



Curled up Small

Mosaics and tiles

Things growing on things

A wider view

What does a seagull see?

Grazing

Tree bark



Purring



Roots



Leftovers



Clinging to the cliff edge



Splashes of paint



Facial expressions



A rollercoaster



A walled garden



A noticeboard



Plant growth



A flock of birds



What's leaking?



Steps

# New Metaphors



Food trucks



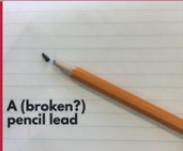
Patterns in brickwork



Shadows



A creative toolkit for generating ideas and reframing problems



A (broken?) pencil lead



A view from above



Cushioning or buffers



Conversation



Room lighting



High points in a landscape



The horizon



Waves



An overgrown greenhouse



Leaves changing colour



Bubbles, foam, or droplets



A temporary covering



Snow



A music box



Graffiti and street art



Sweetness

Dan Lockton  
Devika Singh  
Saloni Sabnis  
Michelle Chou



Hot air balloons



Fallen leaves



Windowsills



Things attaching themselves



Lost and found



Layers



Knots and joints



Cracks in the paving

A metaphor is:

**“a device for seeing something in terms of something else.  
It brings out **the thisness of that** or the **thatness of a this.**”**

Kenneth Burke, 1945

## Welcome to New Metaphors

A metaphor is just a way of expressing one idea in terms of another. THIS PROJECT IS A NIGHTMARE. THE CITY IS A PLAYGROUND. YOU ARE A GEM. Creating new metaphors could help us design new kinds of product, service, or experience, and even help us think about and understand the world differently.

*New Metaphors* is a set of 150 cards (two different kinds) and some fairly simple methods for running workshops, brainstorming (individually or in groups), discussions, and other creative activities.

In this booklet we're going to introduce you to the cards and some ways you can use them, but we're also interested in seeing what you do with them beyond what we've imagined.

We (Dan, Devika, Saloni, and Michelle) are part of the Imaginaries Lab, a

new design research/teaching studio, currently based within Carnegie Mellon University's School of Design, in Pittsburgh, Pennsylvania, but working internationally. We do research projects, executive education, workshops, and collaborations with partners. In our work, we use design methods (derived from design practice) to explore and support people's imagining—both new ways to understand (mental models, mental imagery, new kinds of interface design), and new ways to live (participatory futuring, design for behaviour change, etc). You can see some of our other projects at [imaginari.es](http://imaginari.es)

But although *New Metaphors* was developed partly in a university setting, it aims to be useful outside of the classroom. We know that the ideas will have more impact in the world when they are applied and used in real situations, whether by designers



Could SHEDDING AN OLD SKIN OR PLANT GROWTH be a metaphor for CONFIDENCE? What about SWEETNESS as a metaphor for PEOPLE'S ACCENTS?

or by anyone looking to reframe ideas or generate new approaches to things, whether you see yourself as 'creative' or not (you are).

So, as well as working with students, as we developed the kit we ran workshops with designers, futures practitioners, and even a couple of science fiction writers, at a series of industry conferences and events, to try to ensure we were creating something that would be fun and easy to use, and easy to apply to real-world issues.

## What are the cards?

There are two types of cards:

○ **100 image cards** (as on the cover of this booklet), each of which has a picture of something (natural or human-made, a 'thing' or a situation) with a label for it. The label might not be the exact thing you think of when you seen the image, and we encourage you to think of other ways to describe it (there's space on the back of each card for you to make notes like this).

Each image has been chosen (pretty arbitrarily, but with some method—see later in the booklet) to be something that *could* in some way work as a metaphor for lots of other things. They are not necessarily all commonly used metaphors (we tried to avoid the really obvious) but they are all intended to be able to work at multiple levels, or with multiple facets or elements to them, and trigger other kinds of ideas beyond what's on the cards themselves.

○ **50 concept cards** (shown in the centre pages of this booklet, **red**). These are text-only, each an often abstract concept which we considered was *hard to visualise*, but nevertheless important for some area of the human experience, technology, society, or our environment. Their inclusion here is mainly as a prompt, a set of sample provocations that can work as a warm-up, or to enable you to gain experience using the method, and we suggest (see next section) that over time you come to replace these cards with concepts that are important to you. We have also included five blank cards to start you off on creating your own concepts.

## Ways to use the cards

You'll see in the box with the cards there are also two worksheets (you can download them at [newmetaphors.com](http://newmetaphors.com)). You don't have to use them, but they can help with structuring your thinking.

## Juxtaposition workshop

This is the best way to get started using the cards. It won't solve a problem you have (well, it might), but it will give you experience thinking metaphorically, that you can then apply and use. The instructions here assume a group setting, but you could also do this on your own.

1) Choose some image cards and some concept cards. If you're in a group of five people, maybe choose 10 of each type of card. Pick randomly if you like (shuffle the cards) or lay them out and choose whatever catches your eye. Spend a few minutes looking through them, and try juxtaposing (pairing) different combinations of the image and concept cards (as in the picture on the previous page of the booklet). Are there pairings that seem interesting, or promising? If you're in a group, pick one or two pairings that the group can agree on

exploring further. (Maybe nothing seems to work—if so, force yourself. Shuffle the cards and pick one image and one concept card and stick to them.)

2) Use **worksheet A** to list some of the characteristics or features of the image(s) and concept(s) you've chosen. **There are no wrong answers here** (or in this whole process). You can use multiple images and one concept, if you'd like to compare them. Groups can work well here in pointing out characteristics that individually we might miss. Then try mapping connections or commonalities—essentially, **how could this work as a metaphor?** For example: PATCHES (on the road surface) could be an interesting metaphor for ANXIETY, because both might involve constant rounds of temporary repair, trying to 'fix' underlying issues but only superficially, presenting a 'strong' face to the world even though underneath things are falling apart.



Thing 1 has these characteristics

Collective, aggressive, asynchronous, synchronous, fake personas, lack of physical humanized and feedback (social expressions), diversity, fast, lack of empathy, rich, profitable, via mass hysteria, mob thinking, social phenomena, collective unconscious, experiential learning.

Include characteristics that are hard to measure or quantify, but which you know exist

Thing 2 has these characteristics

Denies, imitating, copycat, my actions have consequences, ripples of cause-effect, not alone, two, butterfly effect, movement vs quiet, dancing lake, mimicking clown, social proof, be an example, mirror, be the change you want to see in the world, mirror

How could some of Thing 1 and Thing 2's characteristics map to each other?

REFLECTION CONCEPT MIGHT PREVENT SOCIAL NEGATIVE FEEDBACK THAT PREVENTS A GOOD ONLINE DISCUSSION } MORE EMPATHY

Minor dancing lake mimick clown "REFLECTIONS"

imagines A



In the worksheet A shown here, characteristics of ONLINE DISCUSSION were mapped to REFLECTIONS. Note that in your decks, you don't have ONLINE DISCUSSION as a concept card—also, the 'Thing 1' and 'Thing 2' labels on the worksheet were confusing, so we ditched them.

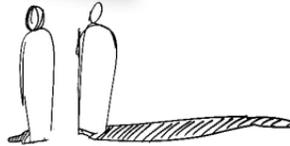
**"I think [Aristotle] says that someone who can perceive resemblances can create their own metaphors... resemblances which aren't immediately apparent. And metaphor would consist of expressing the secret connections between things."**

Jorge Luis Borges, in conversation with Osvaldo Ferrari, 1986

3) So, you now potentially have a metaphor, or more than one, with particular characteristics or connections between them.

Depending on your interest or expertise as a group, or the context you're working in, you can now use that metaphor to start off a brainstorming process—designing (or at least coming up with a concept for) a new kind of product or service or interface, devising new ways to frame or communicate an issue, developing a new policy, even writing a poem. It works well for this stage to be relatively quick—20 minutes or so—at least when you're doing the exercise to gain experience with the metaphor process rather than for a specific issue you really need to solve. Feel free to extend and change the metaphors you're working with—these are meant to be spurs to thinking, not constraints (unless you want them to be).

4) In workshops with multiple groups, we normally now have each group present the ideas they've come up with, and everyone discusses them together. In presenting their ideas, groups usually talk through their process (including the mappings they did in stage 2).



POWER RELATION + SHADOW  
 BETWEEN PEOPLE  
 "WHO HAS MORE POWER  
 OVER THE OTHER?"

Above: scenes from stages 1–4 of the juxtaposition workshop.

Left and below: How two groups (in different workshops) addressed POWER RELATIONS BETWEEN PEOPLE make an interesting comparison. One group focused on SHADOWS as a metaphor, envisaging an augmented reality display enabling people within an organisation to 'see' the influence or power people had over each other.

Another group used ADAPTORS as a metaphor—already 'transforming power' in a different way—but here used as the starting point for exploring a new kind of model for planning a team within an organisation, using adaptable (foldable, reconfigurable) shapes as a kind of construction kit to represent people with different skills, roles, and fit.



## Workshop for your own concepts

Once you're experienced with this kind of metaphorical thinking, you'll probably want to apply it to issues or topics you're working with—it could be a big concept such as 'explaining artificial intelligence' or 'reframing education' or it could be something very specific such as 'redesigning the interface for a personal finance app'. Or it could even be for a kind of therapy or self-reflection.

In these cases, you only need the image cards, and don't need the concept cards (although you could use the blank ones included), but it will be helpful to work out a simple way of formulating your topic, to enable you to step through the sequence 1–4 in the same way. You can use the same worksheet format for this. Of course, if this is an issue that really matters to you or your organisation, this workshop would just be a starting point. You might consider working through the characteristics and relevance of multiple image cards, or related ideas.

## Collecting your own images

You may well get bored of the 100 image cards quite quickly, and so perhaps the most exciting phase of using *New Metaphors* is when you start to build up

your own collection, your own repertoire of images that you find interesting or could be generative or provocative, or which resonate with you in some way. You could become accomplished at noticing things in the world and photograph them, or collect images or screenshots from media which seem to embody particular qualities enabling re-use (compare how different meme formats emerge).

Another way to do this could be to start with a particular concept you need to find new metaphors for, and list / map its characteristics in detail, ideally with a group of people with different perspectives—then use these to suggest real-world things to photograph.

## A futures-focused workshop

A different approach, which you could adapt in different ways, is something we developed for the inaugural public event of the Plurality University Network, a meeting of designers, futurists, and science fiction writers. Here the aim was to focus on *rethinking existing metaphors* around 'An issue facing us now, and in the future', selecting an image card to act as an alternative metaphor for the issue, and mapping similarities and differences between the two metaphors'

characteristics. **Worksheet B** gives a template. The example here (right) contrasts existing metaphors for THE END OF WORK (including DEATH, PARADISE, HELL, and FREEDOM) with a new metaphor, FINDING A NICHE. This method should be easy to adapt to situations where there are existing metaphors which you want to challenge or deconstruct, in the process of suggesting new ones.



B

- 3 What are some characteristics of those metaphors?  
What are some verbs associated with them?  
What 'structure' do they have?

CYCLE  
EVOLUTION  
MOVEMENT  
LIGHTNESS  
HOPE  
ADAPTATION

NEGATIVITY  
FEAR  
LOSSING SECURITY

→ RADICAL CHANGE  
BINARY.

- 4 How could some of these characteristics map onto each other?  
What do they have in common?  
Which characteristics offer in a structural way?

- 3 What are some characteristics of the new metaphors?  
What are some verbs associated with them?  
What structure do they have?

FINDING SECURITY  
EVOLUTION FROM AN  
ESSENTIAL NICHES TO A  
NEW NICHES !!

IDENTIFYING THE NEW NICHES  
↓  
TO LEAVE THE CURRENT ONE.

- 2 What are some of the metaphors you're using consciously or not around that issue?

• DEATH  
• WAVES  
• REGIONS  
• PAINSTAKING  
• SAIL / GOLDEN HANGOVERS

• METAPHORICAL  
• NEW NAME  
• PARADISE  
• FREEDOM

THE END OF WORK !!



- 2 How could the new metaphor(s) change how we think about the issue in the future?  
Could you design an experiential scenario around it?  
What happens if we start to use the new metaphor right now?

LEAVE YOUR CURRENT COMMITMENTS BEHIND TO FIND A NEW NICHES

→ NO MORE NICHES - NO MORE ASSIGNMENT  
→ NOT LOSING CONTROL  
→ DAILY PERFORMANCE  
→ CAREER AS A TALENT  
→ NICHES AS A TALENT.

What are some consequences of...  
side of...  
issue facing us now...  
Hoping... / Julia

**"If you look beyond a tree's rigidity to see it as alive, then you see it as more like a woman than like a telephone pole... It is the same kind of looking that recognises the spirals of growth in shells as the frozen form of cyclones and galaxies."**

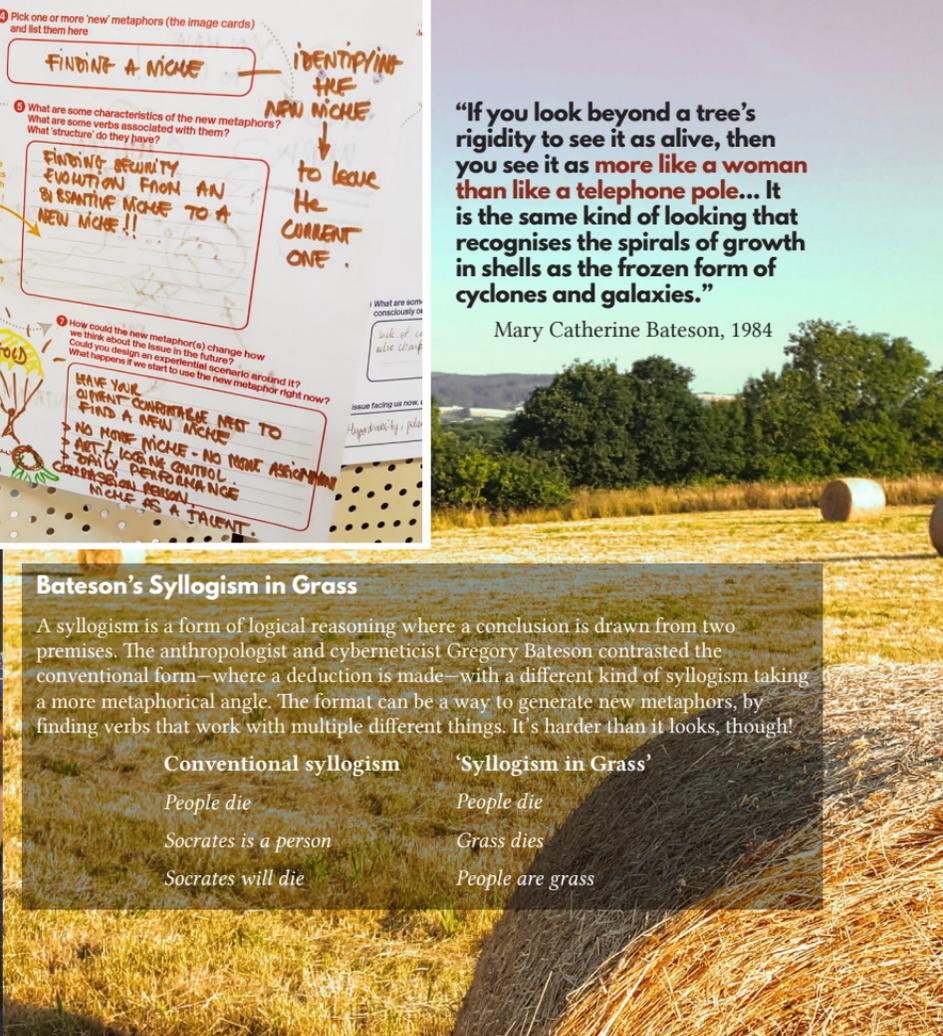
Mary Catherine Bateson, 1984



### Bateson's Syllogism in Grass

A syllogism is a form of logical reasoning where a conclusion is drawn from two premises. The anthropologist and cyberneticist Gregory Bateson contrasted the conventional form—where a deduction is made—with a different kind of syllogism taking a more metaphorical angle. The format can be a way to generate new metaphors, by finding verbs that work with multiple different things. It's harder than it looks, though!

Conventional syllogism	'Syllogism in Grass'
People die	People die
Socrates is a person	Grass dies
Socrates will die	People are grass



<b>Power relations between people</b>	<b>Democracy</b>	<b>Unwritten rules</b>	<b>Inter-dependence</b>	<b>Being an immigrant</b>
<b>Anxiety</b>	<b>Blockchain</b>	<b>Self-care</b>	<b>The economy</b>	<b>Your own sense of agency in the world</b>
<b>Adaptability</b>	<b>Being part of an ecosystem</b>	<b>Corruption in government or business</b>	<b>Love</b>	<b>Maintenance and repair</b>
<b>Other people's thoughts or emotions</b>	<b>Social or peer pressure</b>	<b>Protection and safety</b>	<b>Planning for the future</b>	<b>Overwhelm- edness</b>
<b>Making a decision</b>	<b>The presence of AI</b>	<b>Kindness</b>	<b>Social mobility</b>	<b>Trust</b>

<b>Calmness (in technology?)</b>	<b>Your personal digital history</b>	<b>Community</b>	<b>Ageing (gracefully or otherwise)</b>	<b>People's accents</b>
<b>The opportune moment</b>	<b>Confidence</b>	<b>Climate crisis</b>	<b>The plurality of possible futures</b>	<b>Financial markets</b>
<b>Pensions and investments</b>	<b>Ownership</b>	<b>Gentrification</b>	<b>The backstory of a product or service</b>	<b>Relationships</b>
<b>Being a parent</b>	<b>Very large amounts of money</b>	<b>Motivation</b>	<b>Consent or dissent</b>	<b>Equity</b>
<b>Solidarity</b>	<b>Symbiosis</b>	<b>Privacy of your data</b>	<b>Home</b>	<b>Transitions</b>

## New Metaphors

Space for your notes—as you develop your ‘metaphor’ mindset

What are some characteristics of what’s in this image that really stand out for you?

If you ignore the words on the image, how could you describe it in a different way? Are there other interesting characteristics that emerge?

What concepts have you found this card to be an interesting metaphor for? Keep a record here.

imaginaries lab

New Metaphors v1, 2019

This card is a licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International license (<https://creativecommons.org/licenses/by-nc-sa/4.0/>)

Please check, copy, and edit up the New Metaphors project at [www.imaginaries.com](https://www.imaginaries.com)



## Notes

Which images have suggested interesting metaphors for the concept on this card? Keep a record here.

Which aspects of this concept were provocative to consider, or hard to visualise? Are there related ideas you could explore?

imaginaries lab

New Metaphors v1, 2019

## Using the backs of the cards

The backs of the image and concept cards include templates with some optional questions and space for notes, that might help you as you build your familiarity with the cards and a ‘metaphor’ mindset.

## Background to New Metaphors

Much—perhaps all—user experience and interaction design makes use of metaphors. Initially they’re often used by designers to introduce users to new approaches to interaction or data visualisation, giving us a link to something we already understand. But over time they can become so familiar that we no longer think of them as ‘metaphors’ any more. Do we even notice the metaphorical aspect of desktops and windows and folders and files? What about the cloud, feeds, threads, forums, the net, browsers, the web, websites, or the notion of a ‘site’ itself?

Sometimes designers look for new metaphors intentionally, for example where a new technology offers new possibilities that need some ‘anchoring’ (itself a metaphor) to a familiar concept to be understood. But if we go beyond thinking solely about interaction with technology, new metaphors potentially have a much bigger role.

Many challenges facing humanity today and in the future are complex, involving relationships, complexities, and timescales which are difficult to understand and represent in simple

terms. By mapping features of an existing or familiar situation onto a new or unknown one, it can make it easier for us to grasp it more quickly. Sometimes it can be valuable as a form of user research to investigate the metaphors people are currently using (consciously or not) to explain an issue, and what implications that can have,

Nevertheless, metaphors are not the thing itself—they are always an abstraction, a model of the situation. They can be a map to a territory, but should not be mistaken for the territory itself. **All metaphors are wrong, but some are useful**; they can become a kind of disruptive improvisation technique for helping us think differently and reframe issues.

## Expanding our conceptual vocabulary

Artists and poets are experienced in playing with metaphors, but intentionally creating new metaphors to enable new ways of thinking—giving us a kind of expanded vocabulary—has been proposed by people in many fields, from anthropology (e.g. Margaret Mead and

Mary Catherine Bateson) to politics (e.g. George Lakoff).

Economists and social scientists have examined how the metaphor of ‘the national economy as a household budget’, or even ‘a container/bucket/pot’, commonly employed by media and politicians, can lead to specific policy decisions being made that arguably cause harm. How would political discussion on the economy be different if a different metaphor were used? We can imagine ideas such as THE ECONOMY IS A GARDEN OR THE ECONOMY IS A LOAF OF BREAD BEING BAKED. The New Economics Foundation and partners tested new metaphors such as THE ECONOMY IS A COMPUTER THAT CAN BE REPROGRAMMED through surveys with the British public. Indeed, we (the Imaginaries Lab) hosted a webinar for the Disruptive Innovation Festival 2018, run by circular economy charity the Ellen MacArthur Foundation, in which new metaphors were generated and discussed relating to circular economy issues, including ORGAN DONATION as a metaphor for CIRCULAR BUSINESS MODELS, and LEAVES CHANGING COLOUR as a metaphor for PRODUCT END-OF-LIFE.

From global issues (e.g. engagement with government), right down to the personal level (e.g. mental health), there is an opportunity to create and explore new metaphors, and adopt and adapt them from other cultures, traditions, and contexts. It could inspire creative approaches to designing new interfaces, products, services, communication campaigns, ways of explaining ideas, and more widely, help reframe societal issues around technology and other issues of global importance, providing an expanded ‘conceptual vocabulary’. A method for doing so could be a useful part of the designer’s toolbox—hence the cards you have with you right now.

The hunt for “defensible metaphors”, to use cyberneticist Gordon Pask’s term, is not necessarily easy, and while the role of ‘metaphor designer’ is emerging, there’s little in terms of specific methods for designers to use. There are computational and machine learning approaches, particularly in the growing area of generative creativity, often through bots. But among ‘human’ creativity methods there are only a few projects of which we’re aware (see **Other resources** below).

## The cards and process

What we’re offering here with *New Metaphors* is (as you’ll have seen from the first section of the booklet) very simple, perhaps even trivial. The method is basically browsing sets of images and text cards and then combining them in creative ways to suggest possible metaphors and think through what they might mean.

There are no right or wrong answers. The characteristic-mapping or other processes using the worksheets are helpful, but optional. The combination is a process of *bisociation*—as described by Arthur Koestler, “the perceiving of a situation or idea... in two self-consistent but habitually incompatible frames of reference” and shares a lot with certain approaches to humour.

Or we could think of it as just a simple juxtaposition of ideas as a provocation, in the style of Edward de Bono or games such as *Mad Libs* or *Cards Against Humanity*. This kind of juxtaposition is a common feature of creativity facilitation, and can be fast-paced, intended to be a creative trigger method to generate

multiple ideas quickly and then enable subsequent evaluation and development.

Or, as explained earlier, you might choose only to use the image cards, and/or create your own cards, using them together with a specific problem or topic you already have for which you seek a new metaphor. This is closer to the way that Brian Eno and Peter Schmidt's *Oblique Strategies* cards work: almost oracle-like, for overcoming creative or personal blocks, more similar to the *I Ching* or the 'event scores' produced by some artists in the Fluxus movement of the 1960s and 70s. With the *Design with Intent* cards, previously produced by one of the authors, we found that there were many different ways people used the cards, from treating them almost like a book, to picking one or two cards each week to act as inspiration, to using them to categorise or classify existing things in the world.

In Gregory Bateson's words, metaphor is a "pattern that connects" two concepts. In some ways, a 'forced connection' method such as *New Metaphors* could be a creative exercise in finding patterns where maybe none exists, but treating it

as if one does—a kind of 'apophenia as method'.

We are confident that you'll find interesting ways to make use of *New Metaphors*, particularly as you add your own cards over time, and would love to see and hear what you do—please share, at [newmetaphors.com](http://newmetaphors.com)

### **How the images and concepts were chosen**

There is nothing inherently special or 'right' about any of the cards included here. They're just drawn from our own noticings, and from concepts which have been suggested by students, previous workshop participants, some very helpful Twitter followers, and topics in previous projects ranging from energy use to career paths. In a way, our choice of images and concepts is kind of what makes us the 'authors'—they're our selection of ideas we think you'll find inspirational and generative.

The 100 image cards are an arbitrarily chosen mixture of natural and artificial phenomena (and sometimes combinations of the two). The examples were partly drawn from sensory or

synaesthesia-inspired ideas, such as SWEETNESS, and partly from everyday phenomena that seemed interesting as potential 'design' material—particularly drawing on work around qualitative interface design, indexical visualisation and data physicalisation—from THE HUM OF A FRIDGE TO HANGING CLOTHES OUT TO DRY.

For the 50 concept cards, these ranged from invisible system relationships (e.g. POWER RELATIONS BETWEEN PEOPLE OR EVEN FINANCIAL MARKETS) to intangible emotions, feelings or personality properties (e.g. CONFIDENCE OR ANXIETY). We thought that each phenomenon was something we would be interested in seeing (or otherwise experiencing) an interface or display for, or a rethinking of how it was explained or presented.

The early prototype versions of the cards featured more concept cards and fewer images, but through lots of workshops, we realised that the images are often the more 'generative' part of the method, and that the concept cards are essentially mainly needed for getting into the method, before substituting your own concepts in their place.

Some of the photos and examples in this booklet are drawn from *New Metaphors* workshops run with design (mainly interaction and UX) and futures practitioners, and students, in France (workshops at IxDA Interaction 18, Lyon, and the Plurality University Network's *Portes Ouvertes*, in Paris, both with practitioners), Portugal (workshop at the UX Lisbon 2018 conference, with practitioners), Chile (workshops at the Universidad del Desarrollo in Santiago and Concepción, both with students), and the USA (workshops at the Google SPAN 2017 conference, with practitioners, and the Swartz Center for Entrepreneurship at Carnegie Mellon University, with students).

We have mainly used industry conferences and events as venues for running the workshops—although we developed the cards in a university, these are not meant to be a purely academic tool. We have also explored using variants of the workshop method and cards for teaching within conventional classroom and design studio settings, and in workshops at academic conferences, and in digital versions.

## Kennings

One way to think about and create new metaphors is the *kenning*, an Old Norse, Icelandic, and Old English type of metaphorical phrase in which two concepts are combined in a poetic way to refer to another. The kenning leads the reader to consider things differently, or to pay attention to a different aspect of the idea. For example, in *Beowulf*, THE SEA is sometimes called *hron-rād*, WHALE-ROAD. Some other interesting examples from the Kenning Index, part of the Skaldic Project ([skaldic.abdn.ac.uk](http://skaldic.abdn.ac.uk)), include *hadd jarðar*, EARTH-HAIR for GRASS, *hvapteldingum*, JAW-LIGHTNINGS for INSULTS, and *sveita foldar*, EARTH-BLOOD for WATER.

What could it look like to use this kind of structure to re-describe concepts familiar to us but which we might want to re-frame? Could MOTIVATION be A SELF-ENGINE, or THE PRESENCE OF ARTIFICIAL INTELLIGENCE be CODE-HAUNTING? How much of Steve Jobs' MIND-BICYCLE is present in our current conception of COMPUTERS?

The Young Poets' Network has a great article, by kenning expert Debbie Potts, about creating modern kennings as a creative exercise: [ypn.poetrysociety.org.uk/workshop/land-of-the-ocean-noise-create-your-own-kennings/](http://ypn.poetrysociety.org.uk/workshop/land-of-the-ocean-noise-create-your-own-kennings/)



## Further reading

This booklet includes extracts from a conference paper published about the development of the *New Metaphors* method, which is worth reading if you'd like more of the academic background. The paper is based around an earlier prototype of the cards, with some different images and concepts:

Dan Lockton, Devika Singh, Saloni Sabnis, Michelle Chou, Sarah Foley, Alejandro Pantoja (2019). 'New Metaphors: A Workshop Method for Generating Ideas and Reframing Problems in Design and Beyond'. *C&C 2019: ACM Conference on Creativity & Cognition*. June 2019, San Diego. doi:10.1145/3325480.3326570

A free open-access version of the paper is available at [newmetaphors.com](http://newmetaphors.com)

Deborah Lupton's Vitalities Lab at the University of New South Wales, Sydney, has developed a different set of worksheets to use with the New Metaphors cards, or other images—the Vital Images Method, focused on meanings and emotions. There is a write-up, and downloads of the worksheets, at [simplysociology.wordpress.com](http://simplysociology.wordpress.com)

## Other resources to look up

We're compiling an ongoing list of other useful resources at [newmetaphors.com](http://newmetaphors.com), but some that we've referred to in this booklet, or which should be your first call for exploring this subject further, include:

- *The Metaphor Cards* (2018) by Nick Logro, Daisy Yoo and Batya Friedman at the University of Washington.
- Michael Erard's article 'See through words' at *Aeon* (2015).

- The section 'Design by Metaphor' in Martin Tomitsch and colleagues' book, *Design. Think. Make. Break. Repeat*. (BIS Publishers, 2018).
- Brian Eno and Peter Schmidt's *Oblique Strategies* card deck (and various online versions), 1975 to date.
- The New Economy Organisers' Network, New Economics Foundation, FrameWorks Institute, and Public Interest Research Centre's report, *Framing The Economy: How to win the case for a better system* (2018).
- Katy Gero and Lydia Chilton's *Metaphoria* project (2019) — [metaphor.ga](http://metaphor.ga)
- Darius Kazemi's *Metaphor-a-Minute* (2012) — [twitter.com/metaphorminute](https://twitter.com/metaphorminute)
- Work on applying disruptive improvisation techniques in interaction design, by Kristina Andersen, Laura Devendorf, James Pierce, Ron Wakkary, and Daniela Rosner (2018) — [disruptiveimprovisation.wordpress.com](http://disruptiveimprovisation.wordpress.com)
- *The Design with Intent* cards by Dan Lockton, David Harrison, and Neville Stanton (2010) — [designwithintent.co.uk](http://designwithintent.co.uk)
- Arthur Koestler's *The Act of Creation* (Hutchinson, 1964)
- George Lakoff and Mark Johnson's *Metaphors We Live By* (U. Chicago Press, 1980) and Lakoff's *Don't Think of an Elephant* (Chelsea Green, 2014).
- Yoko Ono's books *Grapefruit* (1970) and *Acorn* (2013),
- *The Thing from the Future* card deck by Stuart Candy and Jeff Watson, Situation Lab (2017).
- *The Manifesto!* card deck by Julian Hanna, Simone Ashby, Sónia Matos, Alexis Faria, and Callum Nash (2019).

- Kate Compton's *Generominos* card deck (2017) and her work on 'casual creators'.
- Superflux's *Instant Archetypes: A New Tarot for the New Normal* card deck, by Jon Ardern, Anab Jain, Paul Graham Raven and Amélie Barnathan (2018)
- Josina Vink's work on 'Rethinking the root metaphor of design', *Service Design for Innovation Network* (2017).
- Gerald and Lindsay Zaltman's *Marketing Metaphoria* (Harvard Business Press, 2008)
- J Paul Neeley's Yossarian 'creative search engine' (2012) — [yossarian.co](http://yossarian.co)

Quotes in this booklet are from:

- Mary Catherine Bateson's *With A Daughter's Eye: A memoir of Margaret Mead and Gregory Bateson* (W. Morrow, 1984)
- Kenneth Burke's *A Grammar of Motives* (Prentice-Hall, 1945)
- Jorge Luis Borges and Osvaldo Ferrari's *Conversations* (vol. 2, trans. Tom Boll; Seagull Books, 2015, original edition 1986)

## Acknowledgements

All photos are by Dan Lockton, Devika Singh, Michelle Chou, Tamar Zea-Wolfson, Shengzhi Wu, Sofia Bosch, Marisa Lu, and Soonho Kwon. Information on photo locations available on request.

Thank you also to Raghav Agrawal, Tara Campbell, Jorge Camacho, Fergus Bisset, Carine Lallemand, Joanna Boehnert, and Jánis Kınasts for suggestions on Twitter for 'hard to visualise' concepts.

Thank you to all our workshop participants for their ideas and enthusiasm, to the students of Carnegie Mellon School of Design classes including 51-372

*Persuasion and 51-825 Advanced Interaction and Service Design Methods*, to workshop facilitators and co-teachers including Sarah Foley, Francis Carter, Eugenia Perez, Michael Arnold Mages, and Stephen Neely, event organisers including Alejandro Pantoja, Corinne Onetto, Bruno Figueiredo, Rita Gomes da Silva, Daniel Kaplan, Chloé Luchs Tassé, Carine Lallemand, and Aleksandar Petkov, to Terry Irwin, Bruce Hanington, and the School of Design at Carnegie Mellon University for support of the project, to Deborah Lupton at the University of New South Wales for trying out the cards in a different context, and to Bella the dog and Sam the cat for modelling for a number of the cards.

## Publication details

*New Metaphors: A creative toolkit for generating ideas and reframing problems*, v1, June 2019. Published by:

Imaginaries Lab, Dawlish, Devon, United Kingdom  
and Pittsburgh, PA, United States

Contact: [dan@danlockton.co.uk](mailto:dan@danlockton.co.uk)  
ISBN 978-0-9565421-2-0 (print)  
ISBN 978-0-9565421-3-7 (PDF)



The cards, booklet, and worksheets are licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International licence: [creativecommons.org/licenses/by-nc-sa/4.0](https://creativecommons.org/licenses/by-nc-sa/4.0)

That means you are permitted—indeed, encouraged—to share, copy, redistribute, adapt, remix, and transform this material, in different formats, as long as you give attribution to the authors and the original project. You may use *New Metaphors* in a commercial context (e.g. internally within an organisation, or as part of a facilitated session for other organisations), but you may not sell your copy or adapted version commercially. Any adapted version, if distributed, must also be distributed under the same licence. You may not apply legal terms or technological measures that legally restrict others from doing anything the licence permits. Please share, copy, and add to the *New Metaphors* project at: [newmetaphors.com](http://newmetaphors.com)

The fonts are League Spartan (from the League of Movable Type) and Linux Libertine (from the Libertine Open Fonts project).

## Get involved with the Imaginaries Lab

If you like the ideas in *New Metaphors*, or would find it useful to talk or engage further, the Imaginaries Lab is available for consultancy, speaking, to run tailored workshops, and to collaborate on projects, worldwide. We also run sponsored university design studio projects at Carnegie Mellon.

Please sign up for our newsletter, and learn more about our other projects, at [imaginari.es](http://imaginari.es) or follow us at [@imaginari\\_es](https://twitter.com/imaginari_es)

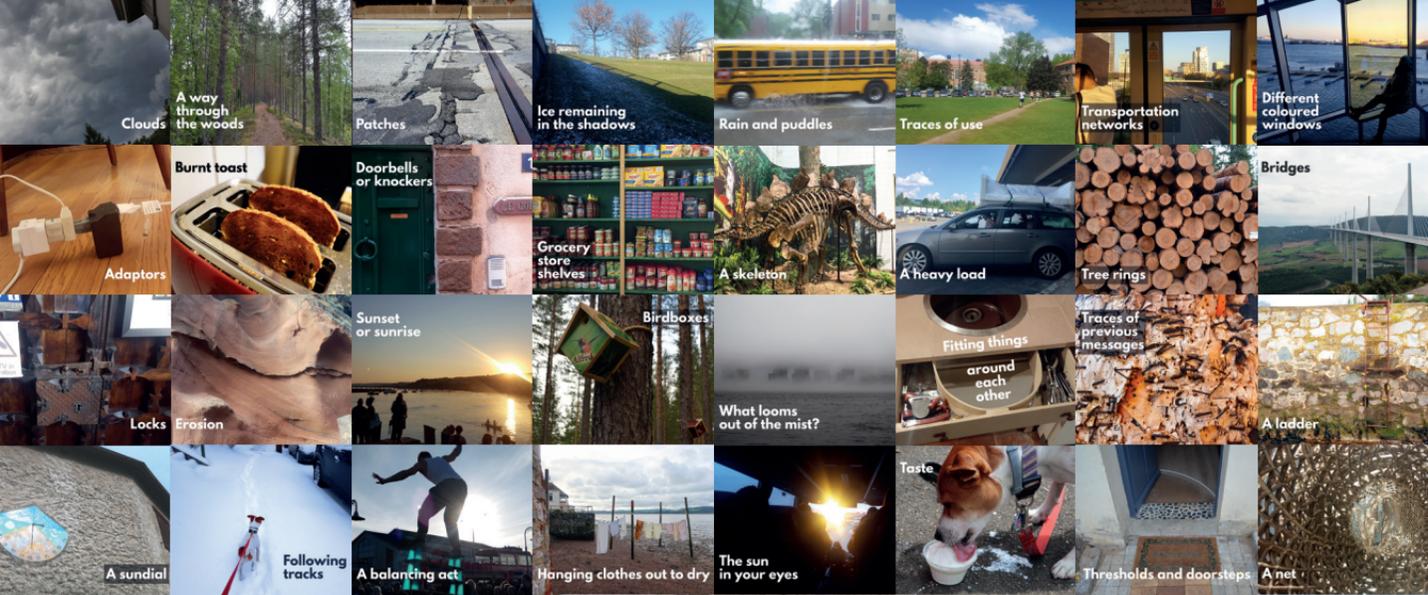
# imaginaries lab

Carnegie Mellon  
Design



PLURALITY  
UNIVERSITY  
NETWORK

*What happens if you physicalise metaphors? This is a model from our Mental Landscapes project, by Delanie Ricketts and Dan Lockton—more details on our website*



Please share, copy, and add to the New Metaphors project at [newmetaphors.com](http://newmetaphors.com)

**imaginaries lab**