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

Lockton, Dan

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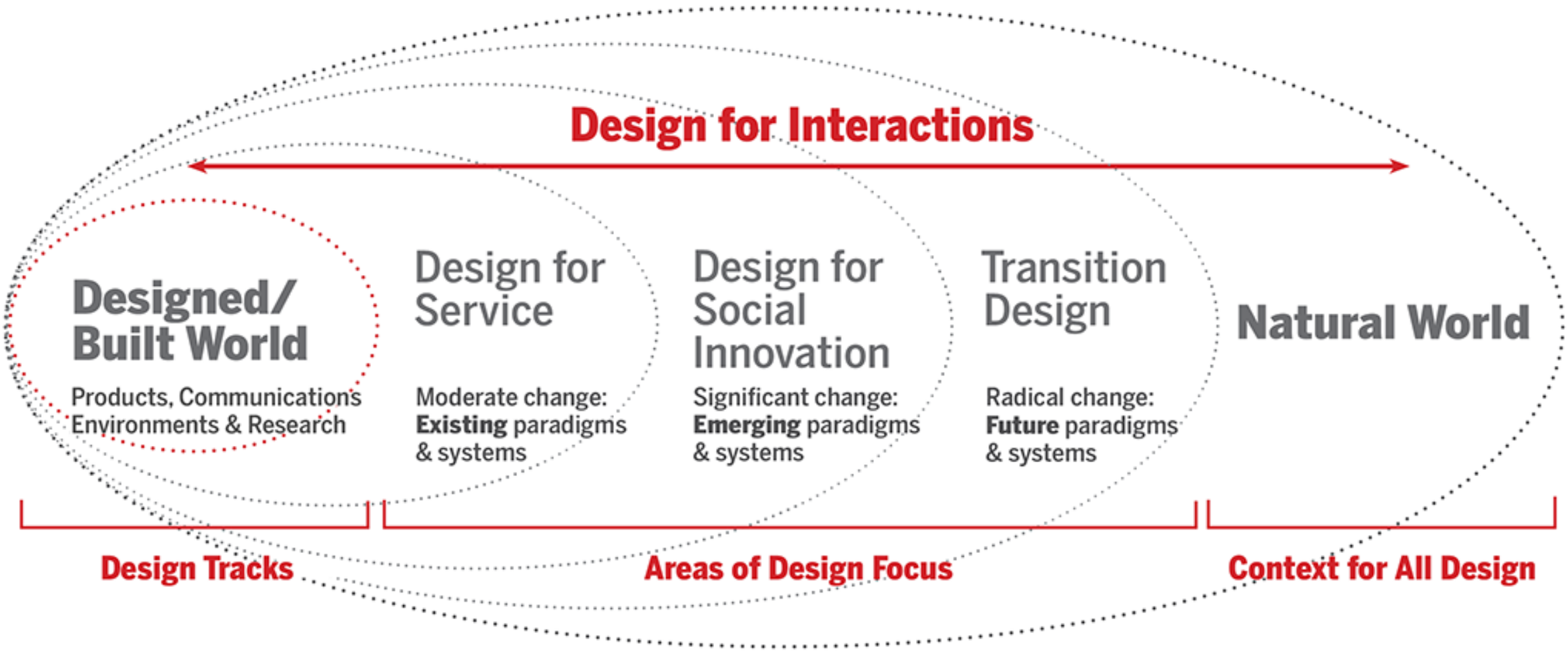
RSD 7, Torino

Dan Lockton
@danlockton

imaginaries lab
Carnegie Mellon

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

Carnegie Mellon School of Design, Pittsburgh, Pennsylvania



Carnegie Mellon Design

transitiondesign.net

Royal College of Art, London

Brunel University, London

symmetry to make elements look related, or asymmetry to show difference and focus attention?

users' expectations or assumptions by controlling the reference points they have?

angle things so some actions are easier than others?

an extra 'confirmation' step before an action can be performed?

users by helping them reduce feelings of guilt about their behaviour?

Bundling

Can you include something you want users to do, along with something *they* want to do, so *both* get done?

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 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

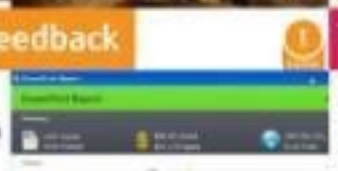
Can you give people 'lower down' a hierarchy the ability to observe and monitor the behaviour of people above them?

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,

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

Reciprocidade

Proeminência

Ângulos

Design com Intento

101 padrões para influenciar comportamentos através do design

1·0

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. →

imaginaries lab
Carnegie Mellon

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

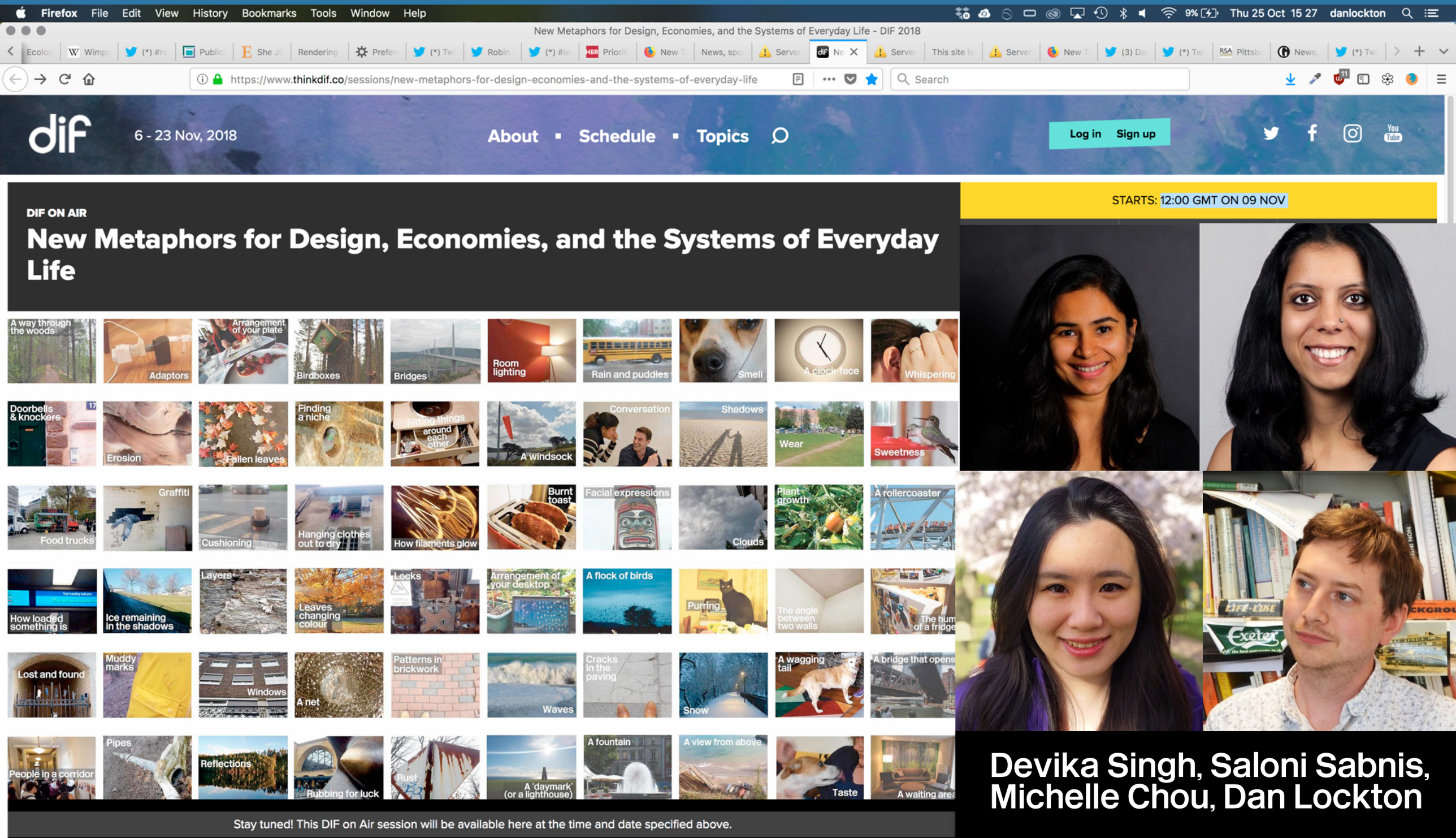
using design methods to help people understand in new ways

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



Devika Singh, Saloni Sabnis, Michelle Chou, Dan Lockton

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?

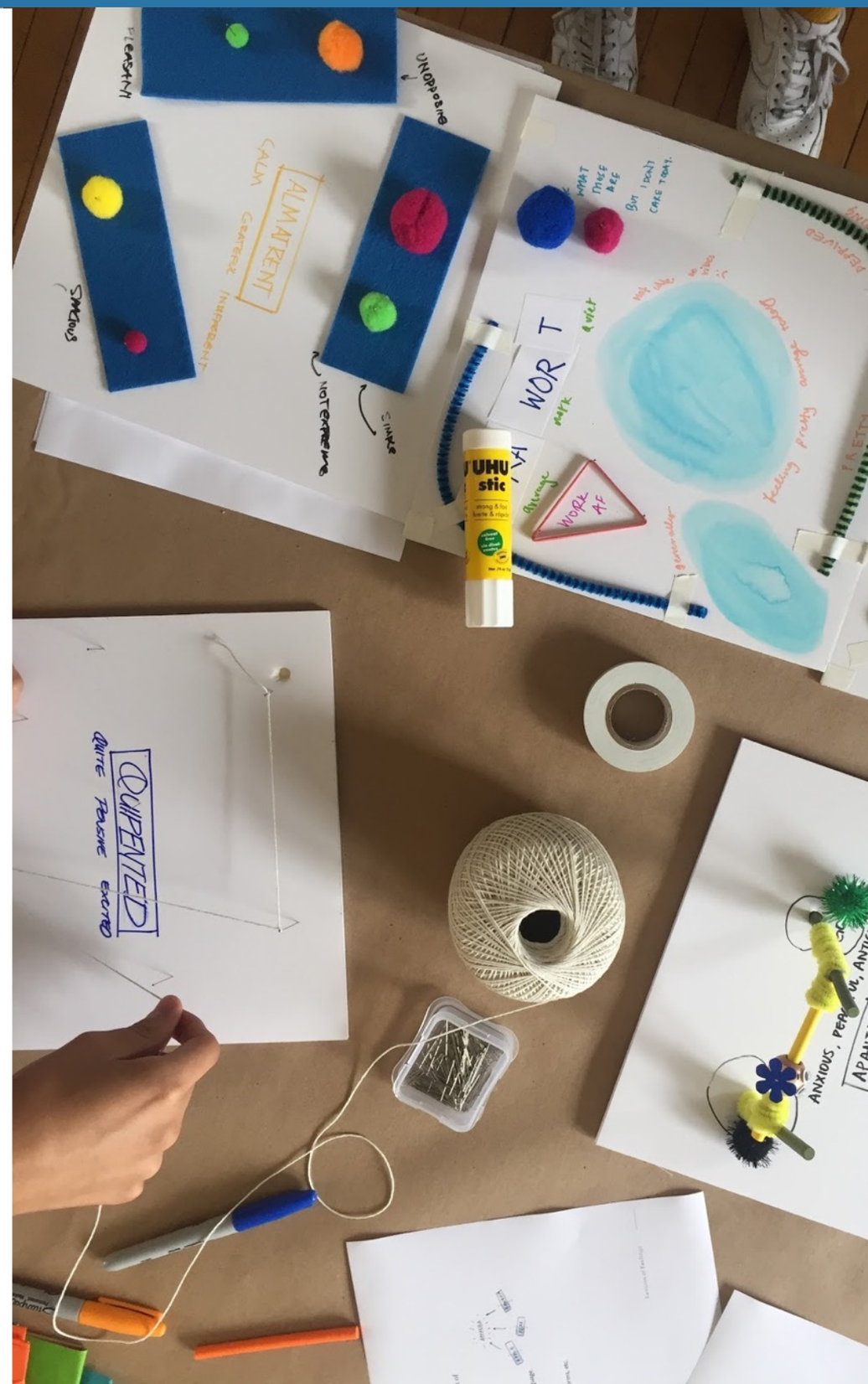
(New types of ‘qualitative’ interface design)

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’

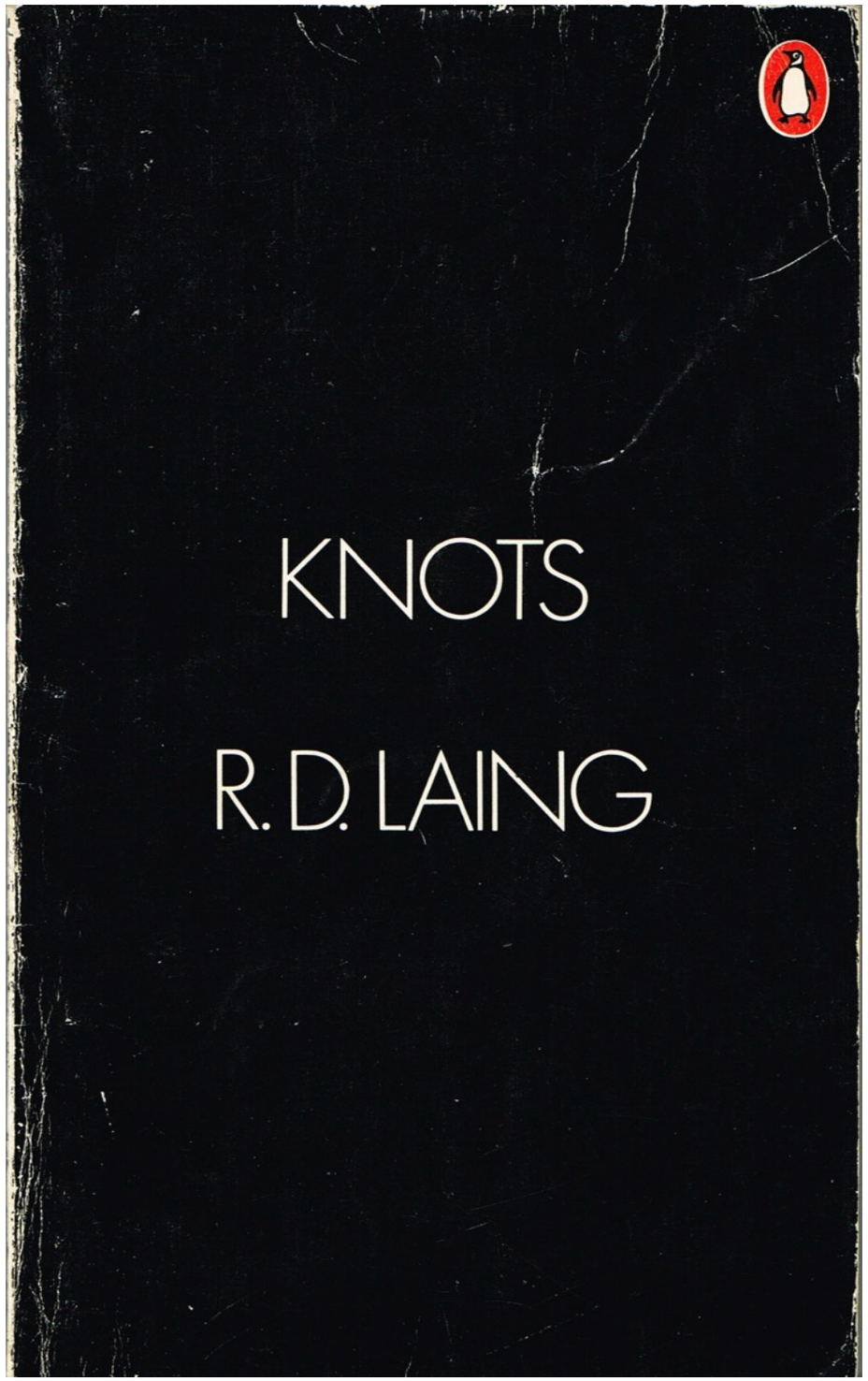
public health
climate change
energy
resources
social equity
the law
the government
the economy
quality of life

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.

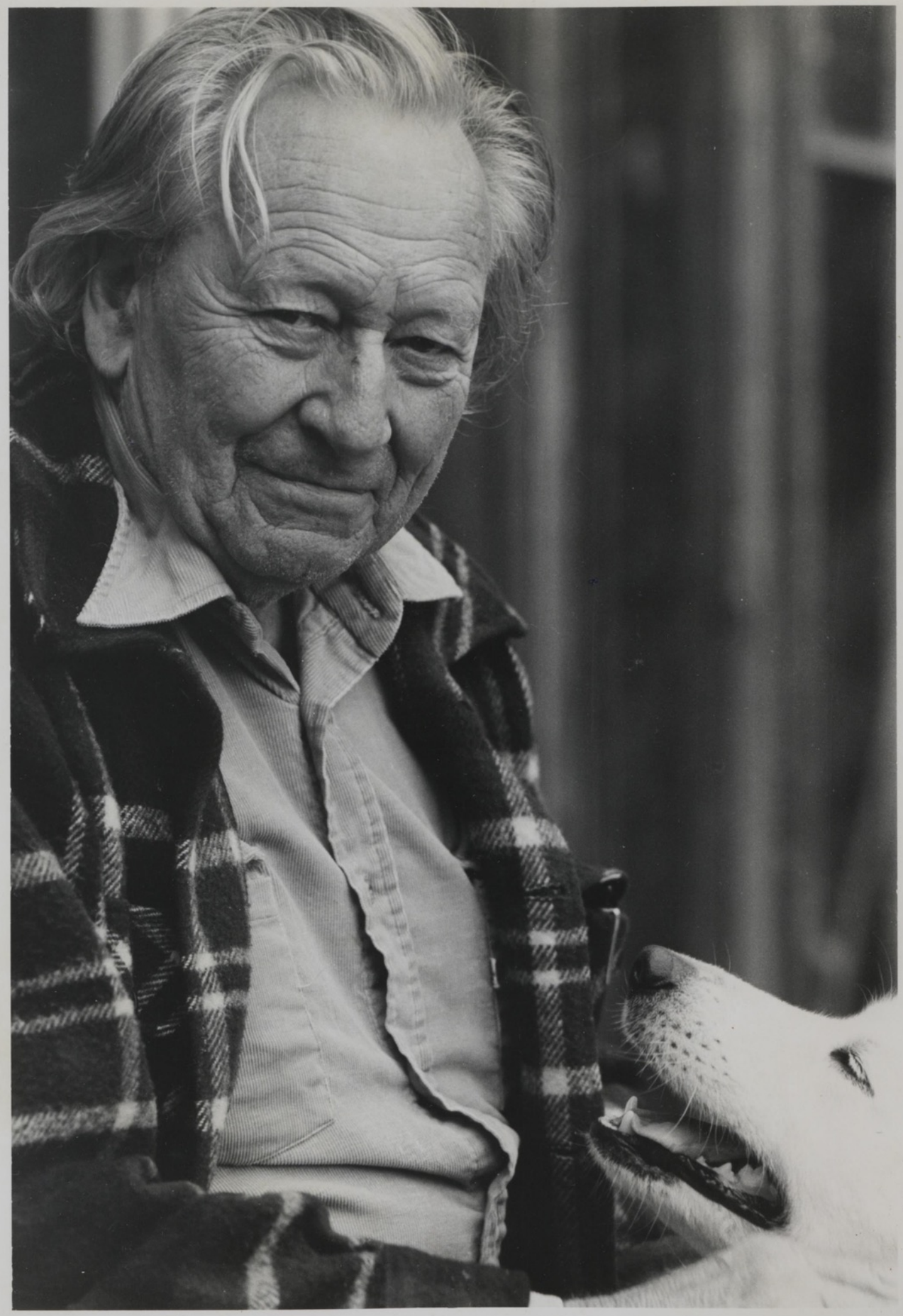
You pretend to be bored
because I am not interested
that you are frightened
that I am not frightened

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



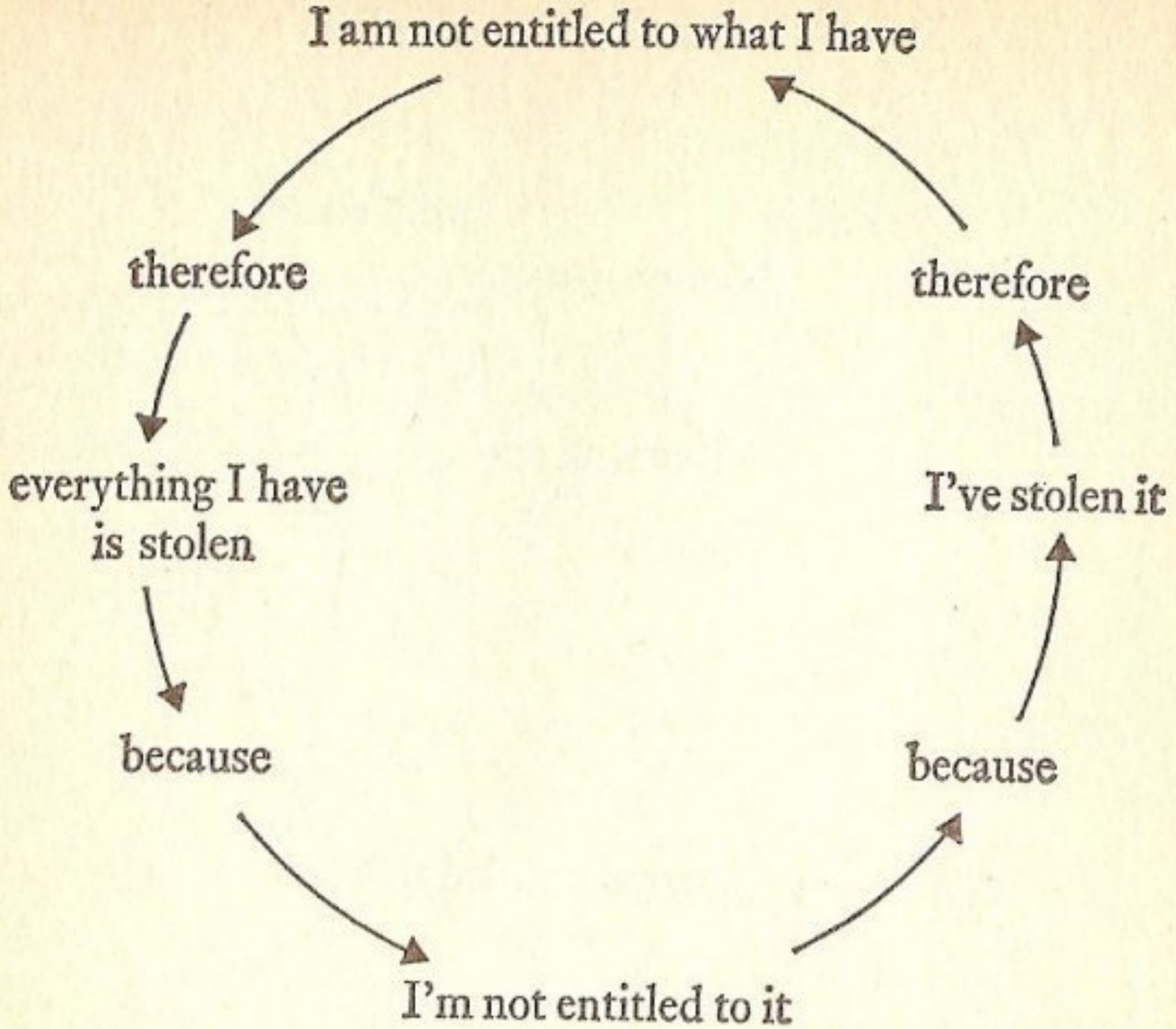
Double binds

(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
therefore
everything I have is stolen
I've stolen it
because
because
I'm not entitled to it

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, reflexivity, theory of mind, and second-order effects in systems to be explored through a variety of narrative formats

More generally, though:

Knots offer a way of enabling recursion, reflexivity, theory of mind, and second-order effects in systems to be explored through a variety of narrative formats

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 thet 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

Jack is important to me

I should reply quickly

I should think carefully about my reply

I shouldn't think too much about my reply

Jack is not important to me

I shouldn't prioritise replying

The reply is fast

The reply is slow

My experience is a fast reply

My experience is no reply (initially at least)

Jill thinks I am important

Jill thinks I am not important

‘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

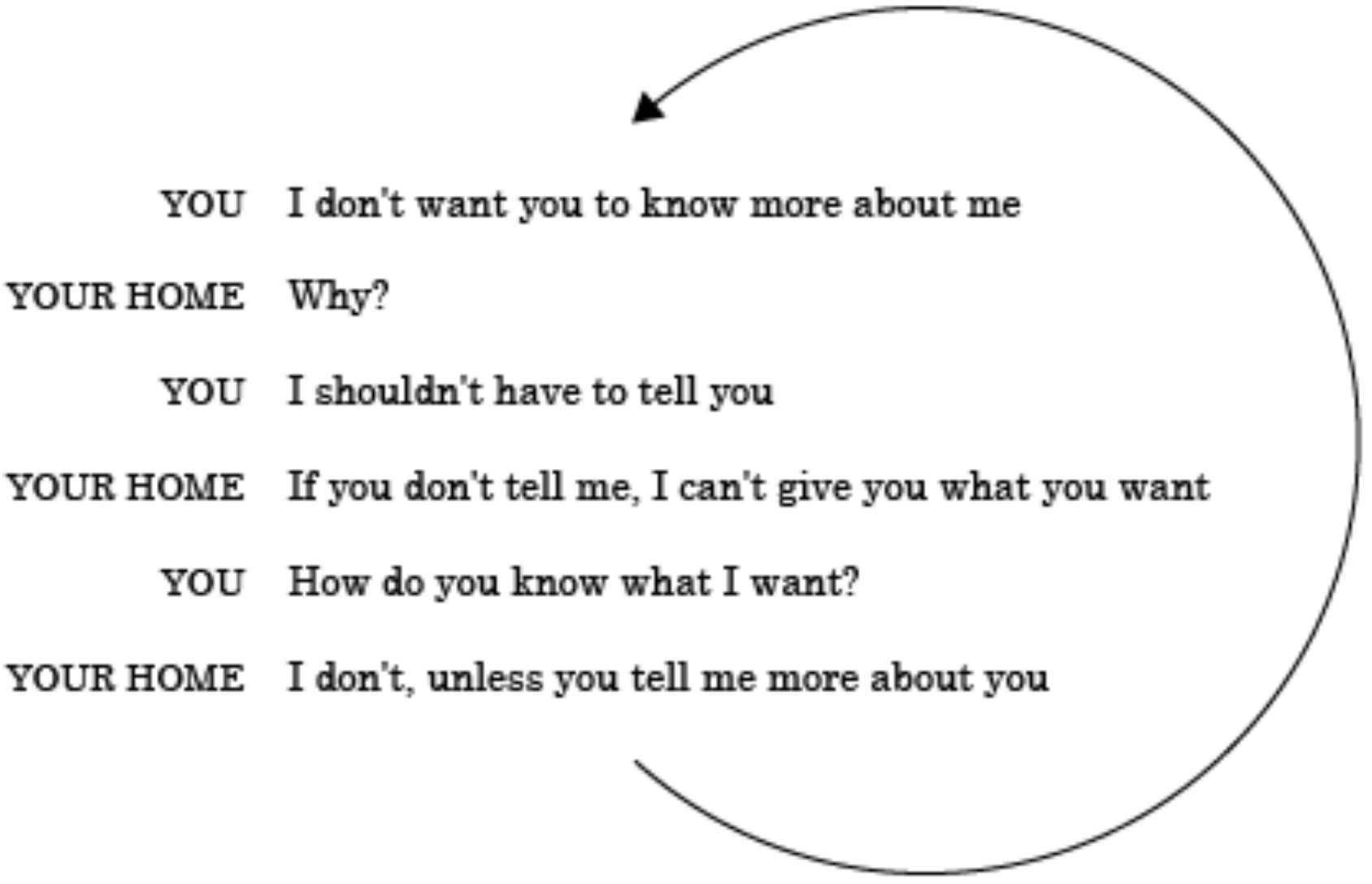
but I want to

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

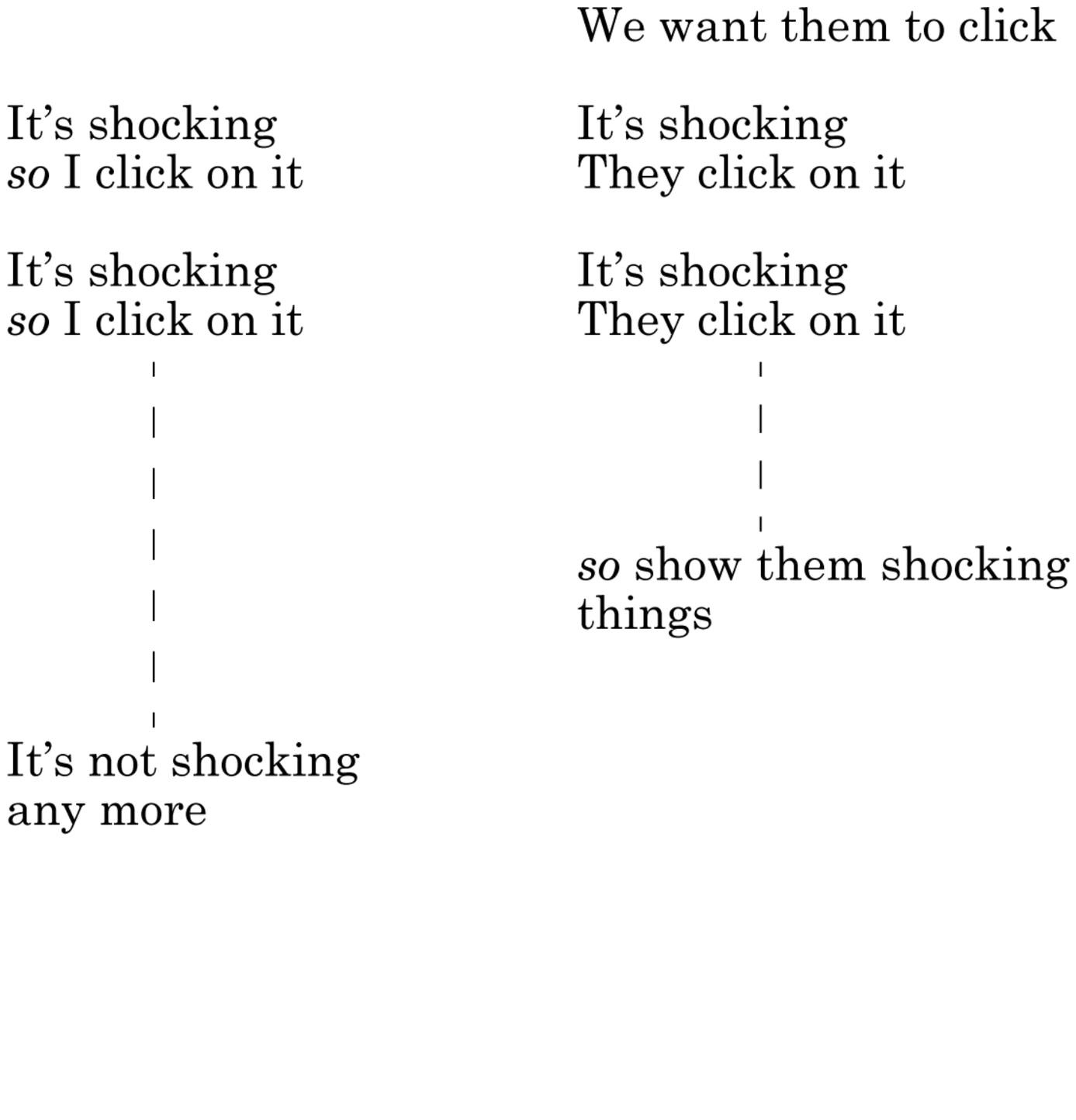
YOUR HOME Why?

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


We want them to click
It's shocking
so I click on it
It's shocking
They click on it
It's shocking
so I click on it
It's shocking
They click on it
so show them shocking
things
It's not shocking
any more

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

New Ways To Think, Fall 2018

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

Based on a case in Delfina Fantini van Ditmar's PhD, *IdIoT: Second-order cybernetics in the 'smart' home*, 2016

Thank you!

danlockton@cmu.edu
Twitter: @danlockton

imaginari.es
danlockton.com

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