we invite collaborations across established borders ... And this is what I would like to know more about: How do **you** do that; how do you (manage to) invite and mobilize **across** traditional/established boundaries/ sectors, professions and disciplines? What do you do to get industry/business, regional authorities, research institutions AND civil society organisations ... to work across established boundaries **and to thrive and flourish together?**

Is anticipation or figuration important to you in your innovation-struggles?
And what about reflexivity and inclusion?

As we in the RCN recently started to experiment with what is called **walkshop-**methodologies to promote our RRI-struggles – I will leave an image of a traversal we made two weeks ago. We had gathered people from different positions plus stakeholders in a big innovation project (this time a biotech – synthetic biology project) – and invited them out of their comfort zone (research institute, industry lab, policymakers, board members) – away from what sits in the walls of our institutions and our "cultured" environments – to discuss about the future of the projects, to develop new figurations and reflect on our own role in changing the terrain ... as well as how to include more stakeholders in the project.

In the middle of a quite unexpected waterfall that we encountered, you see the newly appointed leader of one of our strategic initiatives, Digital Life Norway - making sure that partners and stakeholders – will stay safe during the crossover.



CROSSOVER - the process of achieving success in a different field or style.

Now I want to hear from you about your experiments and learning from your crossovers .

But FIRST – as Donna Haraway would have asked: Does this make sense??