Once Upon a Time...How to tell a good energy efficiency story that 'sticks'

Sea Rotmann, SEA – Sustainable Energy Advice Ltd, 43 Moa Point Rd, 6022 Wellington, New Zealand
Barry Goodchild, Sheffield Hallam University, City Campus, Howard Street, Sheffield S1 1WB, UK
Ruth Mourik, Duneworks, Eschweilerhof 57, 5625 NN Eindhoven, The Netherlands

Abstract

The International Energy Agency's Demand Side Management Programme Task 24, called *'Closing the Loop: Behaviour Change in DSM - From Theory to Practice'* has been working with 100s of experts in over 20 countries for the last 3 years to crack the toughest of nuts - how to turn behaviour change theory into actionable practice.

We have encountered a variety of obstacles on our almost 3-year journey so far, but the biggest one was undoubtedly the silo nature and in-built areas of conflict between different players in the energy system, including the different research disciplines studying behaviour. Our largest workshop to date, kindly sponsored by the UKERC Meeting Place, was held in Oxford in September 2012. We now fondly remember it as our 'baptism by fire' - where the issues mentioned above became glaringly obvious and our proposed method of attack was the one being attacked (rightly so, and it gave us the impetus to modify and improve it). However, we also stumbled across the solution when dealing with so many experts from different disciplines and sectors, thanks to a collective desire for a more constructive way to discuss behaviour change after 1.5 days of criticism and debate. This golden circuit breaker is: the power of storytelling.

On our long journey since this workshop, we have delved deeper and deeper into how to use different ways of storytelling as a powerful tool to cut through jargon, conflict points and the different mandates of our 'Behaviour Changers' in different sectors (government, industry, research, the third sector and intermediaries). We would like to tell some of these different types of stories and how they can be used successfully to impart the important message that the energy system is after all, all about human beings.

Introduction

'Storytelling' is the construction of a desirable future based on a narrative of past events, with a plot that expresses some causal relationship.

- Barry Goodchild, based on D.E. Polkinghorne (1991)

The aim of this paper is to demonstrate the relevance of storytelling to interventions designed to change energy-using behaviours and, as part of this, to provide models of different stories based on real-life examples. Janda and Topouzi (2013) suggest that stories in relation to energy innovations can generally be classified into three genres: hero stories, learning stories and horror stories, with the fourth genre of love stories mentioned for inclusion in the future. This paper suggests that all genres of energy behaviour stories are potentially learning stories, but that their most important characteristic is not their genre, but their form, complexity and sources of information.

Storytelling is a key aspect of human nature and pervasive in our social life. As Bhalla (2013) states: *'It is in our nature to need stories. They are our earliest sciences, a kind of people-physics. Their logic is how we naturally think. They configure our biology, and how we feel, in ways long essential for our survival. Nature shaped us to be ultra-social, and hence to be sharply attentive to character and plot. We are adapted to physiologically interact with stories. They are a key way in which our ruly culture configures our nature.'* Many stories have some overarching similarities. They are: universal, help us process information, shape identity and make connections. The strength of storytelling is that the narrative itself has a stronger logic and is likely to remain in the memory longer than any constituent detail (Bruner 1991). Narratives gain their strength from their plausibility, rather than their explanatory power. Nevertheless, they are commonly labelled as true or false and may draw on science or social science.

The emphasis here is on *persuasive storytelling* (Throgmorton 1991: 1996) or storytelling for planning and policymaking (van Hulst 2012) where the aim is to use stories to improve the policymaking process and to communicate innovative policies and programmes to the public.

The advocacy of storytelling is itself best undertaken through telling a story, that of the International Energy Agency Demand Side Management Task 24 on Behaviour Change. There are two main sections: The first deals with the use of storytelling as dissemination and translation methodology within the deliberations of this group. The second provides a classification of stories with specific examples taken from Task 24.

Why storytelling?

The Task 24 story

This Task, called *Closing the Loop: Behaviour Change in DSM - From Theory to Practice* was created by the International Energy Agency's Demand Side Management Implementing Agreement (www.ieadsm.org) in early 2012. It was quite a special Task, as it was the first one within the IEA family that tackled human energy-using behaviour directly; it was using very creative (and for this technocratic institution, rather unusual) approaches including social networking, films, cartoons and Pecha Kuchas; and it was all about open innovation and shared learning, creating a large expert platform (our 'smart brain grid') around the world.

One of our very first and also our largest workshop to date, kindly sponsored by the UKERC Meeting Place, was held in Oxford in September 2012[1]. We now fondly remember it as our 'baptism by fire' - where it became glaringly obvious that our highly ambitious international project, with its difficult topic (changing energy-using behaviours) and its highly heterogenous target audience (so-called 'Behaviour Changers' in industry, government, research, intermediaries and the third sector, see below) was not going to be an easy task. The workshop was attended by almost 70 of the UK's top behaviour change researchers and experts from industry, government and the third sector from around the world. Within minutes of starting, we ended up getting into arguments about definitions ("What exactly is Demand Side Management (DSM)?" "What is (DSM) behaviour anyway?" "Is behaviour the right focus for this Task?" etc) and our proposed method of attack was the one being attacked.

---

[1] Watch a professional short film of the workshop here: http://youtu.be/P6A_LlE7-qM

The tone of the workshop was highly critical, rather aggressive to begin with and a lot more difficult than either of us two Operating Agents (one of whom comes from the natural sciences which seem to utilise a somewhat less vigorously argumentative approach than the social sciences) had envisaged. Many important issues were resolved that ultimately steered the Task into a much more successful direction (e.g. by carefully developing definitions for the wide scope befitting Task 24, or by using models of understanding behaviour and theories of change based on a widely regarded knowledge review (Darnton, 2008) but then describing them with actual real- life case studies collected for Task 24).

Most importantly, thanks to an impassioned plea of one workshop attendee from the third (community) sector, and a collective desire for a more constructive way to discuss behaviour change after 1.5 days of criticism and debate, we also stumbled across the solution to dealing with so many experts from different disciplines and sectors. This golden circuit breaker that made us end the last half day of the workshop in harmony and with great energy and enthusiasm is: the power of storytelling.

Storytelling as methodology and translation tool between theory and practice in Task 24 emerged therefore from discussions (largely) amongst behaviour change researchers within the IEA DSM Expert Network. However, storytelling is likely to emerge in any case in the context of innovative energy policies. Throgmorton (1996, 33), for example, discusses the emergence of storytelling in a comparison of old-fashioned top-down energy planning where a monopoly supplier is able to determine policy without challenge and a situation where energy suppliers have to negotiate and justify price rises and where, in addition, alternative visions of the future coexist with one another, including visions of decentralised energy production.

Storytelling could therefore also be identified as a response to a situation characterised by an appreciation of lack of certainties, by the existence of multiple perspectives through the interaction of multiple types of actors and, consequently, critiques and by the appreciation that any single solution or 'silver bullet' to tackle problems as and when they arise is absent. The complex challenge of achieving behaviour change in energy consumption has exactly these characteristics.

Know thy audience!

Task 24, more than most other IEA DSM Tasks, has an incredibly wide target audience and a large number of experts from many different disciplines and sectors. As a consequence, the above mentioned existence of multiple perspectives and as many stakeholders is very much present in this Task. For the purpose of practicality we segment our target audience of so-called 'Behaviour Changers' into 5 sectors: Government ('the Decisionmaker'), Industry ('the Provider'), Research ('the Expert'), Intermediaries ('the Doers') and the Third Sector ('the Conscience'). We also acknowledge the huge importance other Behaviour Changers outside the direct energy system play ('the Media', 'the Investor', 'Family & Friends' and 'Other Behaviour Changers'). A diagram, aimed at depicting the story of these Behaviour Changers and their relationships with one another and the energy end user can be seen in Figure 1.
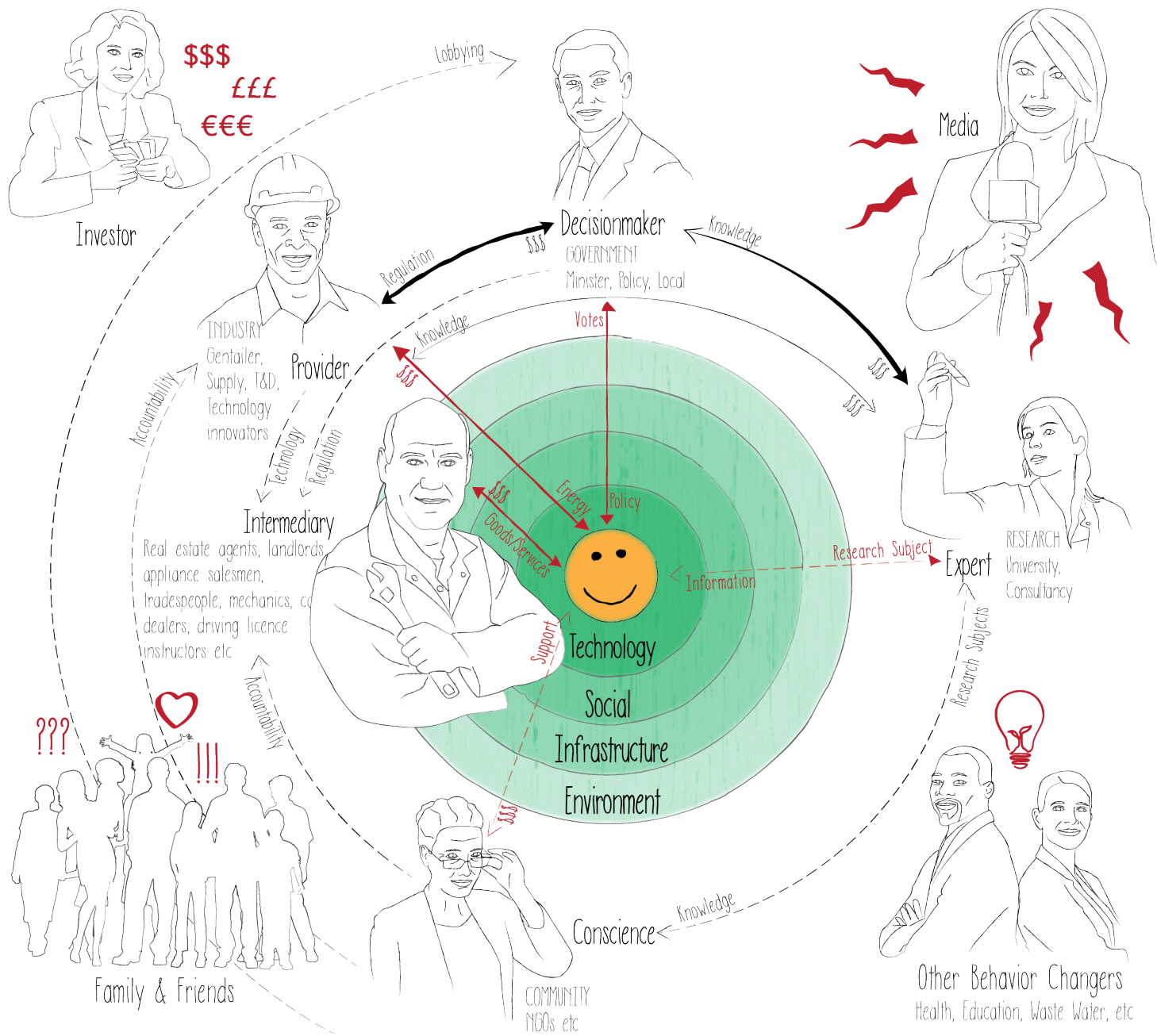
Figure 2. The Task 24 Behaviour Changers model (watch this [video](#) for explanation)

Each one of these Behaviour Changer segments has a lot of power and influence, but each one also faces certain uncertainties and restrictions due to their specific mandates and stakeholders. Each one has the task to tell a different, important story. Below, we discuss some stereotypes of these Behaviour Changers to highlight their different stories. For example, *the Decisionmaker* (policymakers on all levels of government) has the power to change legislation, design (national) policy and they often fund large DSM programmes or projects (including research) with taxpayer money. That also means that they are beholden to their stakeholders (first and foremost their Minister/s, then the political party/ies currently in power, then the taxpayers), which may have different drivers (e.g. not to turn off voters) or timescales (e.g. short election cycles) than a policymaker needs in order to create long-term, embedded change. Their 'story' often gets attacked by other sectors as 'making the right decisions for the wrong reasons', largely due to their work being highly politicised.

The Experts, (researchers, and consultants) have the power of knowledge and are generally looked upon for their expertise, to develop new ways, technologies and theories of how to address demand side management and are often asked to evaluate current DSM programmes. On the other hand, their main mandate is to publish academic, peer- reviewed papers which are not necessarily meant to be user-friendly and actionable in practice, although increasingly this group of Behaviour Changers does invest in action research. In general, they are very precise in their focus, their disciplinary jargon and analysis, and the audience is often a small sector of academics or people in that specific discipline or with similar narrow interest. They are often accused of 'sitting in an ivory tower' where research takes a lot of time and questions are seldom answered with direct, simple yes or no answers or easy, practical advice for e.g. policymakers.

What we found when bringing these very different Behaviour Changers together, is that there is often a lot of misunderstanding, miscommunication and unease about the 'others'. It is quite easy for an academic to state that 'policymakers just need to create regulation' without a deeper understanding of how politically difficult or self- defeating it can be to do so. Or industry can complain about researchers sitting in their 'ivory towers' and not doing more to make their knowledge useful in the 'real world' without understanding that the point of academic research is to be very precise and careful in their statement of facts. Everyone likes to hate the people who make money from selling energy *('the Provider')*, but that is their primary mandate to their shareholders and they often face a direct, in-built systemic conflict between energy conservation and making profits and would first need to change their core business in order to change this story (which is indeed happening in reaction to the felt need to contribute more to conservation).

The potentially most important sectors - the middle person or *'the Intermediary'* who actually goes into peoples' homes, sells people cars, trains them how to drive etc. and the community *'the Conscience'* who try hard to get bottom-up engagement with the three top Behaviour Changer layers in order to ensure social and environmental impacts are minimised - are often forgotten or at least not taken account of when designing big DSM programmes, policies or pilots.

When experimenting with storytelling as a methodology in Task 24, we found that when each sector gets to tell their unique story in a very literal storytelling format and listen to the others' stories in a trusted environment, it becomes easier to overcome silos and understand one another and start looking for common ground. This may also mean to acknowledge areas of systemic, in-built conflict where it is imperative to find other means (or other Behaviour Changers) to overcome them. A clear result of such storytelling experimenting was the acknowledgment that every Behaviour Changer sector has a very important piece of the puzzle but not one can finish the whole picture without the involvement and engagement of the other sectors. To further learn how this puzzle can be resolved, our Task 24 extension (starting March 2015 for 3 years) will undertake action research with Behaviour Changers from all sectors, on specific topics of interest (for example, how to overcome the *Principal Agent* issues to get landlords taking up insulation subsidies) in the participating countries.

Who is telling the story?

Task 24 thus uses storytelling instrumentally in order to bring these sectors together, and to tell their and their interventions' stories. In this section we will demonstrate in more detail how we experimented with storytelling.

So far, we have mainly collected different stories and case studies and analysed them (for example, in our 'Monster' report (Mourik and Rotmann, 2013) and Wiki (www.ieadsmtask24wiki.info). We have also created a little storybook teaser ('The Little Monster'[2]) and a film where our Task 24 experts tell their own energy stories, 'sins' and solutions[3]. We also have an animated story of one of our industry sector experts[4] and have collected sector- and country stories from our participating countries[5]. When analysing the 'Monster report', we have also attempted to re-tell the stories of the different models of understanding from the perspective of the end users, whose behaviours were meant to change according to the interventions based on these models (see below)[6].

In addition, Task 24 ran a very successful workshop called "Storytelling in DSM" in Wellington, before our 43rd IEA DSM Executive Committee meeting on March 17, 2014. All invited speakers from Government, Industry, Research, Intermediaries and the Community really stepped up to the plate and told some wonderful stories with a 'Once Upon a Time' story spine (see example in Fig 4 below). We had *horror, love, learning* and *hero storie*s. We covered the genres of *Science Fiction, Fantasy, Fairytales, Political Thriller, Western* and *Sports*. We had a Treasury official channel Vesper Lynd, the Treasury Bond girl and a Stormtrooper/Han Solo present on the future of transport from NZs largest fuel retailer. Most importantly, it was a lot of fun, highly memorable and everyone wrote their own DSM story, based on our 'story spine', but potentially the most important outcome was a truly constructive discussion with a clear focus on collaborative and social learning. An important lesson is therefore not to shy away from more unusual formats, like storytelling, even in very 'serious' settings such as international energy meetings. People (including policymakers, researchers and engineers) are a lot more open to more creative ways of presenting facts, statistics and data than we might think (probably as we naturally turn all facts into narratives in order to remember them, anyway). The presentations can all be viewed on the Task 24 youtube channel[7].

Another lesson learnt is that even though Task 24 is the channel through which all these different stories are told, it is important to let the storytellers' own voice be heard. We provide frameworks in which to tell stories (for example, the *fairy tale story spine* or *Pecha Kuchas* (www.pecha-kucha.org) to tell country stories) or prompts in e.g. the Energy Experts' interviews. Most of our experts ended up writing their own case studies as fairy tales and in our Wellington storytelling workshop each expert presented their intervention as a story where only the genre was provided. We have one expert who is a brilliant satirist (Juan Pablo Garçia from Leantricity), who provided a lot of our case studies to us in cartoon format, as well as helping us re-tell the story of the Energy System through the 'human' lens (Fig. 2). In

---

[2] https://www.dropbox.com/s/bikivxctvkku4l8/The%20Monster%20storybook.pdf?dl=0
[3] http://youtu.be/wbe83S8FfO0
[4] http://www.leantricity.es/2014/03/04/the-man-with-the-hammer-joke-and-energy-efficiency-projects/
[5] E.g. see South Africa's country story told as a Western: http://youtu.be/yC-yM2ELuVw?list=PLoZ9-YO7tGnoDbnOLmu-cLGC9geztJ0F9
[6] See examples in this Task 24 DSM University webinar: http://www.leonardo-academy.org/mod/page/view.php?id=7240
[7] https://www.youtube.com/playlist?list=PLoZ9-YO7tGnoDbnOLmu-cLGC9geztJ0F9

addition, our entire Oxford workshop was not only professionally filmed, but also told in cartoons by an artist who was not a topic expert.
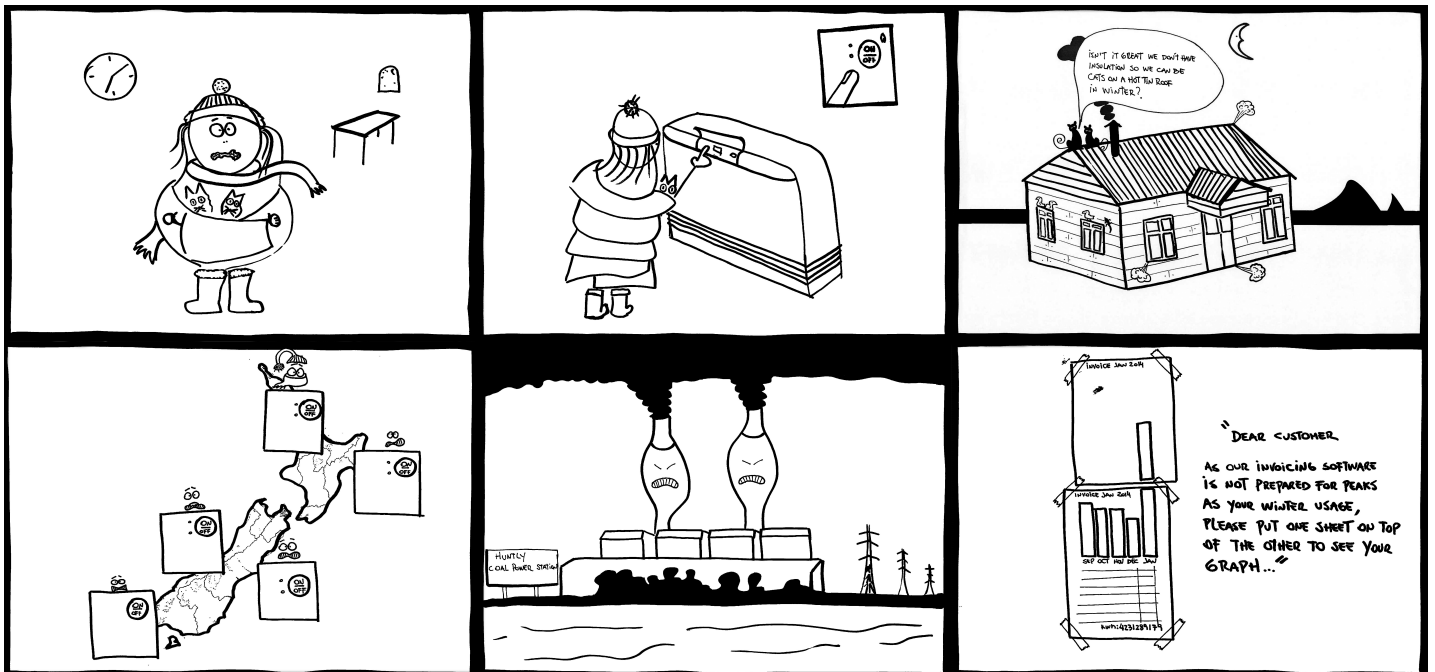

Figure 2. The Energy System as told through the 'human' lens ("Sea's New Zealand energy story"). To hear the story being told by Sea, please watch this video

Forms of storytelling

It is not enough, however, to argue for storytelling per se. As mentioned above, a format is needed that is used by all, and which is thus a neutral ground. The identification of criteria of what makes 'good' stories was therefore another important step in Task 24. Storytelling for policymaking and for the public is a skill and an art. Most probably, the ability to tell a good story is a rather rare skill amongst researchers and government officials. This is largely due to the fact that in either sector the main form of communication discourages pithy, eloquence or drama, all important ingredients when telling a good story. It is obviously not feasible to suggest that policymakers should tell fairy tales to their Ministers or write policies in a more dramatic fashion. It is, however, possible to indicate various approaches or 'models' of storytelling, which can help convey messages and translate between different sectors and types of audience. In order of complexity of the material converted, these are as follows:

The fairy tale

Typically prefixed for example by 'Once Upon a Time' and following a type of story spine as used to describe all our 'Monster' report case studies (see 'the NZ Post Hero Story', below):

- **Once upon a time**… there was a great, big organisation that was delivering mail and parcels all over New Zealand, called New Zealand Post.
- **Every day**… 100s of courier drivers drove 13million kms per year, every year to deliver parcels to grateful Kiwis.
- **But, one day**… NZ Post realised that it was spending way too much money on fuel and that its drivers weren't being as efficient and safe as they could be.
- **Because of that**…they very cleverly used their most respected contractors to become trainers of the other drivers and made it all about being good business sense.

- **So, finally**… they took the drivers on test drives and showed them that they could actually save between 5-40% of their fuel just by changing simple driving behaviours, like gear shifting and braking.
- **And, ever since then**… there was an overall, ongoing reduction in fuel consumption of 5% among the drivers that have taken part in the programme. **The End.**

The reason why we decided to describe all of our (almost 60 and counting) case studies as fairy tales was to aid recall for readers who have to trudge through 160+ pages of rather dense social science analysis. In addition, our case studies came from all over the world and even the titles were often rather difficult to recall and differentiate if the project names were used in their native language (e.g. Norway's *Myhrenenga Housing Retrofits* or Austria's *Die Energiejagd*). So we provided short, pithy fairy tales that outline clearly the setting, research challenge, type of intervention that was used to address the problem, any additional issues and learnings to overcome, evaluation of success and further research (if needed). The morale of a story (or case study) should thus have become already very clear before delving into the factual and scientific detail and analysis of it. We thus see fairy tales as ways of a 'short-cut' to aid recall and quickly 'get the picture'.

Another example of a Task 24 fairy tale was published in the largest energy efficiency and industry magazine, on the Finnfjord aluminium smelter's challenging goal to become the most sustainable ferro-silicon smelter in the world[8]. Together with our New Zealand National Expert, we even brought the storytelling concept into a Royal Society of New Zealand emerging issues paper on our future green economy[9]. Our NZ Expert's *Energy Cultures* research project is also told as an animated 'fairy tale' story on its website[10]. Several Task 24 experts have since used the story spine format to tell their stories, in both professional and personal settings. We have used the fairy tale story spine concept successfully in workshops all over the world, for example, to tell Sweden's current energy story, we retold Switzerland's energy story as learning, love or horror stories and NZ experts' own DSM stories.

The fairy tale story spine sets the context and is particularly good at distinguishing the past from the present, the future from the present, or the distant from the close. It is very memorable and 'pre-digests' facts and the overall morale in a format we all know well from childhood. It is adaptable to all genres - the hero story, the horror story, the learning story and the love story. It seems particularly popular in accounts of technological change where the reader is invited to consider a future, better world. Simple stories can become oversimplified, however. The language of 'Once Upon a Time' can, in any case, also be vulnerable to parody in public discussions.

The drama

The drama provides a means of adding additional complexity and a more rounded plot than the fairy tale. Throgmorton (1992) suggests that dramatic storytelling (in urban planning) should follow a few simple rules:

- Build conflict, crisis and resolution into their narratives
- Build characters into the narrative, who are interesting and believable, and whom readers care about
- Place the action in its rightful context, i.e. acknowledging the settings in which those characters come into conflict

---

[8] http://digital.ien.eu/digitalMagazine?issue_id=434&hash= pages 18-19
[9] http://royalsociety.org.nz/expert-advice/information-papers/yr2014/greeneconomy/
[10] https://www.youtube.com/watch?v=Xr4JBNOyInI&feature=youtu.be

- Adopt an appropriate point of view. To do so they (the authors) have to ask, both for themselves and their characters, who is standing where to watch the scene?
- Who is speaking? To whom? In what form?
- Use the imagery and rhythm of the language to express a preferred attitude toward the situation and its characters.

The dramatic stories are where heroes and villains should be located. They can thus also be compared to Janda & Topouzi's (2013) hero and horror stories. These authors describe the energy hero story as follows (p231): *'The energy hero story has some recognisable elements of the traditional structure. Chief among them is that most of the heroic acts occur in the special world of the future, or the imaginary world of technical potential. […] Whether it is a silver bullet (one technology) or a silver buckshot (a combination of things), energy-efficient technologies and strategies often promise to be the magic elixir that will save us from climate change.'* Horror stories are described as follows (p233): *'It is a story of failure, of technologies that did not perform as promised. The fear is not in the central character, the fear is in the teller. There are fears of a fallen hero, fears of project requirements unsatisfied.'* In Janda & Topouzi (2013), a learning story is described as follows (p232): *'The learning story in energy policy lies in between the technical potential and what is achieved in practice. The learning story is what commissioning tells us, and what post occupancy evaluation reveals. The learning story can be difficult and contentious. It is less soothing than the hero story, as it asks for participation, reflection, and does not provide a single truth.'*

Task 24 has found a few hero stories, where a combination of tools and wide collaboration and shared learning with other Behaviour Changers have led to very successful interventions (Mourik and Rotmann, 2013; see also Figure 4). However, a lot of the hero stories also had very distinct learning elements.

When things go right, or oh so wrong (New Zealand vs Australia)

Probably the best example of all three types of stories (and even a fourth, namely the *love story*) are the *Warm Up New Zealand: Heat Smart*[11] insulation subsidy programme, and its Australian counterpart, the *Energy Efficient Homes Package*[12] (another good example is the Swedish *Sustainable Jarvä*[13] story, which is not detailed here). The two national building retrofit interventions were very similar, both comprised a national insulation subsidy package, based on the neoclassical economic model of understanding behaviour as utility-maximising rational actors having a (information and incentive) deficit which stopped them from insulating their homes without a government subsidy. The New Zealand programme was based on a Green Party proposal but implemented by the newly-elected right-wing National Government in 2008, in Australia it was based on a comprehensive and ambitious left-wing Labor Party response package to climate change. Each programme was based on the premise that historical backgrounds and social and cultural norms in both countries have led to severe issues of under-insulating properties, and that the wider public did not even recognise the value in (for most Europeans) obvious energy efficiency measures such as insulation and double glazing. One was a huge success, which arguably turned into a love story, and the other an unmitigated disaster and one of the greatest energy efficiency horror stories ever.

---

[11] http://www.eeca.govt.nz/eeca-programmes-and-funding/programmes/homes/insulation
[12] http://en.wikipedia.org/wiki/Energy_Efficient_Homes_Package
[13] To read the fairy tale, see here: http://www.ieadsmtask24wiki.info/wiki/Sustainable_J%C3%A4rva

Interestingly, the two stories do not follow the (in our current political climate) seemingly obvious hero vs villain tales of the left vs the right wing. Even though the NZ Energy Minister at the time was arguably a climate sceptic and not prone to overt expressions of humanity or social welfare and the Australian Minister in charge of the programme was the much-loved environmental activist and singer of the band Midnight Oil, Peter Garrett, it was the Australian scheme that ended up in disaster.

One of the things the *Warm Up New Zealand* programme got right (particularly in contrast to the hugely problematic Australian counterpart), was to create a very solid tendering and insulation provider training and auditing regime. This was a way to avoid the rampant fraud that the 'cowboy' installers conducted in Australia, which tragically also led to 4 deaths and over 200 houses which burnt down due to improper installation of insulation[14]. It also worked to install a level of trust in homeowners, which is witnessed by the successful uptake of the programme (more than a third of the NZ housing stock has been insulated to date under this scheme and its successor) and the positive media coverage of the programme, as well as the fact that politicians from all colours like to present themselves as strong supporters (and instigators) of the programme.

Where the New Zealand programme arguably turns into a love story[15], is the fact that the programme evaluation (by public health researchers) clearly showed that the main benefits of the programme were not energy or financial savings, job and market creation or a reduction in greenhouse gases (all positive side-effects) but massive improvements in health to the tune of $5 of macro-economic health benefits for every 1$ spent on the programme. The programme's success in terms of the simple metric of number of homes insulated was already good, but its actual success lay in the gained health benefits, decreased sick leave from work and school (thus increased productivity), decreased respiratory problems and decreased costs related GP visits/improvement in health. There were even studies that showed decreased numbers of domestic violence incidents and an improvement in general mental health - not something one would expect to evaluate for when designing an energy efficiency subsidy!

Dramatic stories offer a way of generating and maintaining the interest of readers and listeners, and indeed the wider public. They are well suited to cases where technological innovations become embroiled in politics or where the policymaking process takes precedent over technological innovation. An interesting side anecdote from this story is that the New Zealand person in charge of the insulation programme apparently had told Peter Garrett on a visit to New Zealand that it was extremely important to make sure that the tendering system worked and that installers were vetted carefully. The response from the Australian Climate Change Minister allegedly was the very typical response "Nah, she'll be right, mate." The rest is history. If this story is indeed true is difficult to ascertain and it is difficult to know if, had this person instead told a horror story of having already encountered issues with fraudulent providers and dangerous installations (which they had), the impact may have been stronger and possibly made the Australians look into roll-out procedures more carefully. We are particularly drawn to dramatic human interest stories, and talking about installers accidentally electrocuting themselves or houses burning to the ground, has greater impact on our emotions than discussing the intricacies of tender procedures.

[14] http://epress.anu.edu.au/wp-content/uploads/2012/08/ch082.pdf
[15] Presentation: http://youtu.be/w-lI5aI9Fas? list=PLoZ9-YO7tGnoDbnOLmu-cLGC9geztJ0F9

However, the analogy between policy analysis, policy evaluation and drama is potentially misleading, if taken too far. Persuasive storytelling is an exercise in building consensus (Throgmorton 2003). Yet consensus building can itself go too far, drowning out dissenting views. Likewise, the references to drama can go too far in the direction of a subjective approach to the production of knowledge and can be used as a political tool (as the Australian story clearly showed, in the way it is still unfolding). It is worthwhile remembering the ironic newspaper saying in this context: 'Do not let an awkward fact get in the way of a good story.'

History

History provides a third model (after fairy stories and drama) of storytelling. History, above all social and economic histories, involves a mixture of statistical and subjective material, taken from the statements of informed actors. It also commonly involves the completion and synthesis of different viewpoints and different stories into an account that unfolds over time and that, doing so, recognises the existence of specific events and tendencies, including statistical data. Like policymaking, therefore, history involves a mixture of subjective and objective information, including the consequences, if any of an event.

The parallels between policymaking stories and history are not exact. Historians argue between themselves whether history can and should provide lessons. Elton ([1991] 2004, 22) suggests, for example, that the study of history is 'to free minds from the bondages that the makers of laws are forever trying to impose upon us' and that this necessarily means breaking from views of history as providing distinct lessons. Elton's objection to storytelling as learning is only applicable if the story amounts to an end point, a final lesson. The objection disappears if we assert that storytelling is a start of a learning process, itself triggering further learning and analysis, and as such a potentially powerful tool to achieve learning between hitherto siloed sectors.

Inside the eco-home: a contemporary history

An account of the recent experience of eco-homes in England, funded by the UK Economic and Social research Council and published as Goodchild et al (2014) provides an example of storytelling as an exercise in contemporary social history. Discussions of low energy housing have historically been routinely concerned with technology rather than use and, additionally with regulation and costs for developers. Where low energy homes have been provided, they have been generally promoted as success stories, as an example of how selected social housing developers and to some extent private developers were pioneering new techniques that would soon become universal.

The aim of the research was to use video as a means whereby the users of housing could tell their own story. Once started, the study revealed a differentiated picture of progress and failure (using a historical account) and of all shades in between. In addition, a division emerged between the tenants and the owner-occupiers who had bought their homes. The owner occupiers, who had moved to their new homes, were almost unanimous in liking their new homes (something akin to the saying that the 'victors write the history'). However, the energy-saving features were generally an optional extra that, other than for a few green consumers, was desirable owing to its potential for saving energy bills and this advantage had to be balanced against other features. The renters, in contrast, were divided, with some feeling they were 'guinea pigs' in a poorly designed experiment. In both rented and owner-occupied homes, the complexity of the energy saving and renewable energy devices was an issue. A demand for low energy eco-homes existed, but only so long as such dwellings fully met social expectations for good quality with all the implications that this involves. Only by letting the

residents, who often came from lower socio-economic backgrounds tell their (hi)stories, did these issues become noticed on a wider level thus enabling learnings for future developments of such kind.

The main limitation of history is to deny the simplicity and sense of drama that Throgmorton and others would claim is the main advantage of storytelling. The main strength is methodological. History deals with real events, rather than with a hypothetical future as imagined, say in a modelling exercise. In dealing with real events, moreover, studies of the historical method have drawn attention to the way in which the social position of the storyteller, the origins and quality of the information sources influence the account (Alvesson and Sköldberg 2008). For example, is there any possible source of bias or exaggeration in what is said? Does the informant or the source reveal a voice that is otherwise seldom heard? How close is the source to the relevant problem or action? Stories of energy innovation can easily focus on technology and little else (see Janda & Topouzi's (2013) description of hero stories). The methodology of history returns the analysis to the user, including low income users whose views might otherwise be neglected.

(Shared) learning stories

Some of the most powerful stories in Task 24 were found to be stories of (shared) learning. An effective way to report on the learning process is to focus explicitly on these learning stories which are in essence a process of co- design and dialogue and retrace replicable elements in these learning stories to allow for a more successful delivery of comprehensive energy efficiency DSM interventions (Moezzi and Janda 2014). Storytelling can also be an effective dialogue and evaluation tool, it allows for multiple perspectives and creates a deeper appreciation for the fact that there is not one truth (Mourik et al, 2015). It allows to move beyond the presented and pretended objectivity of a more quantitative approach. It not only allows for different morales to be discussed, it almost demands it.

As Mourik et al (2015) say in their Task 24 Deliverable 3A on how to evaluate behaviour change programmes: *'We are all aware of the almost inherited right of stories to have multiple interpretations depending on the reader, so instead of either accepting or opposing a story, readers are encouraged to try to understand a story and its multiple interpretations. Through the telling of stories the listeners and presenters learn, not only about negative or unintended consequences. But they also learn to experience bad experiences as part of learning and turning points in a story, with the aim to do better next time. This approach could be transformational but only if the actors are willing to participate in the process.*

Analysing and evaluating the different stories could be undertaken by means of realist synthesis as developed by Pawson et al. (2005): "Realist review is a relatively new strategy for synthesising research, which has an explanatory rather than judgemental focus. Specifically, it seeks to 'unpack the mechanism' of how complex programmes work (or why they fail) in particular contexts and settings" (Pawson, et al. 2005). Pawson's approach allows for history and place, i.e. path dependency to be taken into account.'

One important way how Task 24 used learning stories was in the attempt to provide a 'mirror' for Behaviour Changers with the lens being the model of understanding behaviour they (implicitly or explicitly) used in their intervention design (Mourik & Rotmann, 2013).

Conclusions

Storytelling is inevitable in a context where policy or technological innovation goes into a new direction or involves a degree of political opposition. However, the very circumstances that produce storytelling also mean that the story can never be finished. Storytelling is a means of coping with uncertainty, with multiple perspectives and the absence of any single solution or 'silver bullet' to tackle problems as and when they arise. Equally, these same uncertainties mean that the lessons of a story cannot be final. Each story is likely to trigger a further round of story and, if framed correctly and with appropriate evidence, a further round of learning.

Some additional criteria of a convincing story may be identified:

- Visual imagery and not just the imagery of language is important - in catching the attention of an audience, illustrating themes, offering solutions and heightening the emotional impact of a story. O'Neill (2013) suggests that visual imagery is limited in narratives of climate change and that this is a weakness of these narratives. Further, apparently extreme stories promising ambitious achievements or warning against severe consequences are less likely to be accepted as credible, according to public opinion pollsters[16]. Much better if the narrative can be presented as a learning story that provides a narrative of ordinary people struggling with real problems, involving a combination of technical and social analysis and commonly open to ambiguous or multiple policy interpretations. The cartoons used in Task 24 go some way to provide such learnings in very powerful visual imagery.

- Does the informant or the source reveal a voice that is otherwise seldom heard? The most excluded social groups often fail to have their voice adequately represented owing to lack of knowledge, poor English language skills or other factors. Showcasing the love story of the huge health improvements (especially in the most vulnerable) in the New Zealand subsidy programme is an example of telling such a story[15].

- How close is the source to the relevant problem or action? Is the interpretation given by one informant supported by others or by other evidence? To provide a simple example, a policy to combat climate change might benefit from references to flooding. Those references would, in turn, benefit from the testimony of those directly affected, showing the social and economic impact. However, the testimony would amount to no more than an anecdote in the absence of statistics showing the changing incidence of flooding over time. If the Task 24 'Monster' report was only a collection of fairy tales it would be no more than a quirky aberration, with limited use to Behaviour Changers in research, industry or government. The fact that the stories are underpinned by 'proper' social science analysis, references and data from case studies, is what makes it such a powerful document.

- Can the stories presented by storytellers be influenced by other, previously elaborated stories? Storytellers do not necessarily come up with something totally new; rather, they comment, build or elaborate on the stories that are already circulating in either local communities or the media (Alvesson and Sköldberg 2008, 115, van Hulst 2012). Stories that reflect personal experience and avoid media clichés merit the most consideration.

There are limits, however, to reducing storytelling to a formula. The subtlety of plots and the potential range and complexity of situations is too great. Further, the integration of quantitative information into the story does not necessarily make for a good read or a good drama, even if necessary for the sake of completeness and justification. One take-home message from this paper is to not be afraid to play with different formats of storytelling. This includes listening to, and understanding your audience and their stories (including how their personal and professional experiences and mandates may 'filter' stories), letting them tell their own stories in their own ways and being creative. The beauty of the fairy tale story spine is that its format immediately changes the language of the writer.

Storytelling is not really a device for policymaking in the conventional sense of an analytical technique and, as applied to public policy, is not a device that exists independently of more

---

[16] Presentation given by Matt Evans and Tim Silman (Ipsos MORI) at at a Liverpool University Syposium 'Keeping the Flame Alive? Climate Change, the Media and the Public' held 30 May 2014.

technical forms of analysis. It is a device for communicating a policy to a public or, in the case of history, a device to let the reader make up their own minds and reflect on a complex pattern of events. Storytelling comes after the technical analysis has been completed. To this extent, it is unlikely that storytelling alone could dramatically change the direction of a policy (though see the Australian horror story anecdote above). In any case, and this is why drama and histories are relevant (and not just fairy stories), different parties articulate different stories, according to their interests and position. However, this very process of communication has its own benefits in clarifying what is said, identifying key issues and tuning a policy into the language and cultural assumptions of the context in which scientists and policymakers work. Storytelling is also an admission that technical analysis alone does not necessarily persuade anyone of the correctness of a particular point of view and that sometimes poets and novelists can help articulate a message.

References

Alvesson M. and Sköldberg K. (2008). Reflexive Methodology, London, Sage.

Bhalla, J. (2013). 'It Is in Our Nature to Need Stories'. Scientific American Guest Blog: http:// blogs.scientificamerican.com/guest-blog/2013/05/08/it-is-in-our-nature-to-need-stories/

Bruner, J. (1991). 'The narrative construction of reality' Critical inquiry, 18:1 1-21.

Darnton, Andrew (2008). GSR Behaviour Change Knowledge Review. Reference Report: An overview of behavioural models and their uses. 83pp.

Elton, G. (2004). 'Return to Essentials' in Jenkins, K. and Mumslow, A. (eds.) The Nature of History Reader, Routledge, London, 21-23)

Goodchild. B., O'Flaherty, F and Ambrose, A. (2014). 'Inside the eco-home: using video to understand the implications of innovative housing' Housing, Theory and Society 31:3, 334-352

Janda, K., & Topouzi, M. (2013). 'Closing the loop: Using hero stories and learning stories to remake energy policy'. Proceedings of ECEEE Summer Study, European Council for an Energy-Efficient Economy, Presqu'île de Giens, France.

Moezzi, M., & Janda, K. B. (2014). From "if only" to "social potential" in schemes to reduce building energy use. Energy Research & Social Science, 30-40.

Mourik, R. & Rotmann, S. (2013). Most of the Time what we do is what we do most of the time. And sometimes we do something new. Analysis of Case-studies IEA DSM Task 24 Closing the Loop – Behaviour Change in DSM: from Theory to Practice. Deliverable 2 for IEA Implementing Agreement DSM Task 24. 161pp.

Mourik, R., van Summeren L.F.M., S. Rotmann, S. Breukers. (2015). Did you behave as we designed you to? Deliverable 3A, Monitoring and evaluating behavioural change in Demand Side Management: A Positioning paper. IEA DSM Task 24. 42pp.

O'Neill, S. J. (2013). 'Image matters: Climate change imagery in US, UK and Australian newspapers' Geoforum, 49, 10-19.

Pawson, R., Greenhalgh, T., Harvey, G., Walshe, K. (2005). Realist review-a new method of systematic review designed for complex policy interventions. Journal of Health Serv Res Policy. 2005 Jul;10 Suppl 1:21-34.

Polkinghorne, D.E. (1991). Narrative and Self-Concept. Journal of Narrative and Life History 1(2&3): 135-153

Throgmorton, J.A. (1992). 'Planning as persuasive storytelling about the future: Negotiating an electric power rate settlement in Illinois', Journal of Planning Education and Research, 12:1, 17–31

Throgmorton, J.A. (1996) 'Planning as persuasive storytelling: The rhetorical construction of Chicago's electric future' University of Chicago Press.

Throgmorton, J.A. (2003) Book Reviews Planning Theory, 2:1, 61-67.

van Hulst, M. (2012). 'Storytelling, a model of and a model for planning' Planning Theory 11:3 299–318