



2018

Old rope: Laing's knots and Bateson's double binds in systemic design

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RSD 7, Torino

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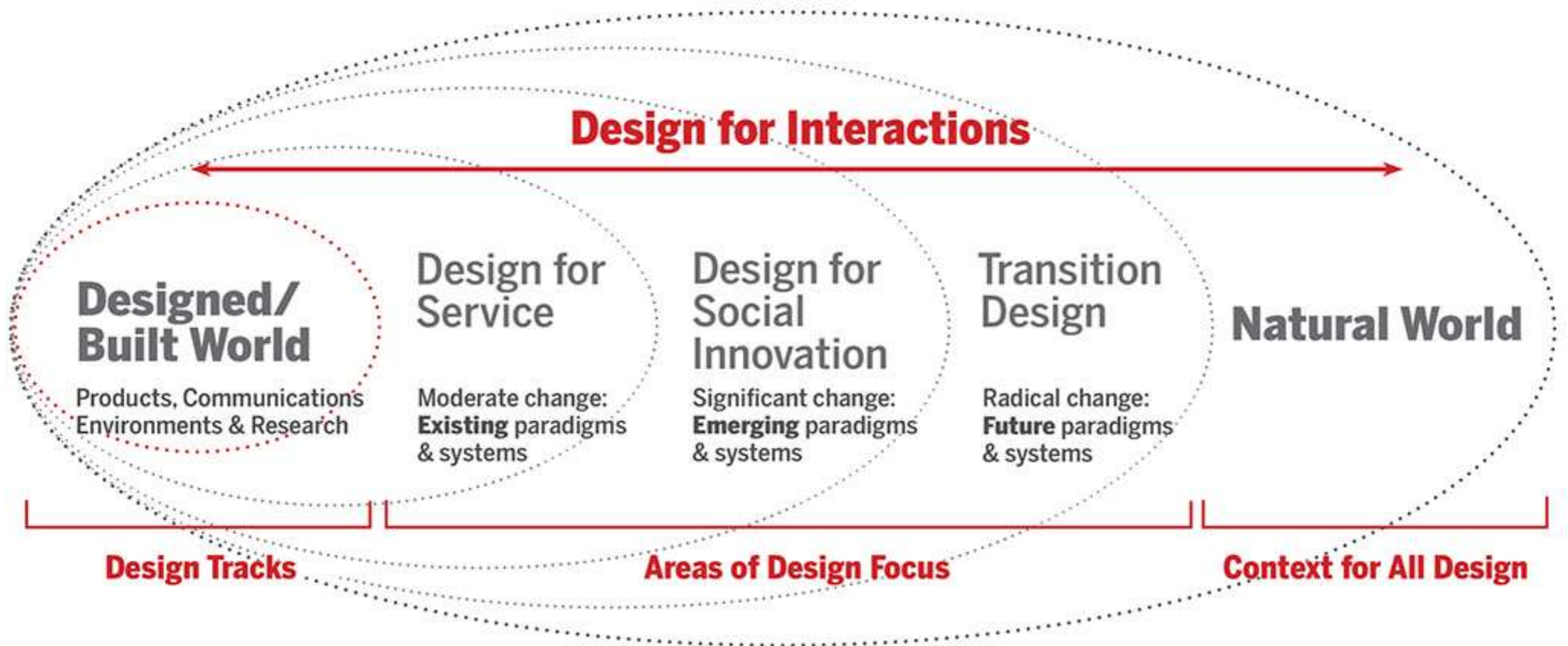
imaginaries lab
Carnegie Mellon

Old Rope: Laing's Knots and Bateson's Double Binds in Systemic Design



Carnegie Mellon School of Design, Pittsburgh, Pennsylvania

Design for Interactions





Royal College of Art, London



Brunel University, London

This image is a comprehensive grid of 48 cards, each detailing a specific behavioral design concept. Each card includes a title, a central image, a key question, and a brief explanatory text or example. The cards are arranged in a 6x8 grid. The concepts covered include:

- Symmetry:** Using symmetry to make elements look related or asymmetry to show difference and focus attention.
- Bundling:** Including something you want users to do along with something they want to do.
- Challenges & targets:** What happens if you set people a challenge or give them a target to reach through what they're doing?
- Choice editing:** Can you edit the choices presented to users so only the ones you want them to have are available?
- Coercive atmospherics:** Can you use ambient sensory effects (sound, light, smell, etc) to make it harder for users to behave in certain ways?
- Collections:** What happens if you encourage users to collect a set of things (friends, activities, places, objects, etc) through using your system?
- Colour associations:** Can you use colour to suggest associations between particular behaviours and outcomes?
- Conditional warnings:** Can you give users warnings based on detecting the error they've made, or might be about to make?
- Converging & diverging:** Can you channel people so they come together (or split up)?
- Decoys:** Can you add 'decoy' choices, making the others (which you want people to pick) look better in comparison?
- Feedback through form:** Can you use the form of your object itself as a kind of interface, giving feedback or suggestive cues?
- Kairos:** Can you give users a suggestion at exactly the right moment for them to change their behaviour?
- Leave gaps to fill:** Can you leave deliberate gaps (in a design, message, etc) which users will want to fill, becoming engaged in the process?
- Matched affordances:** Can you make parts fit only when the right way round, or only with the products they should do?
- Mazes:** Can you get people to follow the path you want them to, on the way to reaching something they want?
- Mimicry & mirroring:** Can your system mirror or mimic a user's behaviour or mood in some way, to increase the engagement a user feels?
- Personality:** Can you give your system a personality or character that engages users, becoming a 'social actor'?
- Poison pill:** Can you arrange things so that an otherwise attractive option has an unpleasant, self-defeating deterrent side-effect?
- Positioning:** Can you rearrange things so people interact with them in the locations you want them to?
- Progress bar:** Can you let users know their progress towards achieving a goal?
- Sousveillance:** Can you give people 'lower down' a hierarchy the ability to observe and monitor the behaviour of people above them?
- Social proof:** Can you show people what other users like them are doing in this...
- Summary feedback:** Can you give users a report on what they've been doing, or...
- Transparency:** Can you (perhaps selectively) reveal what's going on under the surface, or...
- Unpredictable reinforcement:** What happens if you give rewards or feedback on an unpredictable...
- Worry resolution:** Can you help users overcome worry about their behaviour (perhaps...



designwithintent.co.uk

Design with Intent toolkit

A cross-disciplinary design pattern library for behaviour change with products, services and environments; developed through workshops with industry and academia



Obsolescência funcional

Diversidade

Reciprocidade

Proeminência

Ângulos

Você pode
usuários
que rece
favor (p
ou por
usuário
querer

Estes ca
'grátis'
buição
pessoal

O b
com
No t
para

rot

A
in
pe

1.0

Design com Intento

101 padrões para influenciar
comportamentos através do design

Dan Lockton
com
David Harrison
& Neville A. Stanton
Tradução: Luis Oliveira



Requisite Variety

imaginaries lab

Carnegie Mellon

imaginari.es

We're a research studio using design methods to explore and support people's imagining—both new ways to understand, and new ways to live. →

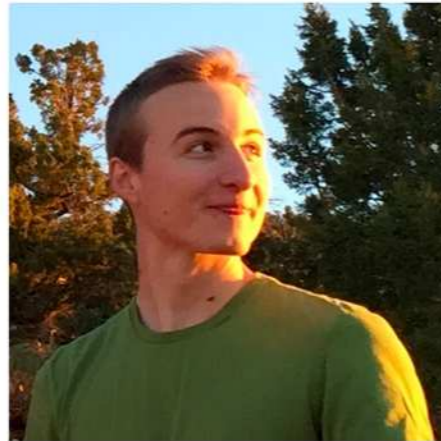


Who we are

Current Imaginaries Lab research team



[Devika Singh](#), Research Assistant
2017-



[Gray Crawford](#), Research Assistant
2018-; MDes thesis student



[Aadya Krishnaprasad](#), Research
Assistant 2018-



[Rachel Gray Alexander](#), Research
Assistant 2018-



[Michelle Chou](#), Research Assistant
2018-



[Saloni Sabnis](#), Research Assistant
2018-



[Dan Lockton](#), Assistant Professor



[Bella](#), Friend of the Lab

using design methods to
understand
how people
understand

using design methods to
help people
understand
in new ways

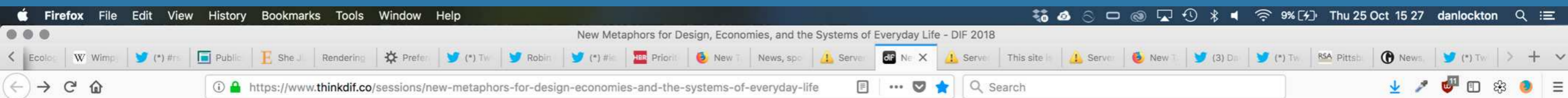
using design methods to
help people
imagine new
ways of living

using design methods to
enable people to change
the behaviour of the
systems they're in

How can we create new metaphors to help people reframe or understand complex ideas?



New Metaphors at the Ellen MacArthur Foundation Disruptive Innovation Festival (online), 9 Nov



6 - 23 Nov, 2018

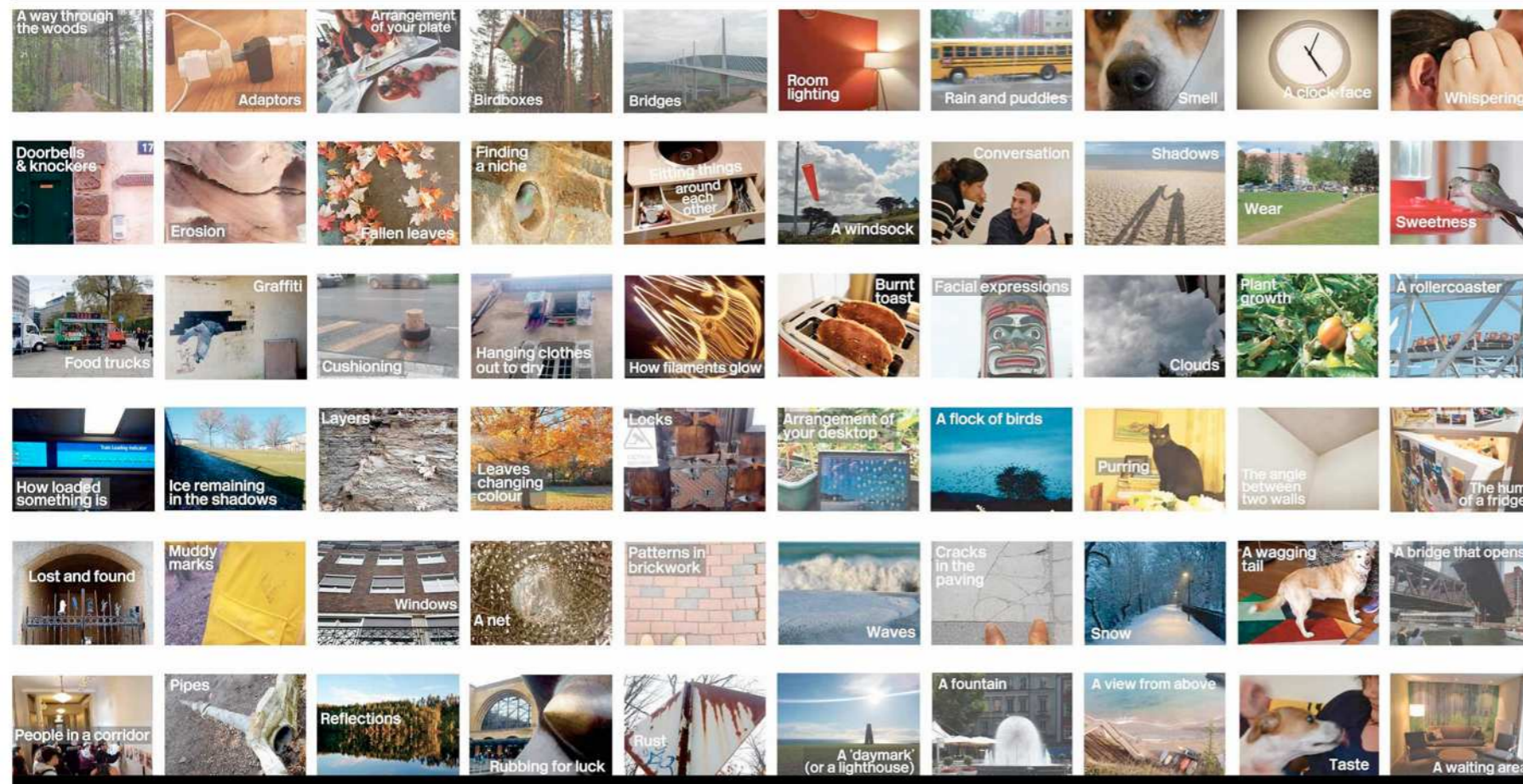
About Schedule Topics

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DIF ON AIR New Metaphors for Design, Economies, and the Systems of Everyday Life

STARTS: 12:00 GMT ON 09 NOV




Devika Singh, Saloni Sabnis, Michelle Chou, Dan Lockton

Stay tuned! This DIF on Air session will be available here at the time and date specified above.

How do people understand local government? (Systems mapping through story construction)





If you could see
(and hear)
electricity in
different ways,
would you
understand it
differently?

(New types of
'qualitative'
interface design)

Shengzhi Wu, Gray Crawford, Devika Singh,
Dan Lockton (2018). 'Electric Acoustic'

Can you use model landscapes to explore how you think about your own life? ('Personal' systems mapping using metaphors)

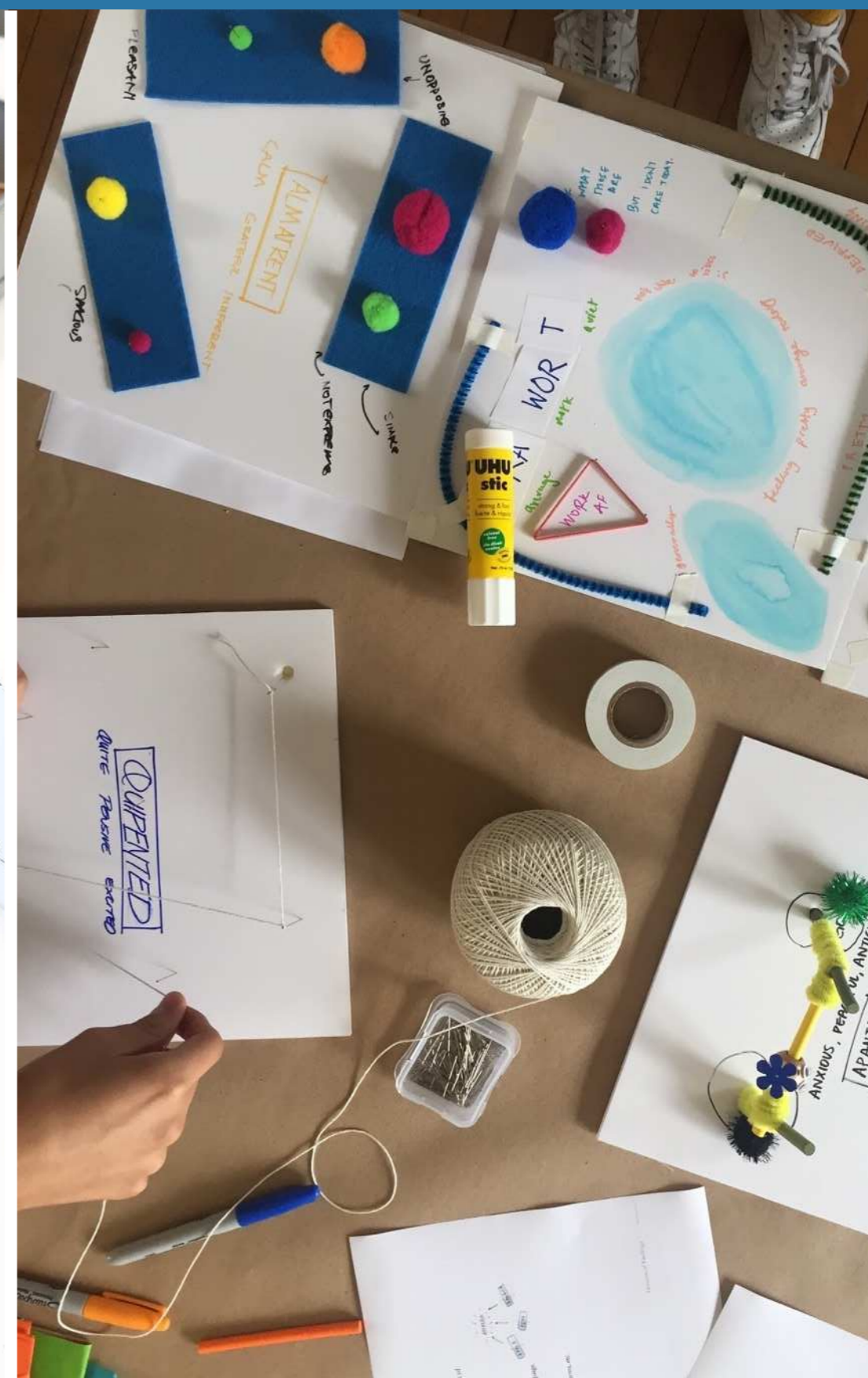


Delanie Ricketts & Dan Lockton (2019).
Mental Landscapes: Externalizing Mental
Models Through Metaphors,
ACM Interactions, to appear

How can we use design methods to enable people to materialise and share their own experiences of mental health?



Laura Rodriguez, Josh LeFevre,
Nowell Kahle, Arden Wolf, Katie Herzog,
Aisha Dev, Kailin Dong, Katie Glass,
Nicole Jin, Soonho Kwon, Jessica Nip



imaginaries

‘If [people] define situations as real, they are real in their consequences’

William Thomas & Dorothy Swaine Thomas
The Child In America, 1928

mental models

heuristics

folk theories

assumed cause & effect links

metaphors

stories

people often act
on imaginaries

people often act on
their models of the
systems they're in

artificial intelligence

automation

**algorithmic decision-
making**

personal data and privacy

social media

'the Internet'

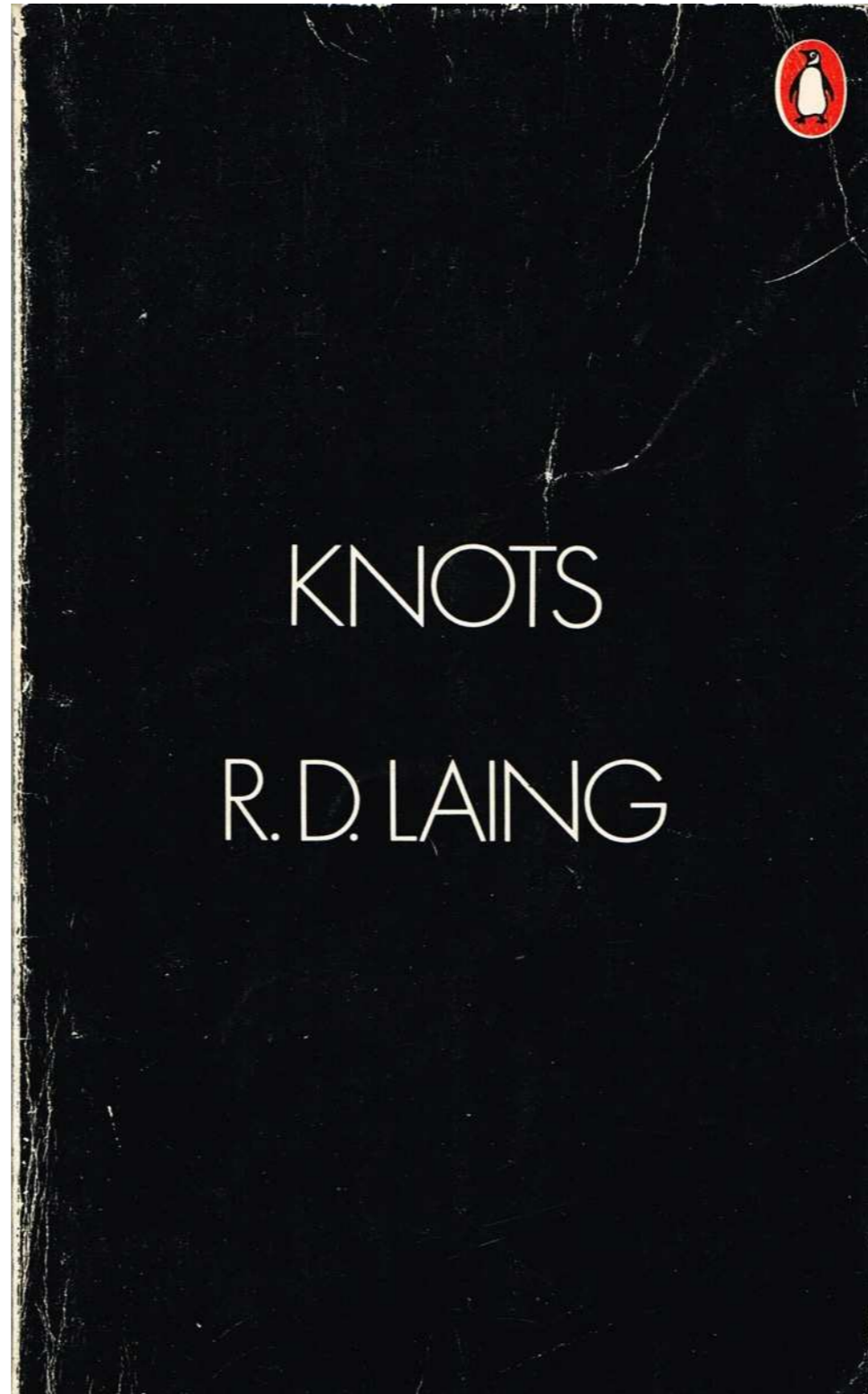
**public health
climate change
energy
resources
social equity
the law
the government
the economy
quality of life**

using design methods to
understand
how people
understand

using design methods to
help people
understand
in new ways

I

They are playing a game. They are playing at not playing a game. If I show them I see they are, I shall break the rules and they will punish me. I must play their game, of not seeing I see the game.



1970



R D Laing
Photo: Daily Mail

I get what I deserve
I deserve what I get.

I have it,
therefore I deserve it

I deserve it
because I have it.

You have not got it
therefore you do not deserve it

You do not deserve it
because you have not got it

You have not got it
because you do not deserve it

You do not deserve it
therefore you have not got it.

You are frightened of being boring, you
try to be interesting by not being interested,
but are interested only in not being boring.

You are not interested in me.
You are only interested that I be interested in you.

You pretend to be bored
because I am not interested
that you are frightened
that I am not frightened

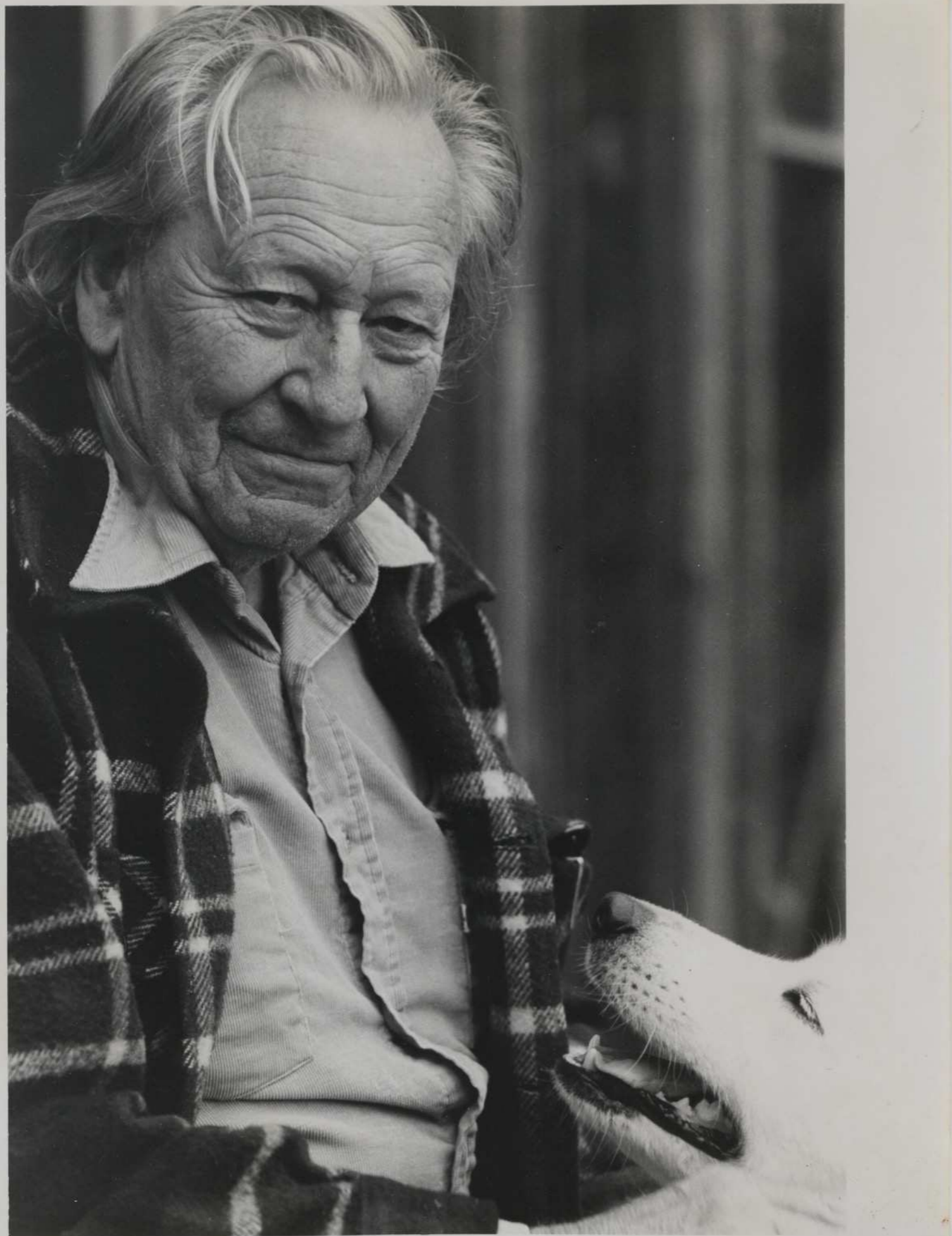


Gordon Pask's 'mind model'
Image: Cybernetics Society

Many of Laing's knots are essentially about **people trying to understand what someone else understands about them**

Or about **how someone understands their relationship with a system**

But that understanding changes how they relate to the system, and the system in turn then changes the relationship



Double binds

(Gregory Bateson)

Contradictory injunctions on a person, often acting at different 'levels' of a system

No right answer; fulfilling one demand means you fail to fulfil the other

Can't opt out, can't resolve it

I am not entitled to what I have

therefore

everything I have
is stolen

because

I'm not entitled to it

therefore

I've stolen it

because

How are knots relevant to design?

One application is in doing user research around **people's understandings of artificial intelligence, algorithmic profiling, and 'smart' technologies** (whatever that means to people)

Thinking about things that think about how we think



What does it look like when we start having these kinds of thoughts about other actors – not just humans?

And when they start having these kinds of ‘thoughts’ about us?

(What ‘models of people’ are being designed into algorithms?)



**More generally,
though:**

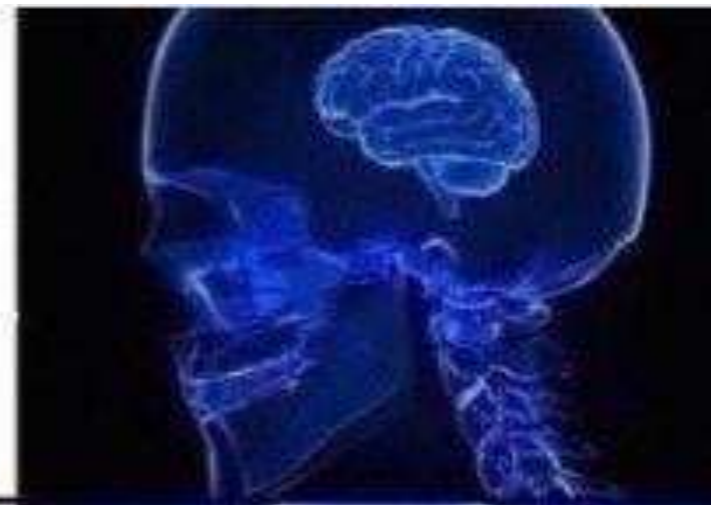
**Knots offer a way of
enabling recursion,
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systems to be
explored through a
variety of narrative
formats**

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though:

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**Opening a
snapchat from
someone you're
interested in
romantically**



**Waiting to open
the snapchat to
seem like you don't
care**



**Opening their
snapchat and not
responding for days
to seem like you
don't care**

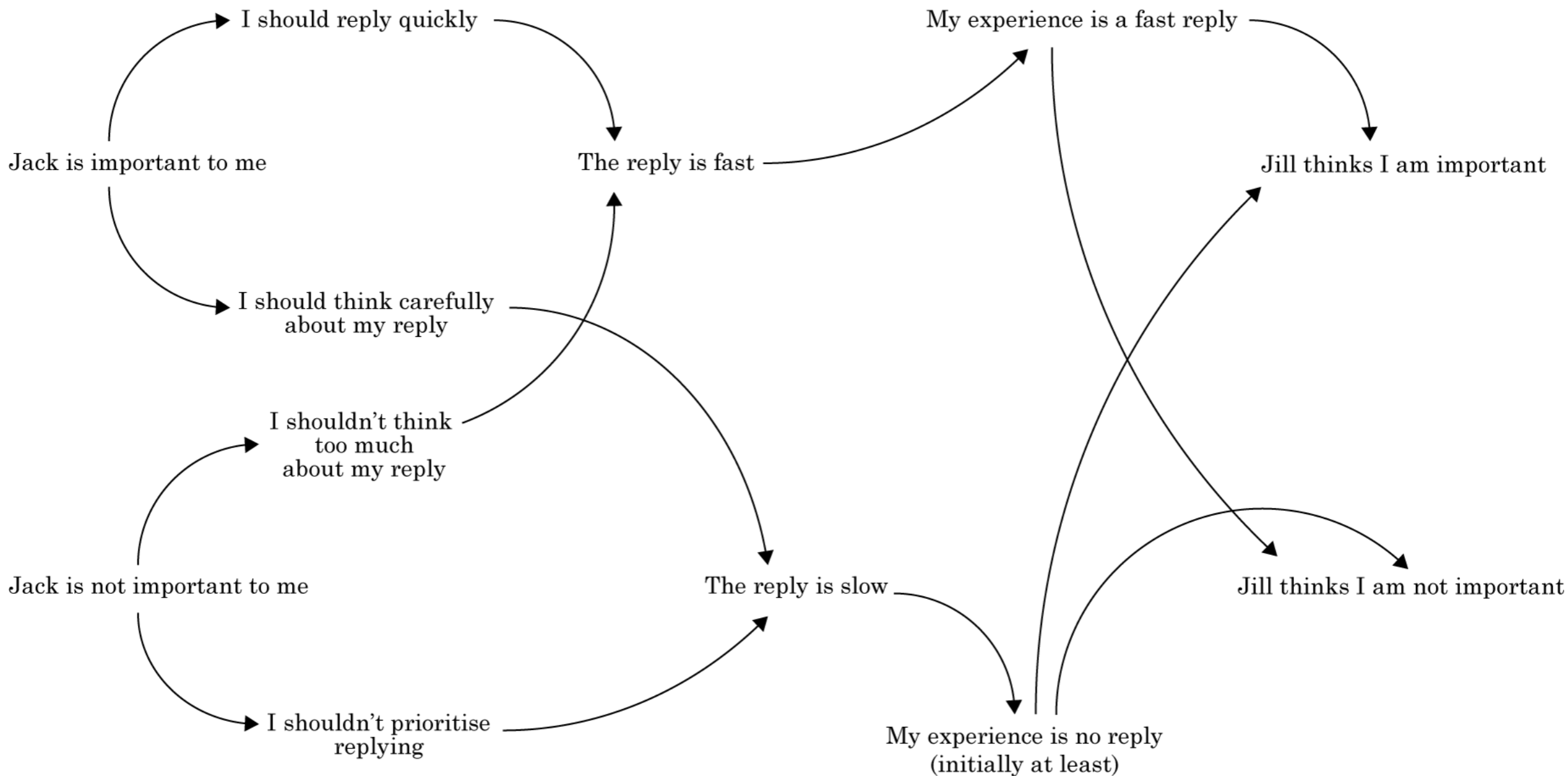


**Opening their snapchat and typing in
the text block so that they get a
notification saying that you're typing
but then erasing your text and not
responding for days so that they
think you were going to respond but
changed your mind and decided not
to and they overanalyze it**



JILL'S EXPERIENCE

JACK'S EXPERIENCE



‘Your experience of me is invisible to me
and my experience of you is invisible to
you...

[but] I cannot avoid trying to understand
your experience, because although I do
not experience your experience...

I experience you as **experiencing**”

RD Laing, The Politics of Experience, 1967

Jill likes Jack

Jill *hopes* Jack likes Jill

Jill hopes Jack thinks Jill likes Jack

Jill *worries* Jack thinks Jill doesn't like Jack

Jill worries Jack thinks Jill likes Jack too much

Jack doesn't like Jill

Jack hopes Jill doesn't like Jack

Jack hopes that Jill likes Jack

even though he doesn't like her

Jack doesn't like Jack

Jill likes Jack

Jill *hopes* Jack likes Jill

Jill hopes Jack thinks Jill likes Jack

Jill *worries* Jack thinks Jill doesn't like Jack

Jill worries Jack thinks Jill likes Jack too much

Jack doesn't like Jill

Jack hopes Jill doesn't like Jack

Jack hopes that Jill likes Jack

even though he doesn't like her

Jack doesn't like Jack

thinks
hopes
worries

KNOTS IN BEHAVIOUR CHANGE

My attitude must be wrong

because my behaviour is wrong

because my attitude is wrong

How can I change?

I want to change

does that mean my attitude is right?

then I don't need to change

but I want to

I will change my behaviour

when everyone else does

otherwise there's no point

KNOTS IN THE SMART HOME

YOU I don't want you to know more about me

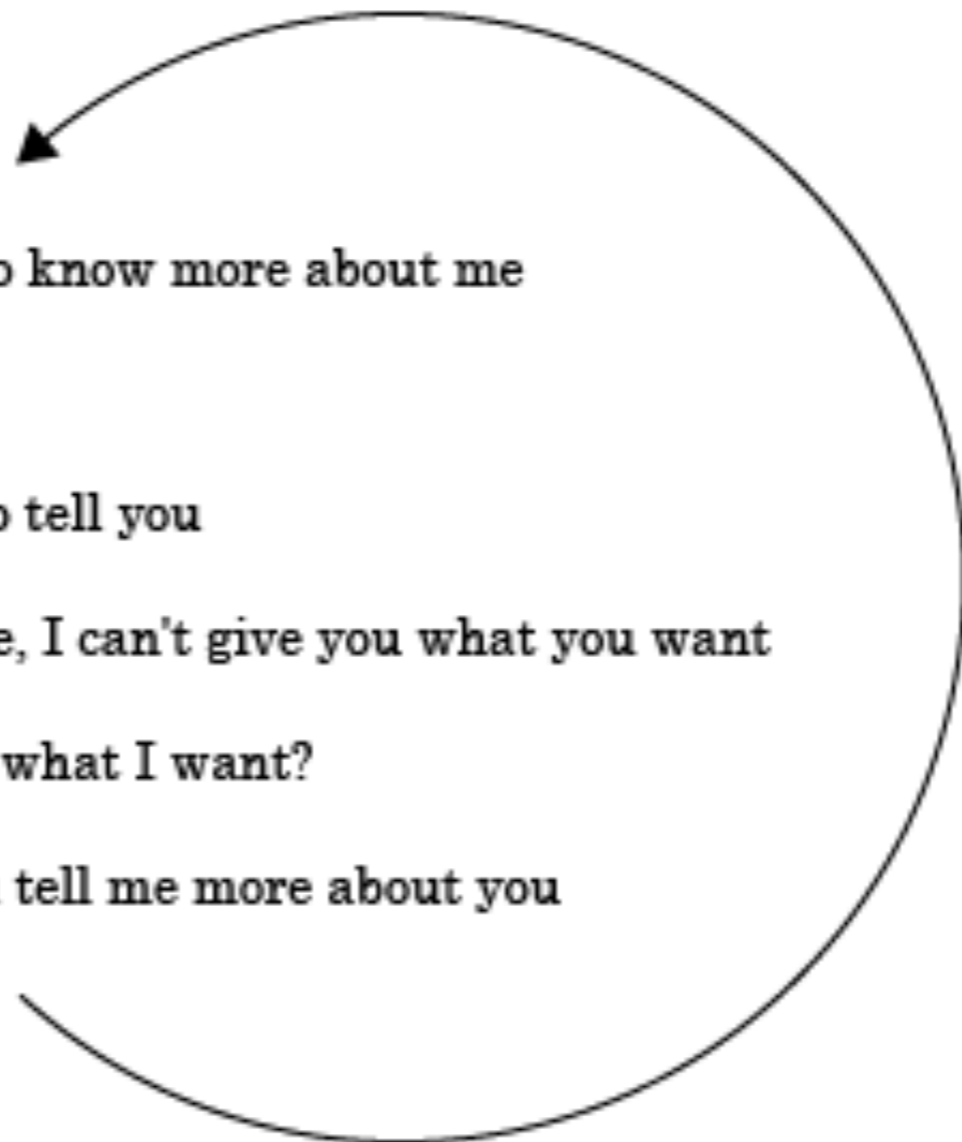
YOUR HOME Why?

YOU I shouldn't have to tell you

YOUR HOME If you don't tell me, I can't give you what you want

YOU How do you know what I want?

YOUR HOME I don't, unless you tell me more about you



KNOTS AND CLICKBAIT

It's shocking
so I click on it

It's shocking
so I click on it

|
|
|
|
|
|
|

It's not shocking
any more

We want them to click

It's shocking
They click on it

It's shocking
They click on it

|
|
|
|

so show them shocking
things

Teaching this to design students is a way of adding to their conceptual vocabulary, but what about research with people?

How can we use knots (and double binds) as a concept to help people explore their relationships with systems?

Can we untangle them Should we? (Is it inherently 'wicked'?)

What could it look like to turn knots into a form of probe or interview tool?

Could we actually physicalise it with string?

Data Physicalisation



KNOTS AND THE SMART FRIDGE, OR THE OLD SAUSAGE*

I am vegetarian
I don't like sausage
My friend is not
She came to stay
She brought sausage
She left some

My fridge has sausage in it
I don't eat it

My fridge has sausage in it
I don't eat it

My fridge has sausage in it
I don't like sausage

Your fridge has sausage in it

Your fridge has sausage in it

Your fridge *always* has sausage in it
You must really like sausage

Let me order you some more



Thank you!

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[imaginari.es](https://www.imaginari.es)

danlockton.com

imaginari.es lab
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