

Policy Mythology

portfolio





I am a form-agnostic storyteller.

I work with scientists, policy makers, and activists to help them tell emotional character-based stories for positive change.



The stories I tell are driven by science, both in content and design. I tell these stories wherever I can find opportunity, meaning my work covers lots of ground. When I'm not hosting workshops or conducting research, I'm creating science communication in three different ways.

WRITTEN WORD

VISUAL DESIGNS

DIGITAL MEDIA

WRITTEN WORD

I often call what I write poetry. Not in the sense that what I write always rhymes, but that often I try to say as much **between the lines**, as within them. These underlying feelings propel the audience forward into the story.

JOURNALISM

Excerpts from my most recent publications as part of my paid and volunteer work.

TU Delft Stories

Growing into an Energy Transition

Some decisions are so large, that no one person or model could begin to capture the entire picture at once. Associate professor Igor Nickolic researches how to work around this reality by capturing multi-perspectives in several models at once to understand the hidden systems behind our largest energy transition projects.

Igor Nickolic's office overflows with trinkets, oddities and weekend craft projects. A collection of assorted relics of a hidden system that is constantly working to power our world. He likes to keep them around to ground his research in the physical, and these objects help reveal the complex web of energy infrastructure that powers our world. "There's such a disconnect between these mega-large systems we use daily without realising it. It's only a limited number of people who directly work with that who have any sense of scale. You have to have been to a chemical plant to realise how big it is. That's why I have it..."

Justice & Peace (Den Haag-based NGO)

[Madi, a voice for change in The Gambia](#)

COVID-19 impacts every individual differently. For Gambian human rights defender Madi Jobarteh, that means balancing time between helping individuals impacted by quarantine measures while simultaneously helping to prepare the country for the upcoming constitutional referendum. "I stay at home most of the time, but I also go out sometimes. I go to a lot of organisations doing food distribution to poor families...If I'm not out, I'm on Skype conferences a lot of the time. Meetings to discuss other issues because it's not just about COVID-19. In The Gambia right now we are also in a transition to build a democratic society with a new constitution. That constitution has been drafted now, so we are also active to push so that we will have a new constitution by 2021."

It has been a long road to this constitution, now in the proposal stage, and COVID-19 is just the latest hurdle on the path towards peace and justice...

Fortunate Accidents

Exploring the Complexities of Palm Oil *Foundation for Inclusion* (a non-profit in Washington DC)

Her office wasn't far, but she was late. Always late, her mother had yelled at her out the door. Nor scoffed, and headed away from her office, into the city. Wouldn't be a problem if she didn't have to live with her parents so far away.

She stopped at the small cart on the corner, past the cluster of men in cheap suits sipping tea and sucking down counterfeit cigarettes and around the pile of discarded cups and torn wrappers. Her eyes flutter over line of newspapers: *Sinchew*, *Malaysia Kini*, *Sinar Harian*. Finally theirs, the significantly smaller local beat, pressed in their own shop down the street. Each of them dominated by the same headline: *EU Bans Palm Oil....*

Fire and Hedges

Expanding Democracy for *Participatory Value Evaluation* (a TU Delft-based start-up)

It wasn't always this way. There was a time before, when the world was smaller. Things were still taking shape, the people still learning to live together. The fires that fuelled their civilisations were kept safe by monarchs in a grandiose halls, far from the hands of the people. Access was only if you were in the favour of whoever happened to have the keys at that moment.

One by one people began to take control of their own flames. Some nations collected little handfuls bit by bit, others kicked in the doors to the grand halls and made off with as much as they could carry. Their fire needed a new home. No longer could it lay out of sight, providing comfort to only those who could afford it...

Food Desert USA

The Impact of Food Deserts *Policy Modelling Lab* (a Den Haag-based consultancy)

Stuck in the world's bread basket and not a single place to buy a loaf of bread. Not since Mr. Johnson closed his store two years ago. Since then, every week, little old Marietta has hobbled out of house and into her Oldsmobile, the one Frank and her bought on their fiftieth anniversary, to make the one-hour drive to the next town to buy groceries. Normally it would take forty minutes, but Marietta keeps forgetting the speed limit isn't 55 anymore. Kids in sports cars speed past her as she clutches the steering wheel, knuckled down over the road, squinting to differentiate between mailboxes and oncoming traffic. Things were so much easier when Frank was alive. When the kids were home. When Mr. Johnson still had his supermarket in the village. Marietta isn't the only one....

PROSE

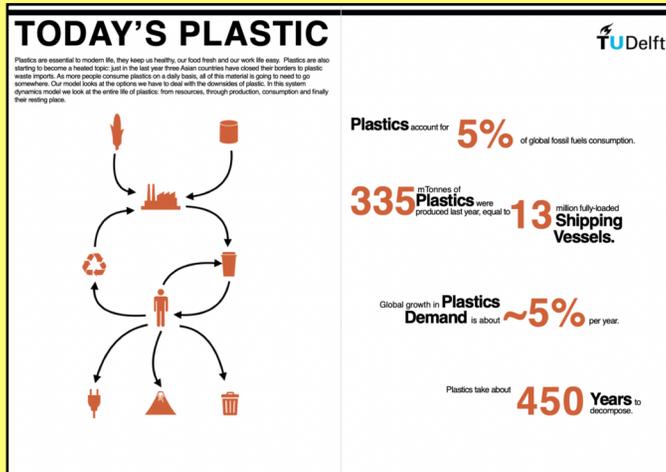
Three openings of mythological stories written to explore scientific concepts.

VISUAL DESIGNS

I believe in **clear, bold designs**. Influenced by designers such as Massimo Vignelli and Don Norman, along with scientist such as Cole Nussbaumer-Knafflic and Mike Morrison, these simple yet striking concepts are **proven to be more effective** at communication.

My Master's Thesis work tested the effect of form on science communication in print.

INFOGRAPHIC



MYTH

The Silent Shell Bird

It was a small island. Not more than a few trees beyond the beach. Home only to a flock of birds: all sorts of yellows and blues and greens. They eked out a simple life on this tiny island, content to sing and search for food all day long.

That is until one day, the bravest of the birds was searching in the surf. There he found the most interesting thing. A clamshell, stuck up tight on both sides. He carried the it to the rocks, and gave the shell a heavy whack, splitting it in two. All the birds gathered around to peer inside. Food, fresh and so new. They had no real need for the shells, so they kept the shiniest and dropped the rest. These were swept away with the tide side, out into the bay.

The brave birds went as far as they dared, past the bay and the corals, out in the deep waters of the talking rock. It would follow them around as they played in the waves, but none of them every slowed down enough to understand what it had to say. They would just splash and shout, and soon the talking rock was as much a legend as anything else.

The shells made everything easy, no more scratching about, the birds were free to do as they pleased. And so they did. And the flock grew and grew and grew.

But a funny thing they were, the shells. They made an awful racket upon the rocks, and with a whole bunch of new birds to feed, the birds were at it night and day. Pretty soon it was the only song on the island, the crack of shell against rock. It was almost like the other songs they all forgot. Not for a long time on this island did any bird sing.

One day, a new egg hatched, and the mother hen squawked at the sight. A brilliant red feathered bird! Not unbound of, the old ones said. But don't let that go to your head, she'll be trouble no doubt.

Red turned out to be more trouble than even they thought. From birth, she could not speak. She would open her beak and nothing would come out. She refused to eat and seemed hate the very air around her. But as soon as she could she tried to fly. Fluttering, tumbling, wing-bending crashes down the tree. But she was determined to fly. Day and night she slowly gathered up the wit of her fathers. Soon her mother said. Soon she'd be able to fly on her own. Tonight Red thought. Tonight I will get out of this awful place.

It just so happened that night was windy one, a warm stream that carried Red far away from the island. Once up, she coasted on her young wings and enjoyed for the first time silence. It was the shells that shook her so. The constant sound whacking at her soul for reasons she did not yet know.

It was a foolish night to fly. A mistake any young bird would make. The warm breeze soon chilled, and shifted to a sharp wind. Needles of rain chipped at her wings, and she faltered. Thunder cracked as she struggled to stay up. She flew brave enough, but eventually the wind and rain drove her into the sea. She plunged head-first in the icy foam below, struggling for breath.

The sun rose red in the eastern sky, the sea finally calm after tropical gale. Red laid, bone soaked and near dead, across the back of a great leathery rock. She coughed as the rock turned and spoke.

TU Delft

TRADITIONAL REPORT

Plastics are not something that one typically thinks could lead to male mankind, diplomatic disputes and fires of war. Yet, this is what we find ourselves today. The miracle material, responsible for so many of humanity's gains, from the food in your fridge to the work in the server operating room. Each of these is produced and made possible by plastics. Yet for the world, like a fire, it is a double-edged sword. For one, that plastic is made of oil is just beginning, destined to be long beyond use. Within in the past year countries such as China, Malaysia and the Philippines have stopped plastic imports, and urged us a war of words with more developed nations about what to do with all of this plastic waste. These may seem energy threats, but with better progress producing the plastics in the environment and landfill will grow by between 3-5 times by 2050, they may also be signs of a solution are not identified in the coming decade.

We developed a **System Dynamics Model** that looks at this plastic problem, and applies the well-known ideas of **Reduce, Reuse and Recycle**, as well as the newer **Repair**, to global plastic production. We applied a top-down methodology to the plastic life-cycle, from raw materials to end-of-life. Plastics have four potential final destinations: landfill, incineration, decomposition of biodegradable and the environment. The flows of plastic into these various stocks are determined by the associated global policies. These varied policies control the flow at several points in the plastic lifecycle. This all happens on the largest level possible, a global view of plastic use. And this model makes several assumptions and simplifications to make predictions. Each policy is on a maximum 500 times with realistic uncertainty values assigned to capture potential futures, and compared to whether that countries today's trends uninterrupted.

The data used in this model is collected from a variety of academic, non-profit and industry sources. The largest contributions are from three reports: The United Nations Report on Single-Use Plastics, the **PlasticEurope 2017 Report**, and the **McKinsey & Co. Global Institute Foundation Report: The New Plastics Economy**. Each of these reports acknowledges forms of all four of the original policy levers: Reduce, Reuse, Recycle and Repair. The three reports offer detailed and quantitative data on the plastic life cycle. Each acknowledges the key role plastics play in improving human life today, while also proposing a myriad of policies regarding the future of plastic production and use.

The UN Report on Single-Use Plastics focuses largely on regulations to reduce consumer plastics, primarily as a means of reducing litter in the environment. This report is the main source of the **REDUCE** policy. While difficult to estimate because of the patchwork of national regulations and various specific issues being such local governments, the UN Report estimates that a reduction of 38% is achievable by 2050. Our model projects that in its best case scenario, **plastics in the environment and landfill will grow by 2-3 times from today's numbers.**

The New Circular Economy report is the greatest outlier of the three, proposing not changes to both the recycling network as well as how goods are packaged and shipped in the business world. It shows that the **largest gains from REUSE** policies could be found, while consumer plastic reuse (such as health care containers across Europe) is an interesting emerging market, business to business shipping is a far more significant consumer of plastics. This policy is hampered by the need for vast amounts of time business cooperation and significant cost associated with the implementation of these types of designs. Our model estimates that **Reuse policies could reduce the average lifetime of plastics by 50% by 2050, the result is a 2-3 times the plastic in the environment and landfill.**

The **PlasticEurope 2017 Report** highlights the potential benefits of **RECYCLE** policies. Traditional recycling is currently limited to 9% of all plastics are recycled, due to the complexity of material type, cleaning and sorting through the waste. Current estimates are that approximately 60% of all plastic used today actually could be recycled. By reaching this 60% recycling target by 2050, **land plastics in the environment and landfill will grow by 2-3 times, with the full envelope of possible futures slightly better than merely reducing consumption.**

By using biological sources to **REPLACE** the current fossil fuel feedstocks, and recycling these materials in special biomass energy facilities, plastics can be developed from oil production and simultaneously reducing the flow of plastics out of the system. The **PlasticEurope** report focuses on the potential of bioplastics as an emerging market. However, these bioplastics are not biodegradable in the sense that they can be disposed of in nature. They require special biomass energy facilities to properly decompose into useful materials, and produce energy as by-product. Today's estimates are that up to 40% of current plastics can be easily replaced with bioplastics. However, this material must come from sustainable water and land use for plastic production would require other requirements for these process resources by 2050, in many scenarios reaching impossible demands. **Ultimately, the conversion to bioplastics will result in a 2-3 times increase of plastics in the environment and landfill.**

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METAGRAPHIC

PLASTIC LIFE

A old phrase is back in the newest ways. It's been about 70 years since plastics entered in modern society, and about 40 years since the first **Reduce, Reuse & Recycle** campaign. Plastic Life looks at what the experts are saying. We set out to understand how exactly this plastic system works, and what it means if we **Reduce, Reuse, Recycle or Replace** our plastics lives. To do this, we will dive into the uncertain world of a model, exploring it through the lens of **system dynamics**. We used this model to look at the globe's entire plastic production: past and future by taking a granular look at this system from start to finish.

Hi! This is my friend, **Plastics**. He's an expert on system dynamics and will be your guide for today!

Hi! This is my friend, **the plastic system**. We've got some natural resources, production to distribution. A consumer, a bit of recycling and end destination.

Here's a look at some possible futures, just keep an eye on the dotted lines, those are the best and worst scenarios, we'll keep these handy.

Wow, how did you do that?

Plastic Life

Plastic Life

TU Delft

The Myth performed best in messaging and recall.

Imagery play in an important role in what I have to say.

Soaking up the last ray of Sunday's sunset.
 Tomorrow's rain cutting short the rest.
 Out at the edge it all blends together,
 Blue sky and grey sea just memories,
 melting off into infinity.

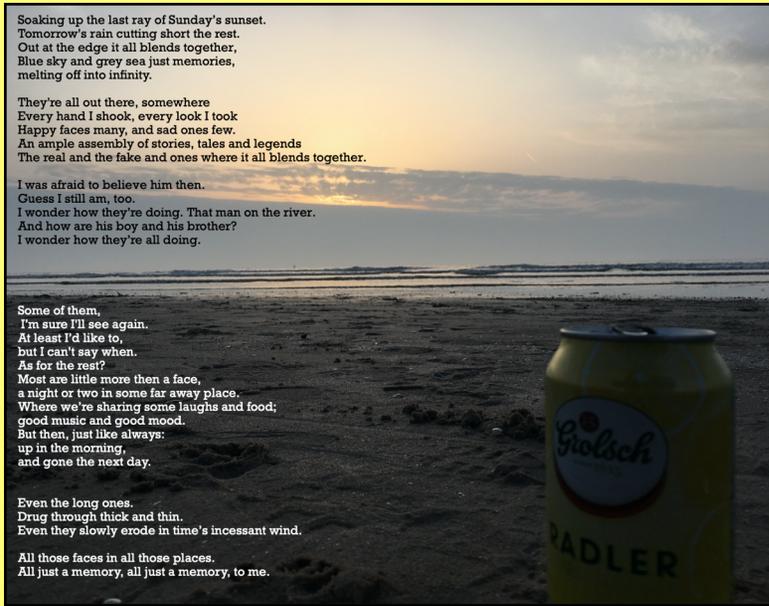
They're all out there, somewhere
 Every hand I shook, every look I took
 Happy faces many, and sad ones few.
 An ample assembly of stories, tales and legends
 The real and the fake and ones where it all blends together.

I was afraid to believe him then.
 Guess I still am, too.
 I wonder how they're doing. That man on the river.
 And how are his boy and his brother?
 I wonder how they're all doing.

Some of them,
 I'm sure I'll see again.
 At least I'd like to,
 but I can't say when.
 As for the rest?
 Most are little more than a face,
 a night or two in some far away place.
 Where we're sharing some laughs and food;
 good music and good mood.
 But then, just like always:
 up in the morning,
 and gone the next day.

Even the long ones.
 Drug through thick and thin.
 Even they slowly erode in time's incessant wind.

All those faces in all those places.
 All just a memory, all just a memory, to me.



I often combine my loves of poetry and photography, writing what I feel as I see the world around me.

there's no ill will seeping from this fish's gill and still and still, I find myself standing on this hill of broken day dreams

there's everything down there under my feet a pile of wasted afternoon and stuffy rides a mile high little snippets of time where I crawled up in my brain to hide playing out a thousand different lives with a dozen different loves

busted thoughts and ideas floating wisps of imagination replaying a litany of drunken kisses slipped glances and lingering caresses

taking a true story and writing new endings wandering a world where things are different following my heart and letting go of life for awhile

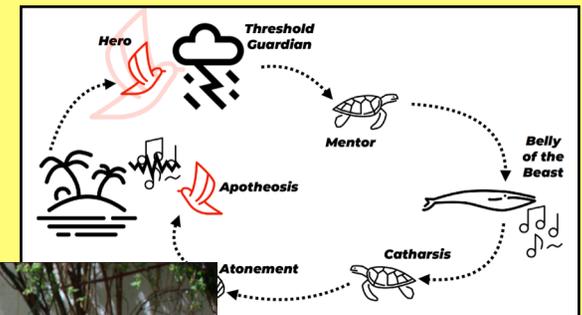
long after the tinted daze fades reality returns with its soul draining haze the truth of it all is there was an ending happy or otherwise a million peering little fires that just sort of about I find myself wondering while all my time has gone while my mind's been out

there's no ill will seeping from this fish's gill and still I find myself lying on this hill of broken day dreams



A **plot** is a sequence of events that transforms the character in some way.

-Credit to Booker & Campbell

I strive to make my presentations as appealing visually as they are verbally.





DIGITAL MEDIA



As a film-maker & podcaster, I offset words with silence to make the audience think and feel. **Stories belong to the communities that tell them**, and in these forms we can leverage their voice in unique ways. Samples of my work are currently available on my website and social media.



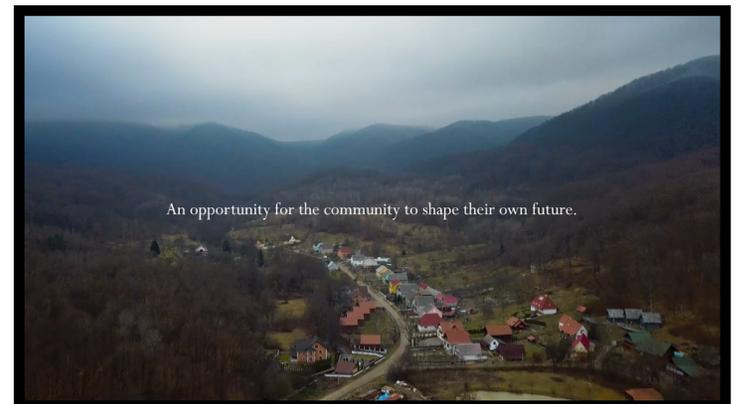
She's So Hormonal: A stop-motion story of the systems that drive the menstrual cycle, and what these chemicals do and do not do.



Circular Stories: My journey through a Tandem Europe project with Villa Gillet in Lyon and LDE Centre for Sustainability in Leeuwarden.



Solotvyno: A collaboration with video producer Gijs Walastra for the ImProDiReT, an EU 2020 Project.





Through the Screen

15 episodes of podcast conversations interviews produced in podcast format with students and faculty of TU Delft, chronicling the first weeks of living and working entirely from home. We talked about hope, fears and opportunities for growth as we adapted to life through the screen.

10 episodes of solo-storytelling, a mixture of readings and retelling of classic myths with analysis and application to life in quarantine. Alongside these stories we reviewed my process and my workshops with the faculty about making myths.

Making Myths

I believe that storytelling has an essential role to play in addressing our greatest challenges. These stories cannot be told alone. Perspective matters.

My experience as an engineer, policy analyst and of just being a human helps me to create in a participatory process. A place where each of us can explore the systems underneath our daily lives through our own words.





Stories of science transforming society.

**Today's stories will become part of tomorrow's
mythos. By taking an intentional approach to
their design, we can create a better future
together.**



every word
an opportunity
with every line
intentional design

our myths
are the metric
by which
future children
will judge
our minds

we've almost forgotten
that's the way
we humans
have always been

so ask yourself
what is it
that we need
to say today?

Policy
Mythology