

# Connected Communities & Digital Futures

*Part of Unbox Labs: Caravan edition 2016*

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The UnBox platform offers a space for experiential learning that builds on emerging contexts and cases of multidisciplinary, creative collaborations that are rooted in people-centric approaches.

Incepted as an annual festival in India in 2011, and a fellowship programme since 2012, UnBox has prompted new thought and partnerships at the intersections of design, art, culture, social transformation and enterprise.

The UnBox LABS provide a form of 'controlled experiments' - in harnessing ideas within collaborative, people-centered settings. We believe this approach to be essential for driving sustainable and inclusive resolutions to the complexities that our collective futures will throw up.

The models of collaboration that the labs seek to foster are new and experimental.

*A book about  
Connected Communities  
and Digital Futures as seen  
through the lens of the Unbox  
Labs: Caravan edition 2016*

mozilla

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# A brief history of Caravanserais

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Angus Stewart

The English word Caravanserai, comes from a Turkish original, Kervansaray, which means “caravan-palace”. Strangely, the Turks call such a place a “khan”, not to be confused with the Mongol word “khan” that means ‘king’.

A kervansaray would be a place like a big walled castle for merchants. In fact, archaeologists sometimes find it tricky to tell the two apart—as at Aqaba in Jordan, when it may be that the site shifted between kervansaray and Ottoman army fortress.

*A kervansaray would have big stables and storerooms for the animals and goods, a bathhouse, kitchens, prayer hall, etc. But the centre would be a courtyard—for people to talk, gossip, and tell stories.*

Rulers who wanted a good reputation—and the money that could be got from encouraging trade, which could be taxed—would build new kervansarays, or sponsor older ones. So a network of these buildings gradually grew, following the main trading routes from Anatolia through Iran into Central Asia. These were secure stopovers, guarded and locked at night. A merchant inside would be safe from robbers and wolves. They were fortified motels.

It wouldn't just be merchants either. There were people who were just interested in travel—like Ibn Battuta in the 14th century, or Evliya Çelebi in the 17th century, who left accounts of their travels. Or pilgrims—Christians heading to Jerusalem from Central Asia, or Muslims heading to Mecca, or, when it was safe, Buddhists heading between China, Tibet and India. Or missionaries—like the Franciscan friars sent out to China, Central Asia and India in the later 13th, early 14th centuries (John of Montecorvino was made Archbishop of Khanbalig (“King’s Town” = Peking) in the early 14th century). Or government agents—like the Chinese officials sent out to help run Persia in the C13/14, such as Bolad Chiensang, who told the great Persian minister and historian Rashid-al-Din about Chinese history and science, or the others who persuaded the Persian ruler in the 1280s to introduce paper money (the economy collapsed overnight). Or it might be scholars looking to study with experts across the region; or storytellers, artists, or slaves. —

# **Caravans**

## *Past, Present, Future*

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### **Why a Caravan**

*Babitha George*

### **We take the Golden Road to Aberystwyth**

*Andrew Prescott*

### **An Epic Meeting of Two Worlds**

*Ayaz Basrai*

### **Slow Convenings**

*Michelle Thorne*

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### **Fragments of (Dis)Connection**

*Annette Mees*

# Why a caravan

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*Babitha George*

UnBox is a platform that showcases multi-disciplinary projects and conversations. We have explored multiple formats over the years. And much of UnBox's evolution has been through conversations and collaborations with friends and partners across the world.

In its previous edition in 2014, the UnBox LABS brought together a diverse bunch of participants to organically form teams and evolve projects together. This year, we wanted to bring together a group of friends and partners (old and new) to spend two weeks together at the beautiful National Institute of Design (NID) campus, in the city of Ahmedabad to seed dialogues and ideas that could be built upon and evolve further in the coming months and years. This change in format was brought upon by the realisation that we want to free the LABS from the restrictions of specific time and people - to open it up to a slower, more on-going process and to continue inviting people into its fold.

We deliberated for a while about what this edition of the LABS ought to be called. After toying with a number of options, we came upon Caravan. India has had a long history of trade routes and journeys within the sub- continent as well as with the world at large. And caravans have been a big part of this. Ahmedabad in particular, situated in Gujarat, is at convergence of the trade routes over land and sea for several years. The word itself seemed to be brimming with possibilities and well encapsulated the tone in which we wanted to set a safe but challenging space for this edition of the LABS.

As a group together over the two weeks, we shared an open emergent journey, where we kept each other company while also being able to step away at times and venture on our own. The caravan had people staying on over the course of the entire journey and several others joining in at different points, similar to what happens in the caravans of lore.

*We built the format of the caravan as a space to take some time off, nascent ideas (or well-thought out ones) with each other and immerse deeply in the context around us.*

Like in any caravan, the only ask we had of participants was for them to come with an open heart and an open mind, and together we would make sure it is an adventure!

This book is a small mirror to this journey we embarked on together; it has reflections from various participants on what they learnt, and what they seek to take back into their own worlds. ■

# We take the golden road to Aberystwyth

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*Andrew Prescott*

It is a windy, cold, breezy February Sunday on the west coast of Wales, about ten miles south of Aberystwyth. I am awaiting the arrival of the next winter storm, Imogen, and wondering if it will disrupt my journey to London. My friends Jon and Irini and the lovely people from UnBox have asked me to write something about caravans and silk routes. It all seems a long way away and impossibly remote.

My scholarly interests are, I apologetically admit, focused on Britain. I adore exploring the libraries, archives and museums of Britain, and part of my enthusiasm for digitisation is because it gives new ways of exploring and enjoying those archives. For me, the exploration in late middle age of fresh archival and bibliographical vistas in Wales, Scotland and other parts of Britain have been as fascinating an excursion as I could imagine. As I get older, all I want to do is to burrow more deeply into those archives and to try pulling together the things I have found.

But I am writing here in the land celebrated by George Borrow as 'Wild Wales'. Borrow's writings on the Romani people helped popularise the romantic image of the caravan and fostered the early twentieth century enthusiasm for the idea that caravans might take us back to a simpler, purer way of life. I don't know what Borrow would make of the luxury caravans that rush through our village in the summer or the mobile home parks that are dotted along the coast. I don't think he imagined that they might be his most distinctive legacy to Wales.

As a teenager I was a great enthusiast for the music of Frederick Delius, to which I was introduced by Ken Russell's marvellous film, *Song of Summer* (1968). Delius wrote the incidental music for a tragic play by the poet James Elroy Flecker called *Hassan*, which is one of the most lyrical expressions of that phenomenon defined by Edward Said as 'Orientalism'—a patronising and infantilising Western view of Eastern cultures. Flecker's play concludes with a chorus as two main characters, disillusioned with the capriciousness and cruelty of court life in Baghdad, decide to join a caravan train on the Golden Road to Samarkand.

*We easily underestimate the importance of these older forms of connectivity—the Romani caravans that crisscrossed Europe in the*





Entrance to the  
'cave' at Grogythan,  
Aberystwyth, beneath  
the National Library  
of Wales




*fifteenth century, the camels and caravans that connected east and west across the silk roads. It is easy to imagine both east and west as impossibly isolated until modern forms of communication such as the telegraph, railroad and Internet intervened. At an early time, the caravan connected remote areas like Afghanistan to the ports of Europe, and the sea connected places like Wales and Ireland to the wider world.*

Manuscripts from Wales and Ireland show us how the caravan brought light and colour to the west from these countries at the earliest time. The deepest blue used for colouring in the Middle Ages was prepared for the precious stone lapis lazuli, mined in Afghanistan and brought by camel and caravan to Europe. The colour was known as ultramarine, because it came from beyond the sea. Michelle Brown has pointed out that colouring from lapis lazuli can be found in tenth-century illuminations added in England to an Irish pocket gospel book<sup>1</sup>, preserved in the British Library. The deep blue in illuminated manuscripts preserved in the National Library of Wales is also derived from lapis lazuli brought by caravan from the east.

But the connections between Aberystwyth and the Silk Road run deeper still. Dunhuang, a frontier town on the edge of the Gobi desert in northwest China, was a major stop on the Silk Road. Close to Dunhuang are hundreds of Buddhist caves. In 1900, it was found that one of the caves contained a huge Buddhist library, which had been sealed up in the cave at the end of first millennium CE. In a series of expeditions, thousands of ancient manuscripts were retrieved from this cave, and taken to libraries in London, France, Russia, Germany, Japan, Korea and China. In London, the material taken from Dunhuang by Sir Aurel Stein contains some of the British Library's most famous Chinese treasures. The huge International Dunhuang Project<sup>2</sup>, a remarkable collaborative international digitisation project, is using digital imaging to reassemble and reintegrate the material from Dunhuang. Among the items found by Stein at Dunhuang is the Diamond Sutra<sup>3</sup>, the oldest dated printed book in the world, over 1300 years old.

During the First World War, there was a threat of air raids on the British Museum building, and the decision was taken to move some materials to the National Library of Wales in Aberystwyth, including the material Stein had sent from Dunhuang. In 1918, Stein was writing a book about his discoveries in his retreat on the Kashmiri alpine hillside of Mohand Marg. He received a letter from Lionel Barnett, the Keeper of Oriental Manuscripts and Printed Books at the British Museum, who reported the safe arrival of these Silk Road treasures in Aberystwyth, and described how: *In one respect I am (for the time being) like you: I am on the top of a hill. The National Library of Wales has been built with fine judgment on the summit of the hills which surround Aberystwyth in a semicircle, so that we have on the one side the sea in all its glory and on the other the everlasting hills, green and purple.*<sup>4</sup>

Thus, for a time the world's oldest dated printed book came from Dunhuang to Aberystwyth. It was to return again, for during the Second World War, many of the British Museum's greatest treasures were stored in specially constructed air-conditioned caves beneath the National Library of Wales<sup>5</sup>. The entrance to the caves can still be seen on the hillside beneath the library. Joyce Morgan has described how the Stein collection came to Aberystwyth in the Second World War in this fascinating article on 'The Stein Collection and World War II'<sup>6</sup>.

Connectivity runs deep, adopts surprising shapes and links disparate points, as the story of the Silk Road, the oldest printing and Aberystwyth makes clear. I hope the UnBox caravan makes similar links and forges new connectivities. 

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1 [britishlibrary.typepad.co.uk/digitisedmanuscripts/2013/12/the-irish-pocket-gospel-book.html](http://britishlibrary.typepad.co.uk/digitisedmanuscripts/2013/12/the-irish-pocket-gospel-book.html)

2 [idp.bl.uk](http://idp.bl.uk)

3 [en.wikipedia.org/wiki/Diamond\\_Sutra](http://en.wikipedia.org/wiki/Diamond_Sutra)

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4 [britishmuseum.org/pdf/14-Morgan%20pp.pdf](http://britishmuseum.org/pdf/14-Morgan%20pp.pdf)

5 [news.bbc.co.uk/2/hi/uk\\_news/wales/mid\\_/7820055.stm](http://news.bbc.co.uk/2/hi/uk_news/wales/mid_/7820055.stm)

6 [britishmuseum.org/pdf/14\\_Morgan%20REV.pdf](http://britishmuseum.org/pdf/14_Morgan%20REV.pdf)

*Ayaz Bazrai*

*Ayaz Bazrai*



A retired revolutionary, festival organizer, Free Internet activist on a head-on collision course with a grand old professor of architecture, extraordinary teacher and revolutionary in his own right. The kind of meeting that can only happen in the most optimistic recesses in our imaginations. *Or at an UnBox event.*

In our half-developed initial discussions on the Dark Temple of Dis-connectivity, an offshoot of the Connected Communities theme at the latest UnBox Caravan, we witnessed this mad collision firsthand. Our Dark prophet Vladan Joler and our blossoming entourage had been developing this idea of a place for frequency silence, an almost Zen-calm-experience of nothingness on the insanely cluttered information superhighway. It seemed loosely resonant with our group, and there was a palpable sense, right from the first post-it provocation that we were on to something that seemed like a life's work. *To return to calmness, create a dark island within the fast flowing river of information, a significant blot on the busily bouncing network maps, seemed really fascinating to explore.*

With this half formed idea we entered Professor Neelkanth Chhaya's Ahmedabad office. We saw him on a table unlike anything we expected. He sat there with a large sheet of paper, working craftsman-like with a pair of scissors and Sellotape. "I'm remixing my old plans of older structures, cutting and pasting parts so I can plagiarize my own work" he said and smiled at us. After all these long discussions on signal jamming, PCBs and the vast abstract of the Internet, this sight just made the contrast even more pronounced.

The freewheeling talk that ensued had us sequentially in stunned silence, in rapturous laughing sprees, in gleeful chuckles as new perspectives were thrown up in those incredulous eye-rolling whooaaaaa-did-he-just-say-that moments. What was actually a two hour interaction felt like it had somehow shifted the huge inertia laden gears of my mind to direct me towards a whole new direction. It's almost meaningless to attempt a summary of what happened, and what I was left with was the true sense of a massive shift. Maybe the way a city feels after the last tremors of a massive earthquake have subsided. And it's a feeling that's physically experienced. None of us had too many words to describe what we'd felt, which I guess is almost a barometer of a truly formative experience.

What we felt will now probably become a lifetime of work.

From among the incessant madness of my everyday life, from the midst of all the clutter and chaos, this singular experience of the conversation is my own Dark Temple. For us to see eye-to-eye and have an egoless contribution with a teacher of his stature, for him to excitedly tug at his beard (a universally acknowledged sign that he thought your ideas had merit), for us to scribble ballpoint-pen blasphemies in his pristine sketchbooks, and come out of it with a feeling that we'd together thought something that none of us entered the room with, that to me is the essence and grammar of UnBox.

And that to me is the potential of our own Dark Temple.

Many thanks guys. You are creators of magic, and connectors of dots. 



In the tech world, the 'hackathon' is king. It's an event format where you invite a group of people together and make things for a brief period of time. The events typically run for a weekend, and there can be a lot of pressure on participants to produce as much as possible in that time.

When making technology, or anything really, the speed at which you go about it can influence what you make and how you do it.

*Are your ideas quick and throwaway? Do you have time to consider the place and materials required for what you're making? Where do they come from, where are they going, and who will interact with and be affected by them? Do you have time to know who you're building for, and are their voices with you in the room?*

These questions are often not fully explored at hackathons. There's just not enough time. But they are important questions. The UnBox Caravan asks them. One of the main reasons it seems able to do that is because it grants itself the time.

UnBox Caravan is a slow convening. Slow down and have a chai. Slow down and cook a meal with your neighbours. Slow down and observe where you are so that you can make something with intention.

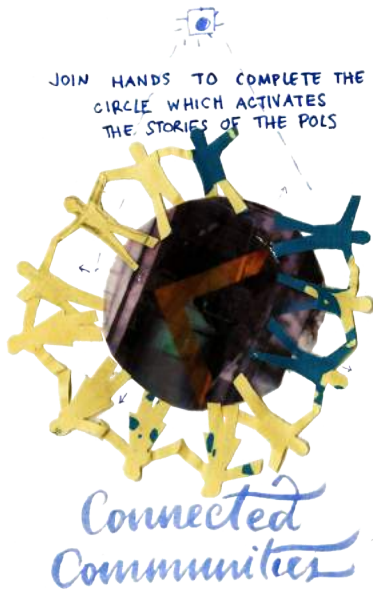
We had time to visit and understand local manufacturing processes. This in turn inspired us to make things using local materials, traditional crafts and Indian electronics. We had time to travel by train, slowing our pace and opening up hours to discuss project ideas and converse. We had time to meet and socialize with our neighbours in the Old Town, where we stayed. These exchanges enabled us to ask deeper questions about their home, their relationships with technology and how they would or wouldn't like to connect.

Many events can treat their location as a neutral backdrop. You're shuttled from an air-conditioned hotel to a generic convention center. There's no time to understand why you're in a certain place and who lives there. There's no time to engage with your surroundings, to be inspired by it and ideally contribute back to it.

Inspired by the UnBox Caravan, and finding parallels with the Slow Movement, I propose that a slow convening:

- Provides ample time in the agenda to observe, listen and reflect.
- Facilitates homestays or accommodation that celebrate the architecture and domestic heritage of a place.
- Incorporates local cuisine and ingredients as a path to understanding cultural practices and sustainable eating.
- Sources event materials from local manufacturers and explores the affordances of a place's crafts and skills.
- Seeks event venues that are active partners in the agenda and bridge the event into local communities.
- Fosters understanding and sensitivity to local languages.
- Strives to contribute something positive and sustainable in the place where the event takes place. These are small observations from a two-week convening. There is an acknowledged luxury in that length of time.

Nevertheless, I believe it is not a contradiction to take a slow convening approach to shorter events. We've explored that, for example, during a five-day retreat in Anstruther, Scotland, and we hope to do more of it in 2016 as the Caravan continues. ■



# The super collaboration highway

*Jon Rogers*

I'm not sure exactly who came up with the term Information Superhighway - seems like the Clinton/Gore administration (or it might have been MIT). The who for me isn't as important as the what. The notion that we have 'information' and 'providers' connected in a perfect system doesn't seem to be particularly human. I don't want 'providers'; I want collaborators. Even the notion of 'information' doesn't seem that relevant anymore. Yes we want information but we also want knowledge; knowledge that comes in a myriad of different forms and knowledge that can be formed in complex diverse human ways.

*The idea of a Caravan for me is a looking at this new routes, pathways and journeys through knowledge from digital practices and expression. That people from all sorts of places and interests can join a journey rather than an event. That there is no group start and end. That people work asynchronously and in multiple locations. It's as you would expect me to say - messy, emergent and rather experimental - with the likelihood that something might not go as planned.*

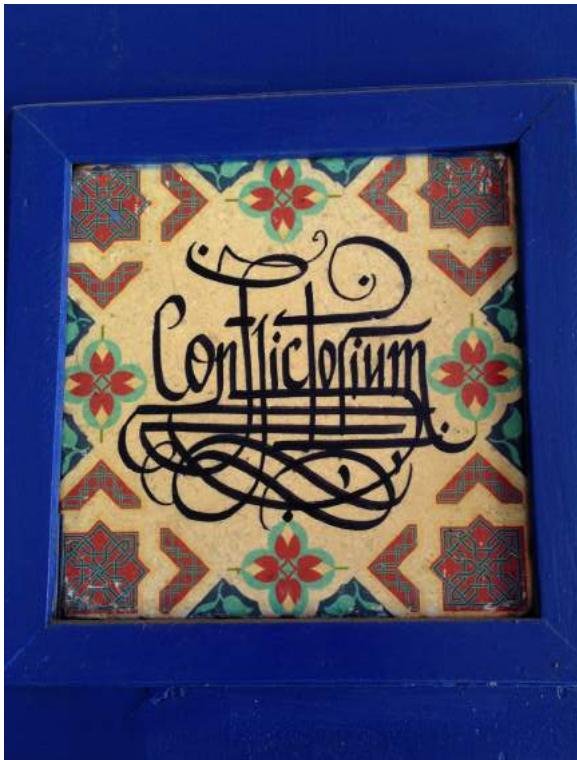
For me, I've joined the Product and Exhibition design studios at NID, Ahmedabad to explore the 'Connected Home'- something that Michelle Thorne and I have been playing around with over the last year or so. One of the students asked me this morning "What is the difference between a Smart Home and a Connected Home?" - a brilliant question! - and one that I think enables me to frame where I think so much of what I'd like to explore in the caravan. So I told the student that I thought the Smart Home as a corporate notion of technology driven innovation where technology would replace human activity in my home. That the Connected Home was much more abstract, less defined and was about social connectivity in and through the home - where technology can play an amazing role, but where people are in charge and have ownership.

So let's jump onto the wagon and explore the collaborative superhighway on a journey into far off digital lands - lands that are full of people who have ownership of their digital worlds and who are able to craft the digital future that they want... **—**



# Fragments of (dis)connection

*Annette Mees*



## Disconnection

Day two. I race around town with three students from the NID. We visit woodworkers making home altars, Manek Chowk – a market for metals; gold, silver, brass, bronze, steel. I'm still shy about communicating without words. The NID students translate – they are amazing. I feel like an observer. The students dress me in a sari. They love me in it, I love me in it, so I buy it. Now, nine days later, I still don't know how to tie it. I wonder if I will ever get to wear it.

The UnBox Caravan connects via Slack and Whatsapp. Messages from back home come through on those platforms too. Fragments of the rest of the world; a question about Kintsugi (Japanese gold ceramic repair), a discussion about the use of Artificial Intelligence in gallery spaces, a picture from fellow WIRED fellow posing with Bob Geldof and Kofi Anan for Vanity Fair. Facebook says I have five events this weekend. It all feels impossibly far away.

## Connection

Pete and I decide to visit the Conflictorium, a museum about conflict and peace. It is a wonderful place mixing art with politics, pop culture with high art and design, interactive installations exploring possible transformations. It is an open space, aspirational, housed in the middle of Mirzapur, the old part of Ahmedabad. I feel home. We meet Shefali. She holds a degree in conflict resolution and has worked in the museum since it opened. We talk about the vision of the museum, its openness, the communities around the museum, their problems with casual violence and alcoholism. She tells us about the project where they made comic books about experiences of violence with local women, and peer-learning workshops currently running with 10-15 yr olds. I feel at home. She invites us to come meet the kids at the workshop the next day.

Pete and I adopt the Conflictorium together. We both love it, for the same reasons and for different reasons. It's great going on an adventure with a curator. We are at the kids workshop. They are unfathomably excited to have such odd guests. We take off our shoes to join in. We can't join in. We don't know the lyrics to the song. Rachida (age 12) next to me helpfully holds up the text in Gujarati. I pretend to read along. Then we play.



I teach them Zip Zap Boing – a theatre warm up game. They teach us a game called Balu (or Bear). One person is a 'bear' everyone else freezes. The bear prowls and growls until someone laughs or moves. Then they too become a bear. This continues till there is only one person still frozen. They win. Pete makes a great bear.

### **Disconnection**

We come back to the Museum of Conflict to another workshop with our group of children. This time we give them two of the disposable cameras Sara brought with her. We split into two groups. We ask them to go out in the neighbourhood and take pictures of things that excited them and things that made them sad. They were mostly excited about taking pictures of themselves. I go out with one group. My presence however proves distracting. A Westerner attracts an audience. I shake hands, say hello and generally move with a crowd. It reminds me of theatrical flocking games and Greek choruses; we move as one. It gets in the way of the kids taking photographs. Someone gently suggests it might be better if I go back to the Museum. I retreat.

I meet Atish of Budhan Theatre with Shena from the Conflictorium, and Pete. Atish tells us stories of his tribe the Chhara, a nomadic tribe. They were entertainers, performers. The British declared them “born criminals”. They were known as thieves. They don't have access to mainstream education, employment, and they get moved around to live in terrible places-- their neighbourhoods are literally not on the map. The Chhara are one of many 'Denotified Tribes' in India. The stories are heart breaking. Walking through the neighbourhood I feel out of place.

### **Connection**

I wander around on my own for a bit. I hear the sound first. To my western ear it sounds like a kazoo. It is not a kazoo but it shares its properties; a small whistle designed to sound silly. I find a small puppet theatre, and it's beautiful. A drummer/storyteller on one side of the stage and an array of puppets with delicately carved grotesque faces with long lean limbs covered in colourful traditional Indian garments. One hidden puppeteer with his kazoo-like whistle accompanies the action. It feels like magic. My fellow audience members are five small children and their parents. It is abundantly clear both to the children and their parents in what category I fall.



I'm quickly invited to sit in the front next to a four-year-old girl. Together we howl with the delight when one of the puppets starts a macabre dance juggling its own head. The not-kazoo creates a perfect slapstick score.

I meet Amitesh, an artist who lives and works in Delhi. We explain our practices to each other. He has come from traditional theatre but moved into installation. I was trained at the Royal Academy of the Arts in my native country, The Netherlands but moved into experimental interactive theatre. Our practices sit somewhere between performance, art installation and experiences. We reference the same books, artists, practices and theories. Then we discover Amitesh worked with a British producer I know. He has played a game I designed years ago with an English colleague and a Chinese artist I didn't know. It seems right that we have already played together without knowing.

### **Disconnection**

I need to send a draft to a collaborator – an answer to the question: what would it look like if your current artistic project would be transformed into a festival? I've been putting it off – the ideas are not coming together – my imagination is currently saturated with experiences and imagery from here. I send an email with thoughts, explaining it is hard to connect thoroughly with the brief, that my brain is submerged in Ahmedabad. I apologize for doing such a bad job.

Pete and I do a photography project at the Conflictorium. We attempt to create family portraits of 'Families of the Future'. Mustaq, who works at the museum, writes the instructions in Gujarati. The kids just want to pose. Being on camera is what is exciting. Our carefully laid plans are swallowed up in the beautiful chaos created by the enthusiasm of the kids. One girl asks, "what does that word mean?" as she points at "future". Pete makes beautiful pictures of all of them at play.

### **Connection**

In the chaos of the 'Future Photography Studio' we find moments to interview some children about their ideas about the future. Mustaq, who works at the museum, asks them questions, I record. I can't understand what they are

saying. I read their faces -- the moments when they ponder what might be possible, the shiny eyes when they describe possible and impossible dreams, the shyness about some others and the mischief that belies others. I love these moments.

I meet Archana, an artist from Bangalore. She makes UFOs: cultural spaces Under Fly Overs. We talk about our practice, how we both are excited about art as a place to connect different stakeholders; artists, technologists, public bodies, private companies, academics. I'm surprised by how closely both our methodologies and dreams are aligned. I interview her about the future. She speaks beautifully about the alignment of the roles of mother, artist and entrepreneur and the dream to see a future where people don't have to feel divided between the past and the future. I recognize myself in everything she says.

At the end of our visit to Chhara's Budhan Theatre, Atish and I talk about interactive theatre, Boal, audience engagement techniques, and the use of sound and music in storytelling. We talk about our shared aesthetic of breaking down boundaries between actors and audiences –about tactics we both use. Our context is completely different but our craft overlaps. We are both artists and theatre makers – we are peers. Later today I'm attending rehearsals. **■**

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## **Rethinking Making** *Myself, My practice, The city, Objects*

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**34 go mad in  
Ahmedabad**  
*Adrian Cockle*

**Chewing the Cud**  
*Archana Prasad*

**Post LAB Reflection**  
*Akshay Roongta*

**Museums Without  
Walls**  
*Pete Collard*

**Camera Things**  
*Sara Legg*

**Immersions**  
*Laura de Reynal*

**Story of a Caravan  
Journey**  
*Reuben Jacob*

## 34 go mad in Ahmedabad

Mid October 2015, paraphrasing somewhat:

Me: ...oh yeah, and I'm about to hand my notice in at work.

Jon: Shit dude, you've got to come to India with me.

Me: OK! Why? Who's paying?

Jon: It'll be fun. We'll figure the rest out.

It's fair to say I'm in a point of flux. I've just left a job I've been in for nine years to go freelance. Jon Roger's offer of a couple of weeks in India the week after I finished was the kind of opportunity that was too good to turn down. It was a blank page but I knew Jon well enough to know that's where he makes magic happen.

I came with no expectations, which is tricky when you're trying to explain to your in-laws exactly why it is you're flying halfway round the world. I wanted to use the time to clear my head and renew my energy for the next phase of life. *Deep breath. Jump.*

First impression: India is nuts. Everything's turned up to eleven—the colours, noises, smells, contrasts are all extreme. The trip from the airport took us past green, riverside parks sitting next to slums piled with kids, animals and huge piles of trash. The sun was setting over the river, the smog in the air turning the skyline into a watercolour. Get to the hotel and see monkeys playing out on the roofs opposite my window with black kites circling above. We're truly not in Kansas anymore.

NID was our concrete playground for the two weeks, offering a home from which to explore the city and a studio to build projects together. The only brief for our work was to explore Connected Communities and the target was a show somewhere in the city a week and a half later. The first couple of days were spent in sponge mode, absorbing and rapidly forgetting people's names, touring the city in autorickshaws and visiting workshops and markets where people were making stuff. My small group comprised Laura and three NID students who took us to a paper factory out near Gandhi's house, a family of weavers making fine fabrics from their porch and a guy designing printing blocks and producing scarves with his prints. We'd heard about a group of puppet makers too, but the directions took us through a slum on the outskirts of the city. The experience shook me, firstly from nerves and then from the guilt. The smell from the rancid stream running through it will stay with me for a while too. What does a digitally connected community mean for the families living there? Right now it feels as distant and irrelevant to them as a manned mission to Mars, but when will they intersect, how and what will that mean for the city and the world?

That felt like a challenge that could frame our work: trying to imagine what the next fifteen years might hold for the residents of this city of seven million that's doubled in size over the last fifteen. Prime Minister Modi's Smart Cities Mission underlines this question. It also gave us a way to connect the other projects being

**FUTURE HISTORY**

- FUTURE HISTORY**
- WHAT DO YOU THINK OUR CONNECTED FUTURE LOOKS LIKE?
  - WRITE YOUR OWN HEADLINE

ਮਾਪਿਧਾ ਨੂੰ ਇਤਿਹਾਸ  
ਨੂੰ ਵਿਆਪਕ ਫ਼ੀਡਬੈਕ  
ਤਸਮਾਨ ਮਾਪਿਧਾ  
ਮਾਪਿਧਾ ਨੂੰ ਇਤਿਹਾਸ  
ਨੂੰ ਵਿਆਪਕ ਫ਼ੀਡਬੈਕ  
ਤਸਮਾਨ ਮਾਪਿਧਾ

run within the Caravan, by considering their long-term possible impacts if scaled up.

The Future Histories project sets us in 2031's Ahmedabad, looking back at the last fifteen years of the city's development as a connected community, through imagined news headlines, short provocations, first-personal social posts and other media.

Bobby, Laura and I created a stream of news based on the outputs of the Caravan's other projects, woven with provocations from the group earlier in the week, research on the state of India's digital development, and discussion with people that live here. Primarily, it's a list of stories that paint a picture of potential shifts and trends in development, and that invite questions about the positive and negative impacts to different societal groups of technological development. We beta-tested the approach at the Wednesday show in the Conflictorium by sticking headlines up on the wall, with a pad of paper for visitors to suggest their own. The permanent version is a digital piece that allows you to scroll through a timeline of the key stories and social responses.

To bridge the gap between the city's huge population of craftsman and the screen, I created an object— by using a locally made terracotta chai cup as an interaction tool to move through the timeline. Reflecting the city's culture up-cycling of discarded materials, the internals are from a very second-hand USB mouse, re-wired to suit the purpose and embedded in a teak body turned in NID's carpentry workshop.

The project has been a fascinating and challenging experience— using elements of my previous experience in strategic communications planning to think about audiences and the 'Why' of any piece of activity in a new environment, and contrasting that with developing new or seldom-used hands-on crafting skills to adapt materials to a new use. I just wish I'd had the time to learn to use the workshop's lathe to turn the wood from a solid cube into the finished article.

The project has a possible future life ahead of it, as the digital version will be live for the foreseeable future at [futurehistory.adriancockle.com](http://futurehistory.adriancockle.com), and it'll be great to add to it as new trends and developments come to light. and it'll be great to add to it as new trends and developments come to light. Sign me up for the next one, Jon. ■

# Chewing the cud

Archana Prasad

I was stoked to be part of this caravan. It sounded right up my alley. Perfectly aligned with our current focus at Jaaga DNA to explore UnderFlyOver spaces (UFOs) in Bangalore as public spaces and infrastructure that could be leveraged for creative activities and a means to bridge communities torn apart or disrupted by the effects of hyper-urbanisation. I was looking forward to working with some of folks at the caravan on developing project prototypes that leverage tech to engage the public in playful yet meaningful ways.

Given my family commitments, I knew I could only be away from Bangalore for a short period. I thought being part of the opening days of the caravan would be great to enable this intention, and then I would contribute remotely for the rest of the journey. As things would have it, my little one fell ill and I ended up coming to the concluding couple of days of the caravan.

It was hard to insert myself in any kind of useful way into the runaway train of lovely madness that I stepped into. But the caravaners were kind and generous enough to let me peek in. There are at least a couple of conversations that I would love to see go to the next level. If nothing else, more than a few of the projects that emerged would be great to have over at the UFO's if imagined at full scale and contextualised to the local.

I imagine that many things will come out of the several threads of conversations I have started with the caravaners – whimsical contracts between two passers-by in the Under Fly Over spaces sealing in their intention towards a better day, a temple bell manned by people across countries resonating peace amidst the angry, urgent din of the surging traffic of Bangalore, possibilities for participatory city exploration performances mediated by tech and across borders of continent and consciousness.

An image of a festival of public arts at the UFOs in Bangalore that brings the caravaners together again, where we present work that leverage art and tech to bridge community divides becomes more real as I write this. I can see quite clearly that spaces like the Conflictorium, students and faculty from NID, and the happy mix of us Caravaners, could bring to bear something of a large impact on the streets of Bangalore as the next stop. ■

*Ahmedabad, and NID,  
brought back a flood of  
memories of my student years.  
I really wish I could have  
stayed longer. But even in  
the two days I was there, I  
started to breathe, relax my  
shoulder muscles and absorb  
the moment.*

*I encountered the timeless  
autowala — his style of  
navigating and the fluid  
cinematic experience he  
imposes on the passenger.  
While riding with  
international caravaners,  
while riding with local  
caravaners, and while riding  
alone – the emotions he evokes  
seem at once Déjà vu'-esque  
and impossibly new. He is so  
very unique to Ahmedabad.  
Nowhere else in this country  
have I had the epiphanies, the  
clarity of hard truths brought  
home to me with such singular  
speed and brutality, than with  
him, here in this city of heat,  
dust and timelessness.*



# Post lab reflection

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*Akshay Roongta*

## Day T minus 2

Coming in to Ahmedabad, I had serious reservations about what I was going to be able to contribute to the Caravan. What I was feeling was impostor syndrome (I'd heard about it at some point). A half hour of Googling and skim reading a few articles and I knew that this was it. This was before I'd read the profiles of the other fellows; once I'd read those, the big questions for me were, 'What the hell am I going to contribute?' and 'What fictitious family emergency was suddenly going to pull me away?' I guess the reservations sprang from the sense that I hadn't really built or done anything substantial, and more importantly most of what I had done was far too grounded in issues that surround us today, in a context that felt far removed from the one the caravan was going to inhabit.

## Day 1

The first exercise itself put my mind at ease. Starting off the Caravan experience with an informal conversation about our values without any formal introductions was a great idea. The conversation wasn't so much about what we do, or what we were interested in, but the underlying principles and themes that inform how we judge work and the world around us.

The discussion I had with Ayaz and Michelle on the roof of NID seemed otherworldly, especially given the isolation in which I now work out of my room in Mumbai. It filled me with energy, and I felt like I had already brought value through some simple ideas around using e-commerce for one of Ayaz's projects that I've been actively following since it launched last month. Further conversations in informal spaces like walking to and from lunch, or over the umpteenth chai, also led to interesting connections to explore ideas and lines of inquiry that some of the other fellows were passionate about.

Coming back and sharing our values with the group showed that some of the values that I hold dear such as openness, participation, democracy, and the right to customise/adapt/hack and contextualise were quite important for many, if not all the other fellows. I felt like I was in the right place, and tore up the note where I'd jotted down all the excuses to leave.

### Day 6 (Midway through)

Over the last year or so I've increasingly felt that the role I enjoy playing is that of catalyst and planner so that when somebody describes their idea to me, I usually ask questions to unpack the idea and dig deeper. This is often followed by that golden rule of improvisational theatre: saying 'and then..', thus helping to extend and build on somebody's ideas. I found that that was the role I comfortably settled into in the dynamic of the larger group, and hoped that I was able to help a few of the other fellows who were bringing to life their own visions of projects in the context of connected communities.

The project that really fired my imagination was the 'Order of the Dark Temple'. Reflecting back on why I got excited about it, a few things come to mind. First and foremost, in the context of the world we now inhabit, much of the conversation almost uncritically so, was about how do we connect, and this felt like an essential counterpoint to that larger movement to connect everything and everyone. The area of Big Data, privacy, networks etc... are something that I researched and worked on<sup>1</sup>, in the one year I spent at Aalto University. Since then I've been passively following the space and keeping up to date, but I felt like working on this project over the next year could help me understand these issues better, while expressing my own opinions about it. An additional bonus is that thinking about the Dark Temple and the ideas it encompasses will give context to the semester of course work I have ahead of me in the latter half of this year.

### The last day + takeaways

There is one major takeaway for me from the last two weeks, apart from possible collaborations to be explored and the work with the Order of the Dark Temple. Coming in to join the Caravan, I felt like whatever I was doing was just an activity that was being carried out. Through this process and talking to people, I now have a sense of what is 'my work' or my 'area of research/interest/inquiry'. It has given me a greater sense of where I am headed at least for the foreseeable future, and given me a clearer vision of the stray threads of inquiry that I want to follow up on. —



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<sup>1</sup> [akshayroongta.in/notes/category/dvd/big-data/](http://akshayroongta.in/notes/category/dvd/big-data/)

# Museums without walls

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*Pete Collard*

I arrived in Ahmedabad with a very open mind on the caravan and how it might work. Having been associated with UnBox directly and indirectly over the past four years, I knew that coming with preconceived ideas or a pre-planned project would not result in productive collaborations. Instead, better to embrace the fluidity of the situation and let things work themselves out. Hopefully. Somehow. In particular, better to arrive, meet and listen to the other caravaners. UnBox is a chance to work with people from disciplines similar to my own or completely dissimilar (and when it's the latter, so much the better for it).

As a non-designer (and most definitely a non-tech person), how things work is of less interest to me than in how they resonate with us emotionally. Much of my past work could be described as 'traditional', curating mostly static spaces with displays of objects, images, texts and films, although this has changed a little in recent years. Yet curating is a constant learning process and ultimately very rewarding. Of great personal interest is field research, going off the beaten track a little, to meet with new people and communities. And this is where UnBox excels, in facilitating such exchanges.

The fact that I had visited Ahmedabad previously was possibly useful, but also highly irrelevant; the city reveals new things to me each time I come. This particular visit will be remembered for the Conflictorium and the people, conversations and experiences that happened in and around it. The museum, if it can be given that title (or if it wants to be called as such), offers a telling demonstration on how to tell complex social and political stories in balanced and highly nuanced ways. It demonstrates also how such narratives can be told using alternative, nonlinear, methods of display that work across multiple linguistic and cultural barriers.

Most importantly, the Conflictorium reminds us there is never a single audience. Instead, like most communities, there exists a complex series of cultural, social, religious and economic circumstances that reflect on and impact our individual understanding of the same shared history. There is no one universal 'truth' to be told, despite attempts by many established institutions to offer one. The dangers of communicating ideas in this way are self-evident.

But the Conflictorium also asks deeper questions about how exhibition spaces and museums can engage with local communities beyond the stories and objects they present. On Mirzapur Road, an outreach programme is run for local children that live and work on the streets around the museum, teaching English, drawing and performing songs (and allowing European visitors to pretend to be bears). These workshops became the inspiration for our project, exploring new methods of role-play and performance with the children, asking them what their future family might be and how Ahmedabad can change over the coming years. The results were chaotic but above all a lot of fun, which was to be entirely expected and definitely encouraged.



These kinds of ideas are potentially relevant to museums everywhere. As the traditional concept of a 'museum' becomes ever more fluid (and increasingly financially challenged) new frameworks and working practices need to be established that can strengthen existing audiences and nurture new ones. Performative and participatory engagement can help foster this process, creating new co-authored content, which in turn supports the idea of a real museum community, a community that can be an active stakeholder in the space. The histories that museums notionally hold have been created by the public, yet historically have felt disconnected and separate. Our future histories need to be more democratic, accessible and accountable.

Through the UnBox caravan I have been able to work and explore ideas such as these that take my practice in new directions, far outside my usual methods and approaches. Theatre and performance were previously akin to Hindi and Gujarati in my vocabulary, yet through working at the Conflictorium, I hope to further develop these ideas into future projects. —

## Camera things

It is interesting how different environments of interpretation – the people, places and things that collide to make meaning – create for me an entirely new object, from an object I felt quite familiar with since childhood. The object I'm talking about is a disposable camera. It isn't just that the 'meaning' of the camera that changes as I change environments, but the actual object that is a camera – it's 'thingness' – changes in relations to other things, if we take for granted that all things are in relation.

My team at Quicksand had ordered a box of ten disposable cameras at my insistence that we try to use them in an upcoming field research trip to South Sudan. Unfortunately the cameras arrived a few days after my team had departed, so I thought what better way to make use of these cameras than to take them to the UnBox Caravan.

My understanding of the disposable camera became complicated first when going through security at the airport while on my way to Ahmedabad. The box with the cameras was removed from the security conveyor belt and a security staff member asked what was in it. When I told her it was a box of cameras she looked at me blankly, before opening the parcel to inspect it. She pulled one small cardboard rectangle out, looked at it in disbelief, and proceeded to open one individual camera. I repeated that it's a camera while another curious security guard joined her. She didn't believe me, claimed the box was much too small to have a camera inside, and unwrapped the protective foil around the disposable camera. I repeated that it was a camera, but it never registered. At no point does she look at the camera with a nod or offer any other kind of acknowledgment that would suggest she knew what she was looking at.

And so the camera in all its thingness has bubbled up into something else. Is it the camera that changes for me or is it the security guard? Both? Is it insightful anymore to describe experiences as mediated? I'm now recalling Ian Hacking's comment on the observation that something that is socially constructed is not very impressive.

During the second day of the caravan the participants were asked to come up with ideas to pursue and prototype for the remaining week and a half. I noticed a lot of them walking around the first couple of days snapping photos of shops and people, and especially children. As a facilitator wanting to instigate further exploration among groups, I suggested a common research method, cultural probes. Cultural probes are essentially objects chosen participants interact with – and this interaction informs and illuminates a design question to varying degrees. For me, there wasn't time to make thoughtful, skilful, even rigorous 'cultural

probes', so I thought at least the cameras could be used as an ice-breaker or first point of research contact between the caravan participants and the residents of Ahmedabad they were engaging with. I wanted to give participants a research tool they might not have used before. Yes, scrappy probes they were indeed.

Jon Rogers thought it would be a good idea to call these "empathy" cameras. This came up in response to several negative reactions to the disposable cameras, and Jon attributed this to a feeling of uncomfortable violation denoted by the word "probe". It's true, there isn't much nuance to "probe". On the other hand, empathy has its limits, especially from behind a camera.

I had a box of ten disposable cameras, which I gave out to various caravan participants and NID students to experiment with in any way they saw fit. Below are three observations of how people chose to use the cameras.

### **Jayne's camera**

Jayne Wallace of the School of Design, Northumbria University was interested in the cultures of pottery making on the outskirts of Ahmedabad and spent a lot of her time with them along with her design partner Sean Kingsley, a technician at DJCAD, University of Dundee. Through the course of their conversations Jayne and Sean asked if the potters wanted to use the camera and they seemed happy to. Jayne and Sean directed them to take photographs to document their daily lives.

Jayne made further observations that all the kids were asking her to take their photos constantly. She found the camera as an object fascinating in India as the kids adored seeing their pictures. She tells me in the village, people had almost adopted a pose and didn't smile. One woman in particular wanted to have a photograph of her and her family and really wanted to be able to zoom in on the photograph. There was a big difference between a disposal camera and a digital camera that they were then able to see themselves in. I have personally found this to be a social norm in India – if you have a digital camera and want to take photos of anyone, it is customary to turn the camera around and show the person the photo. The delayed gratification of the disposable camera was likely a bit bewildering.

Jayne tells me that there are loads of differences between a camera and a cultural probe. She reminds me that people have called anything a cultural probe, even a notebook, and insists there is scaffolding involved in making design probes work.

### **Bharat's camera**

Bharat, a furniture design student, came up to me when I was presenting the disposable cameras to the caravan team as a possible empathy tool. He was curious about the possibilities for cameras to capture the daily lives of people, not so much for furniture design research, but as a purely exploratory measure.

Bharat gave his camera to a family with four children. He told me they were members of the Harijan community, which he described to me as a 'sweeper' community. A quick look online search reveals this is another word for the Dalit community, popularized by Gandhi, and is increasingly considered derogatory. The word Harijan was originally coined by a Gujarati poet-saint Narasimha Mehta, and we were after all in Gujarat – so maybe Bharat was attempting to reclaim this word.

The family Bharat chose does laundry work -- they wash and iron clothing, and one of the children goes to work as a nurse. Bharat picked them because they were approachable and he knew them, and he could see they were having problems. He described their home to me -- they have only one big hall with a television, just a structure they made out of stacking stuff, and they sit outside on the front porch doing the ironing work all day for which they received a meagre amount. Apparently this family was quite acquainted with NID and its students as they are often approached research projects.

Interestingly, Bharat's house help came to him and asked why he gave the camera to the family as she thought she would be getting it. She told Bharat the family came to her house and took her photo, and she was happy about that and wanted to see the results. Bharat surmised that in this particular community having a camera changes a person, and everyone wants their picture taken, "when you give someone some task like this it makes them feel special - and





this was a different ‘click camera’”. Here it seems the camera acts on a person, affording them another status, and in this case a special status owed to the uniqueness of a disposable camera.

### **Annette’s camera**

Annette Mees, a director and artist based in the UK, brought two cameras to a group of children at the Conflictorium; a museum dedicated to showcasing art and culture to create a dialogue about peace and conflict, located in the older part of Ahmedabad. Annette had been spending time with these children teaching them songs and theater, and wanted to spend one afternoon asking the children to take photos of their surroundings. A teacher read directions to the children on how to take photos of things that were inspiring, and things that posed trouble, with the intent of discovering what might be ripe for innovation.

It wasn’t a minute that we were outside before the children started beckoning the general community around the Conflictorium to take photos of and with them. Soon after everyone wanted a picture with Annette or myself - our clothing, skin colour, the new camera - all of it was very novel. It became apparent that we were a major distraction from the task at hand, so I suggested we go back inside and leave them to take photos of whatever they wanted. I’m not sure what happened after that. The enthusiasm died down, the children came back inside, and we had to wait to develop the film.

*What is interesting here is not so much what was on the film, but how the participants made choices about who they gave the cameras to, and how the cameras instigated interactions and created new relationships — relationships between the camera and the person using it, and relationships between people mediated by the camera. The camera is a thing that acts in society and in relationship to other people and things, its meaning and movement determined by the environment it finds itself in — at times a foreign object and at others signifying a special status. —*





## Immersions

Getting close to a group of users can happen in different ways, through different types of interactions, but it needs to happen to conduct meaningful design or ethnographic research. You can choose any method you want, but the most meaningful insights arise when you immerse yourself in the culture and the community that you are studying.



*Like many of the long distance train rides across India, the journey from Bangalore to Ahmedabad is a concert of people selling local—often handheld—food.*

### **En route**

By train, it takes 38 hours to travel the 1600 km from Bangalore to Ahmedabad, with frequent stops for new passengers, food, and chai. Riders experience India's vibrant railway ecosystem: a unique, physically narrow, and fascinatingly transient community of residence and commerce—continuously immersed in an atmosphere which many Indian people are familiar with.



*Making their living environments as comfortable and possible for the long journey, people use their own space and their friends' to eat, chat, relax, and sleep.*

*People flow to and through common spaces, taking advantage of open doors and invitations to talk.*



*We arrived in Ahmedabad at NID inspired, with a localized appreciation for things that many young, aspiring Indian people feel: distance and community.*

## Working with students

Another way to be immersed in the culture and atmosphere of the Caravan was to work directly with the group of students at NID. We spent lots of time working with different groups, some more than others, to follow their progress and help when possible. Mingling with different groups and participating in their diverse activities allowed us to be immersed in the culture in a more indirect, yet very useful, manner. A few interesting insights and lots of inspiration came out of this meaningful collaboration.

Sometimes, it was useful to share specific research skills and mindsets with the groups. In this picture, you can see Himani asking some families near the Conflictorium to tell us more about the community and to share some stories from the families with us. This was designed to provide content for a storytelling IoT project the students were building, to bring communities together. We spent a good time going around this neighborhood and talking to people to understand it better. In the end, this made their project exhibited at the Conflictorium way more meaningful and real. The exhibition was made by the community and for the community. What can be more immersive than this? —



I embarked on this journey with an open mind. That feeling when you just do not want to listen to what others have to say about how you do things, sums up my mental state before I landed in Ahmedabad.

With seven years of architectural design based tempering, my mind was in a state of excited restlessness, having been recently exposed to the wider spectrum of art and technology and the growing synergy between the two. The Connected Communities theme of the UnBox Caravan was just that, I didn't need convincing to accept the invite to ten days of collaboration and discussions with myriad individuals from various creative and technological walks of life.

Having recently become part of an organisation - Think Happy Everyday - that constantly questions structured norms and patterns of creative workflows and design ideation, I had had my fair share of dabbling with Arduinos, LEDs and sensors in the installations that we set up in our six months of work. I was ready to make and do at the caravan.

The caravan, Ahmedabad and NID had a larger diabolical plan. On Day 1, I was thrown into a chaotic, cultural hotpot of creativity and interesting people. Conversations seemed familiar and instant synergies formed. All my preconceived notions were scattered by the relaxed but vibrant vibe of the NID campus and friendly atmosphere created by my fellow caravaners.

Meeting the students and becoming a part of their studio was truly insightful and gave me a moment or rather a few days to pause and look back at a time when I wasn't forced to carefully articulate and structure my work based on factors and parameters that the system or clients imposed on you. Some of the projects had a great sense of sensitive societal intervention in using familiar and recognizable constructs of daily life to bring technology to less exposed sections of society. Visiting the smaller maker communities in and around Ahmedabad was a different experience, showing us that creativity and innovations exists even in the most crowded and least connected parts of societies in India.

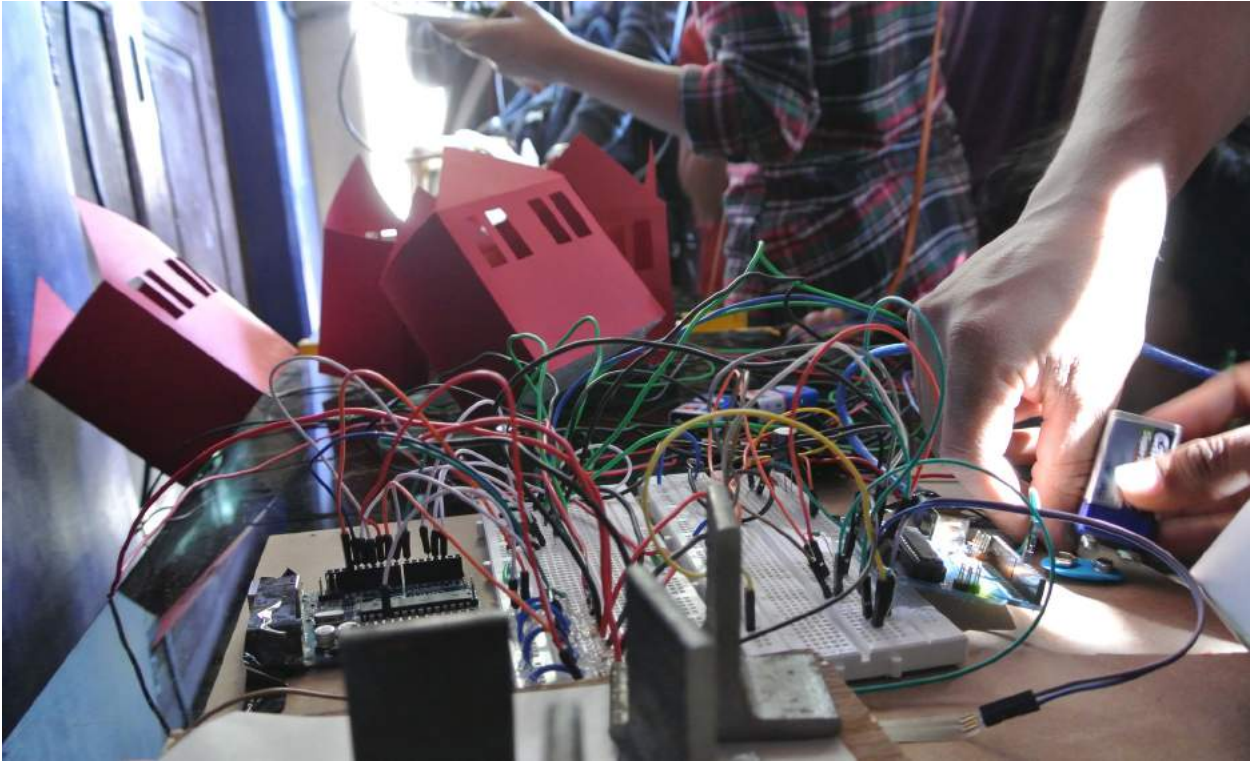
### **Chai gate charcha**

The caravan conversations were probably the most fun and also the most mentally invigorating parts of the whole experience, most of which took place at the Chai gate. I didn't need an excuse to go for a smoke and a chai and most of the time I would end up sipping cold chai as I would have ignored it, fully engrossed in conversations about Internet securities, musical influences, dark temples, brown temples, grey temples and ghantas (bells).

## **Story of a caravan journey & chai-gate conversations**

*Reuben Jacob*





### **Bells and dark temples**

It was journey that made me stop, look through a kaleidoscope of creativity, technology and culture. I was actively involved in two caravan projects that were polar opposites in philosophy. The Ghanta Project looked at placing IoT connected Ghantas bells in homes and clustered communities so that they could use it as a call beacon to gather as a whole, physically and even virtually, to share and celebrate as a community.

On the opposite end of the spectrum, probably even penetrating the dark side of the interwebs, was the Dark Temple- an order that chooses to isolate or enshroud themselves from the realm of cyber signals and electronic frequencies.

### **Taking the caravan to the community**

The exhibition at the Conflictorium of the final manifestations of the various projects by the caravaners and students was one of the most unique and energetic exhibitions I have been to, with flocks of children and people from the local communities thronging the various displays of IoT based fare.

The caravan served its purpose for me, as a journey of taking a pause and re-aligning myself to input more local and cultural influences into my work for the future. Here is to taking forward all those conversations from the Chai Gate and one day possibly seeing a world with Ghantas and Dark Temples! **■**

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## Making Something

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### **A Word of Advice to Myself as A Student**

*Michael Henretty*

### **Journal Entry**

*Sean Kingsley*

### **Dumb Inside**

*Michelle Thorne  
Michael Henretty  
Shashank Sriram*

### **Conductive Contract**

*Michelle Thorne  
Shashank Sriram*

### **Diyas Thinking Through Making**

*Jayne Wallace*

### **Unbox Redux**

*Gary Stewart*

### **Finding Chemistry: Clay, Metal, Leather**

*Sean Kingsley & Jayne Wallace*

### **Excepts from a Diary of a Journey, 3PM Daily**

*Irini Papadimitriou Kingsley*

# Advice to a younger me

*What I learned in India that I wish I knew as a student*

## Ahmedabad, India

Along the banks of the Sabarmati River, right in the heart of the bustling city of Ahmedabad lies India's prestigious National Institute of Design. NID's reputation for being one of the best design schools in the world is due in no small part to the city of Ahmedabad itself; a community of tinkerers, crafters, fabricators, electricians and more, all within a kilometer or two of the school's tranquil campus. Students at NID understand the unique symbiosis between craftsmanship and entrepreneurship that makes this city tick, and they take full advantage of it for their handcrafted projects.

NID boasts a diverse mix of students both in background and talent, and as such there are many programs and events that come to NID in search of collaborative opportunities. One such event is the Unbox caravan, a two-week program of discussions, workshops, exhibitions, and excursions into the city with the ultimate goal of understanding the direction and role that technology is taking in cities like Ahmedabad, and how thinkers and activists can help shape that direction.

The Unbox caravan is what brought me to Ahmedabad, and eventually had me collaborating with the students who call NID home. Having spent the last three years working on mobile technology for emerging markets like the ones in India, I finally had the chance to experience such a market first-hand. Of course, nothing could prepare me for the experience and it will take months before I can have any sort of perspective on my time spent here. But what was more surprising than the inner workings of the city itself was the way NID students approach problem solving, an approach that is unlike anything I have encountered in my education and career thus far.

## Big questions

The first surprise was the scope of the problems that these students are tackling, and the fearlessness with which they do so. Curriculum, from what I saw, did not consist of the typical blend of textbooks, lectures, and tests. But rather the students were prompted into action with big, open-ended questions:

- How can we use technology to bring physically disparate communities together?"





- How can we make the pollution problem more visible?"
- How can we take the feeling of home with us wherever we go?"

Looking back, I'm sure these kinds of questions would have terrified me as a student (indeed they do even now). But at NID students seem to relish the opportunity to invent their own process and solve problems using a healthy mix of sociology, artistry, craftsmanship, and technology.

It quickly became clear that what interested me most at the Unbox Caravan was working directly with these students: teaching and learning from them. I listened to them brainstorm, I went out into the city with them, I saw them haggle, I followed along as they navigated the maze-like streets looking for papermakers, embroiderers, metalworkers, etc. I watched them design, I helped them code, and I listened to them talk about home. They are confident, kind, and extremely fast learners. In one 20-minute period some students and I went over the basics of Linux, Git, and Github. They proved especially adept at picking up new tools and incorporating them into their workflow.

### Looking back

I have been programming professionally for many years now. Over that time I have learned some good lessons about programming, prototyping, and process. These last two weeks I have learned some new lessons about problem solving that I will take back with me from India. Reflecting a bit, I wish I could go back in time and give myself a crash course on everything I have learned since being a student. But then again, the journey is arguably the best part. Still though, if all those years of work have granted me the privilege to give advice to students like these (and to a student like I was all those years ago), it would look something like this:

#### *Try something that might be impossible.*

Imagine something you want to build and ask yourself, "I wonder if I can do that...". Then, dive right in. Even if it turns out the idea was batshit crazy, you will learn a lot in the process and will probably have ten more great ideas along the way. Don't think in the constraints of your current abilities, but instead work to expand them.

#### *Hammer first, polish later.*

Hindi has this great word for engineering: Jugaad. To paraphrase, it means something like artisanal jerry-rigging. Sometimes the best way to know if something will work is just to hammer away at it until it does what you want. You can always make it beautiful later, and indeed careers are built on polish. In the beginning don't be afraid of ugly yet functional. Jugaad the heck out of it.

#### *Keep learning new tools.*

If you're getting comfortable with a programming language like Processing, try another one like VVVV or Vuo. If you feel familiar with Arduino, build something with a Spark Core or ESP8266. Programming languages and tools are constantly changing and evolving, so don't become reliant on any single technology. The more programming tools you know the better your understanding of computer fundamentals will be.

#### *Don't be afraid to suck.*

No one was born knowing how to code; every Jedi started out as a Padawan. Embrace being bad at something, and enjoy the process of becoming good. In a tech career you will have to do this over and over. It's one of the best parts of the job actually.

#### *Don't keep it a secret.*

If you are working on something (game, art project, a library for cataloguing your stamp collection, etc.), remember to talk about it. Tell your classmates. Tell your friends and family. Go to meetups, conferences, bars, temples, and fast food restaurants. Find a stranger and tell them what you are working on. Don't be embarrassed. Don't be modest. Many times people won't care. But sometimes they will think it's really cool. And maybe they will find it so cool they will want to help out. Or maybe it will remind them of something that you find cool, and you'll want to help them. Remember: programming is about collaboration, so put your work out there and see what happens.

*Oh, and I have one piece of advice specific to the students of NID: your futures are unimaginably bright, so always remember to use your powers for good. —*

## Journal entries

### 1 February 2016

Blimey! India is an assault on all the senses. I am not sure how to take it all in, within the next couple of weeks, but I have to. There is no escaping it unless I just sit in this room and go out for meals to the canteen occasionally. But what is the fun in that...?

### 10 February 2016

Today we needed to go and collect the camera we had left as a 'cultural probe' in the pottery village Sarkhej, south west of Ahmedabad. We got Christopher the auto driver again. I have had him a few times and probably only remember his name because it seems somewhat unusual.

Irini hadn't been to the village, so we did much of the same touring around we had done before. First stop was the second pottery shop we came to on that first day, the one with the thrower. Today he was working, rather than him having to 'demonstrate' to us during his rest time. There was another potter there, throwing a small round of desert pots. During a pause in his throwing I took out my camera and showed pictures of the work I do, which includes pots, the clay pit, the potters wheel that I work on, and an example of my daughter's drawing on a plate. I have done this before and it is becoming established as a great way to share with people who I am, especially when neither of us can speak the same language. It appears to aid a mutual understanding, so it becomes

a two way thing rather than me just observing. It appears to work in non-pottery environments too - I showed the same photos to a large Muslim family who had requested photos of us at the Sarkhej Roza mosque and tomb complex. They were interested in us and I wanted to share something with them.

The potter showed me the kiln again, describing the height of the pile of pot in the kiln and how all this is covered with big pot shards. It takes three hours to fire and nine to cool down (though with the lack of mutual language, I am not entirely sure this case).

Jayne encouraged me to ask to have a go on his potter's wheel. This is something I might find quite irritating myself (hence my reluctance), but he was fine about it. He uses an unusual technique in making cups. He pushes out a flat disc first then lifts the edges up and manages to narrow it again. At least I think that is what was happening - it was very quick. I wasn't able to duplicate that method. *The local family came to see how I was doing. I could tell from the potter he hadn't expected me to be able to do anything, so there were little sounds of surprise from all watching when I managed to produce three pots similar to the cup he was making, using my method. The potter even picked up one of my pots to show his wife when she came out to see what all this was about.*



Next we went to the workshops where we had given a camera. As we waited for the camera to come from their home, I asked for a go on the stamping machine used to make diyas. This wasn't quite as physical as it looked, since it is very nicely balanced. Last time we visited we took some clay from them and when refusing payment they had asked to see UK coins, so this time we gave them two sets.

Walking around the corner was another thrower. We stood outside his property and looked at various unglazed salt pigs, lamps and dishes until a rather fed up looking potter came out. On the three occasions we have visited the village, we have always arrived too late, since the workers were usually resting then, having started their work at 4 AM. I don't blame him for looking fed up. After some short discussions regarding prices, I got out my camera and showed him my pot pictures. He transformed into a laughing, smiling potter and invited us to his property and workshop. He started off with a 'hump' of clay on his wheel and proceeded to demonstrate 12 different pots (including an ironic, I think, cup and saucer) in 14 minutes. Good, rough and freely made stuff. We bought some things from him.

On the way back to the auto, we met an angry looking cow and a fellow who was very insistent on taking us in to his house. (They weren't together). Inside was a great sleeping lump, which he just ignored as he set out chairs and laid down on one of the bed cots. Then his mother came in. She looked really old. Jayne and Irini were lovely with her – no English and just a wee smattering from her son. The three ladies pointed to jewellery and compared. Another great way of connecting. The mother, however, seemed to be disappointed with Irini for having so little jewellery. For all the untidiness and rubbish outside, nearly all Indians are amazingly, beautifully well dressed and extremely clean. It is a curious contrast. This lady was obviously looking after how she looked. However the lump on the floor didn't seem to particularly care. After a bit of farting and bum showing, he arose all cock eyed and stumbled to the outdoor loo. Poor guy.

In the meantime the house owner had asked me if we wanted a soft drink. Of course I refused, but he insisted in that way that makes it difficult to refuse without seeming rude. So I said Sprite expecting him to get it from inside

the house, but he jumped on his bike and off we went! Five minutes later we had it and the Sprite was delicious, as it was actually pretty hot.

*(A little detail: he brought three plastic cups too – he may well have been aware that we might have had some reluctance to drinking from his cups.)*

The original potter turned up just as we were preparing to leave this house – our host had been a quite insistent guy – we were invited to go to his. Already we had been in the village for over two hours. Before that though, the potter took our host out and showed him the pots I had made. He came back and exclaimed 'You a full potter man!'. High praise.

On leaving the house our host said how happy we had made him in visiting his home. He gave Jayne some diyas and Jayne had insisted on paying for them, having seen a wee message from the mother, who had rubbed her fingers together as we were getting up to go. The man refused money, but the mother happily accepted it.

It turns out the potter wanted to show me the house, which was still being built. This was interesting because I could see the layout without any privacy issues, as it was just a shell. It was simply the three connected rooms, with the end room having a high shelf around the top. There may have been access to roof space – I'm not sure.

Between these two homeowners, they explained to me that the father had died three years ago, while the original host's father had died 16 years ago. I think they were suggesting that there is some sort of inheritance that they both received with the more recent death, explaining why this house was only getting built now, while the death 16 years ago explains why the other house was finished and inhabited.

Each time we visited this place we were getting pulled into the community more – or so it felt. We were making connections with people, who could see we had shared interests with them and an enjoyment of their place. An amazing experience. **■**



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ing at one point to the  
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ormance.

Dumb  
Inside

Open the book to turn on the light.  
Bring temporary connectivity to everyday  
objects using simple circuits. Apply to  
other objects as desired.

Open me.





# Dumb Inside

Michelle Thorne, Michael Henretty & Shashank Sriram

*Open the book to turn on the light. Bring temporary connectivity to everyday objects using simple circuits. Apply to other objects as desired.*

This project was borne from the question: can we bring simple Internet connectivity to the “dumb” things we already have? And if we do that, can we ensure they are compatible with other Internet of Things products?

Currently, the Internet of Things has a lot of vendors competing to control the products and services in your home. These products don’t always interoperate with one another. This leads to consumers being locked into a vendor’s ecosystem (a so-called “walled garden”) or needing to buy complex solutions to get all of their connected things at last connected with one another. We believe you shouldn’t have to buy a new object in order to get it talking with the web, and that being able to open and modify an object is an important part of owning it.

Our project proposes that the web is a tool that can provide interoperability. We suggest using web services such as IFTTT to get different products talking. As a secondary feature, we wanted the ability to easily apply and remove the connectivity of an object.

To demonstrate this concept, we developed a simple interaction inspired by the reading lamps in Indian national trains. In our project, a user opens a book, which turns on a reading lamp. When they close the book, the light turns off.

To make this, we created the circuits using Arduino, Processing.js, a radio frequency

transmitter and receiver, and some LEDs. Once the first version of our circuits were working, we made a more robust version by soldering them to a circuit board. In parallel, we made a lamp stand by cutting and joining up a large plastic pipe. We also folded paper around one part of the circuit to make a bookmark.

This project was showcased at the Conflictorium in Ahmedabad with an emphasis on electrical efficiency. We also highlighted the importance of reading and learning in the lives of children so as to bring light into the homes of people in the future. These insights helped local visitors relate to the technology and understand its implications on their lives in the near future.

To take this project further, we would try to make the circuits actually connect via IFTTT. We’d also want them smaller, perhaps one day, down to the size of reusable stickers, and boost their connectivity so that they could be easily programmed with the web. We would also demonstrate how they’d work with consumer-grade connected products. Possible analogies would be Estimote beacons<sup>1</sup>.

*Dumb Inside* is part of a larger concern about interoperability and walled gardens in IoT. Perhaps a version of F.A.T. Lab’s Free Universal Construction Kit<sup>2</sup> for the top ten product ecosystems of the Internet of Things would be a fun related project we could do next. ■

<sup>1</sup> [estimote.com](http://estimote.com)

<sup>2</sup> [fffff.at/free-universal-construction-kit/](http://fffff.at/free-universal-construction-kit/)

Michelle Thorne &  
Shashank Sriram

# Conductive contracts

*Complete the circuit by stamping it. Your contract will be digitally authorized using conductive ink, Indian stamp paper, and your thumbprint.*


This project considers whether paper contracts would benefit from digital features. Possible use cases include: verifying the signatures in the contract or notifying a database that the contract has been completed.

In India, it's common to draw up a contract using stamp paper. This paper is watermarked and has various monetary denominations. To obtain our stamp paper, we went to the courthouse, where a legal clerk logged our transaction in a ledger and wrote the contract on a typewriter.

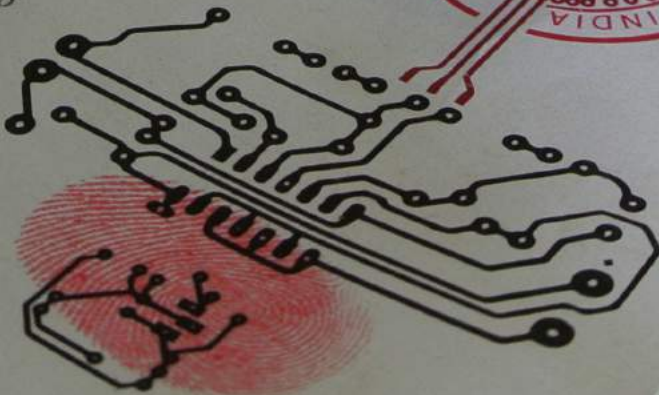
A traditional form of signature in India is the thumbprint. This technique is often used when the signatory cannot write their name. It is also biometric data, which is commonly used as a form of identification.

We designed a circuit that would light up when the contract was signed by both parties and then stamped by the notary. Ideally, this would be created using conductive ink. We were unable to obtain it during the Caravan, so we made an artistic rendering of a circuit instead.

We also crafted a notary stamp, which was inspired by the tradition of customized stamps used in many businesses and ministries throughout India.

To take this project further, we imagine talking with the courthouses and members of the judicial system to ask whether these kinds of interactions would add value to their practice. If so, one could readily create a circuit design that could be printed directly on the stamp paper. 

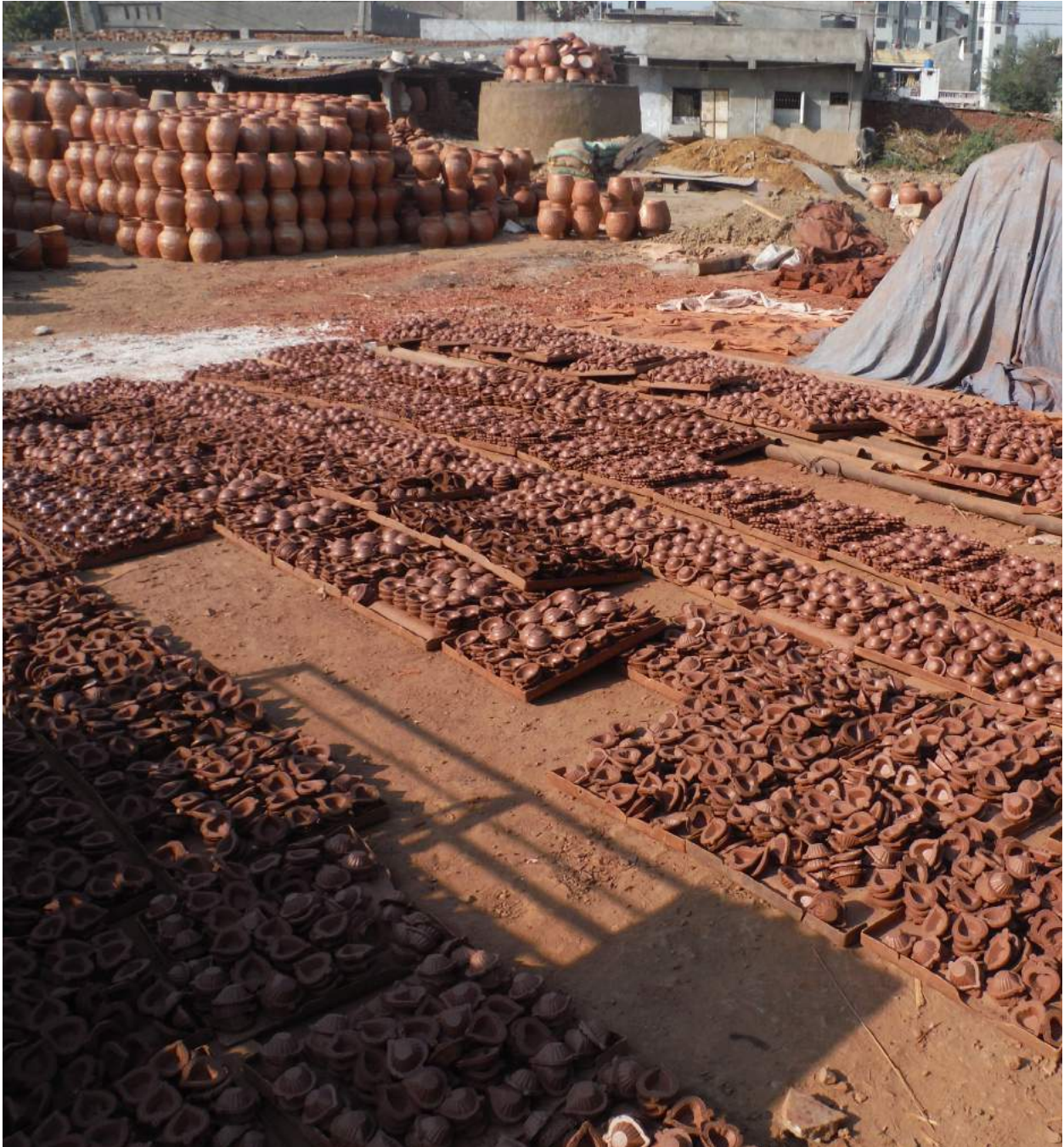
Michelle, Shamana and Aruna will  
and make together with the other people  
a fair, fun and respectful society.  
We promise to be good boys and girls and  
Papa Jon & Mama Babina very happy.





## Diyas : Thinking through making

*Jayne Wallace & Sean Kingsley*



We're both makers - we make for pleasure, we make to sell, we make within research projects to find things out about people and contexts and sometimes we make to make sense of things for ourselves. Our diya objects were made by us as a way to think about the different experiences we have had over the last fortnight in Ahmedabad. A lot of what we have done over these two weeks has centred on meeting craft makers and finding ways to have conversations with them - sometimes through making together, sometimes through showing images of things that we have made before. Photographs, drawing and prototyping has been our shared visual language and way to communicate. Making the transformed diya objects has been another form of conversation for us. We hope to be able to share the results of what we have made with the potters in the village, to continue our dialogue with them.

*We made the objects as a way of reflecting on the different potters, pieces of pottery and cultures that they belong to and how we could bring parts of ourselves and our own cultures into this dialogue.*

During our first visit to Sarkhej (a pottery village on the south west outskirts of Ahmedabad) we met a group of women who were making diyas (small traditional clay earthenware oil lamps, lit during celebrations and festivals). They were doing this by putting shredded, slightly dry clay into a metal mould on the large metal press they were seated at. A spin of the large press' wheel squeezed excess clay from the mould and produced an intricate, shiny clay diya. Ornate, but simple forms, the rows of diyas drying in the sun looked beautiful and are also rich examples of a particular Indian craft aesthetic. Once back at NID as we talked through the things that we'd seen we kept returning to the diyas. On looking into their cultural significance, we also found messages online from Prime Minister Modi from 2015 asking that people stop buying imported

modern battery operated diyas and to keep India's ceramics craft industry alive.

We knew that we wanted to 'make with' the diyas and returned to Sarkhej to see if we could bring some unfired ones back with the intention of transforming them in some yet to be discovered way. We also brought back some clay from the village, both to see how it handled and in order to improve our chances of being able to join the diyas to pieces we might make.

In the ceramic studio we found a change of pace to the caravan and some thinking time. We initially spent time throwing simple forms on the wheel and playing with how the diyas may look if incorporated into them. One of us is a potter and the other has taken up pottery over the last two years. Our personal aesthetics in the things we make are typically very simple, and we made simple contemporary forms here, both for this reason and also so as not to compete with the ornamentation of the diyas. The forms of diyas have some natural characteristics such as spouts and bowl forms that lend themselves to being spouts of jugs or lids, and we carefully cut and removed sections and offered them up to the cylinder shape we were throwing. While some of the making decisions were set by the technical difficulties of getting our wet thrown forms and the over-dry diyas to the same dryness, so that they could be successfully joined, we didn't want to overwork the forms - on seeing the simple ways in which the pottery in Sarkhej was produced we wanted to reflect that in the decisions that we were making. Over the course of six and a half hours we built seven pieces.

Making can be a way of absorbing experiences, in the same way drawing enriches the viewer in ways that taking a photograph rarely does. We have made objects that suggest ways in which diyas could be incorporated into a wider western

aesthetic. It was a way for us to think through how these traditional objects from one place could take on a series of new roles back in our lives. We have made pieces that we would like to live with and use and in that way they have meanings to us beyond referencing this visit and our respect for the cultural ways that diyas are used in India. By making domestic objects that we would both use in our homes we've folded the diyas into what our everyday lives are like.

The process of making these pieces gave us both the time to talk together about our visits to the village and the lives and craft cultures of the people there. The conversations have already opened up further on completion of the transformed diyas, with responses from Anand Bhai, the workshop coordinator and Neelima Hasiya, the Course Coordinator of Ceramics at NID.

Anand has a unique view of Sarkhej as he comes from there and knows all the families and people we have met. He is a traditional potter and understands the history, successes and challenges that the pottery community faces. The stamped diyas and jigger/jollied plant pots are fairly recent developments in a move toward mechanisation. While economically making sense, he also sees this as a trend towards de-skilling. He thinks that the potters who make the round-bottomed pots for water have 15-20 years left before they will die out. These pots are extremely challenging to make, requiring precise timing to paddle out pots at two stages of them drying out. Running a pottery like this, he says, requires five or six people; it just isn't possible to run it with fewer, but fewer people are interested in doing it.

On seeing our transformed diyas, Anand felt that giving our ideas back to the community could help them see some alternative possibilities for their production. To help them

iterate and innovate. Here we have the potential for continuing connections through 'making conversations'.

Neelima works with rural potters and considers Sarkhej an urban pottery village, with the capacity to adopt more industrial processes. Where we were seeing Sarkhej itself as a rural village environment, Neelima saw them as producers of goods for the neighbouring urban life of Ahmedabad. Whilst we saw the modes of production as very simple (electric wheel, hand turned mould press and electric jigger/jolly) Neelima knew them to be sophisticated and a departure from the traditional pottery that still exists in rural India. Our transformed diyas sparked this conversation.

Some of the NID ceramics students have been surprised by the power of transforming a familiar object and using it in a western way. What was interesting for us was that we hadn't seen our forms as particularly 'western', but of course they are! The east meets west in a pottery form?

A final comment to make is that all of these conversations with Anand, Neelima and students in the department were only made possible by the fact that we were making and had made these pieces. Just as in Sarkhej the showing of pottery that we had made opened up conversations about the wider contexts and implications for the communities of makers who produce them - in this case both the diya makers in Sarkhej and us. ■





Through the two weeks of the Caravan, one of the things that stood out to me is the relationship between students from NID and artisans in the city (of handwoven textiles and materials, manufactured ceramics and metal goods). These highly skilled workers proudly participate in extending the student 'idea space' not just by actualising the prototypes the students have imagined; it is a virtuous circle of communal symbiosis and socialising. The students are not considering how to supersede and replace but are carefully reflecting on ethical design approaches that preserve traditional and local sustainable manufacturing.

Out on the field trips, it was amazing to see an enclave of metal-workers and fabricators, who willingly with great synergy compliment each others activities; eager and happy to recommend and approve other suppliers where appropriate, in a balanced system of mutually beneficial support that serves the system operating as a whole. Some of the products are distinctive and uniquely hand made in relatively small quantities while others are one off and specifically a very particular part of a greater whole reproduced at great volume. It's a harmonious balance emerging from a human spirit of co-existence, not enforced or regulated by some draconian punitive force. This is real alchemy, the transformation of raw material through the harmonious sequence and correlation of different elements.

So what do we make? The caravan encourages a different approach and process. A shift from something envisaged beforehand and placed before the viewer to something that was inspired and born from a process of reciprocal creative labour, communication, sharing and reflection. Placing yourself with others at the intersection of co-creation and participatory interaction without the counter intuitive imperative or necessity to 'create and make' as rapidly as possible can often yield surprising outcomes.

From this process and inspired by the documentation from other caravan participants I start to think about the structure of a playful sound and visual environment where the rhythms of work are accentuated by the regular repeated patterns of movement and sound. Harmony, dissonance and counterpoint emerging from the duration and periodic tempo of individuals and groups of humans and machines locked in mechanical processes that articulate a sequence of events, dynamics and processes into new compositions born out of the imagination and labour of women, men and machines.

*What new meaning might emerge from the unexpected sonic song of the brass stamped metalwork playing with a printing block maker? What kind of kinetic choreography might happen when a diligent scissor maker is now playing with the frenetic widget maker?*

I built UnBox Redux as an environment where activities that normally inhabit different worlds can be celebrated together with each other; a playful invitation to the 'performer' to

create abstract connections between different forms of making. The user has to conduct and curate the narrative and in doing so are intimately embedded and mixing the content with no fixed structure in advance. It is meant to be open, inviting and fun and if in the midst of all this, some particular serendipity takes place or profound abstraction emerges that would be great too! And in that sense, it is a mirror of the underlying spirit and ethos of the caravan itself. **■**

# Finding chemistry in clay, metal and leather

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*A conversation between Sean Kingsley & Jayne Wallace*

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**Jayne:** We were talking yesterday about the power of clay

**Sean:** You mean the accessibility of it, yeah

**J:** I guess on this visit, through clay we've had the most conversations with people who we can't speak the same language as us

**S:** Yeah, well I mean that's interesting because, I mean you as a jeweller had that experience of speaking to the metal guy and we as a ceramicist speaking to the clay people – well both of us obviously – do you think there was a difference? In the conversations?

**J:** Yeah definitely, hmm, I think in that metal village it felt quite... well I didn't get to show them what I can do, I just got to show them things that I had made that I was wearing, but through doing that experienced something similar to you, but I think there was a very different dynamic – because it had already been set up that we were coming and they knew Vineeta it was different to us just rocking up in a village – there were certain assumptions as to why we were there and expectations of us buying stuff, but while we were in the pottery village we were just strangers who had appeared.

**S:** we did have more people to choose from there as well of course, if we hadn't have got on with the first folks we could have easily have gone on to the next. As it happened everybody was extremely open and willing to show us what they did and how they did it.

**J:** You say that, but it wasn't quite that easy – like the last guy – there they were eating a meal

**S:** Ha, they were yes, Aye

**J:** We're just stood there looking at the finished pots outside his wall, we can't easily communicate as for that last trip we didn't have a student with us to help in translation.

**S:** Yes, Aye

**J:** But then you started showing him your work on your phone and that's when the magic happened again. I think there's something really interesting there. The things that have most stood out to me are how -I think basically you both showed each other that you've got mutual respect for each others skills and talent.

**S:** Yeah

**J:** And listening to Neelima (Hasija) in ceramics here at NID the other day usually it's people from a lower caste

**S:** yes

**J:** who would do ceramics, erm, there was something there - there was a kind of bond - it wasn't just... well it shifted from being a patron wanting to buy something, appreciating the goods that they've made to more like what happened when you were talking to another potter in the village earlier in the week where you called yourselves *Mati Bhai* (clay brothers)

**S:** Yeah, that's right yeah

**J:** And I thought that was really powerful

**S:** Yeah, and it wasn't just westerners coming in as well, all that sort of thing, trying to buy tourist objects you know. Of course they were all wholesalers as well weren't they, which I think is important as well, they're not generally selling to the public direct, so we were probably fairly unusual I think

**J:** I think every time you've showed your pictures of your work, something similar to that has happened - there has definitely been this kind of 'Oh! You're one of us!'

**S:** Yeah, that's right, yeah

**J:** And I don't you can underestimate the power of that

**S:** yeah, I mean that's been a great insight hasn't it

**J:** I'd say that the experience with the leather, rather than us just going into the shop and saying we'd like to buy what they have, the actual prototyping and making and us showing the leather things that we've already made and me showing them the bag I had made and working out a pattern for them in paper there was a sense of them seeing us as makers like them.

**S:** That's right, yeah - that we understand the process like they do

**J:** It's like a different kind of communication isn't it

**S:** Yeah it's a common language isn't it - making - and going through the process of making is a way of thinking

**J:** yeah, and maybe what we found through our several trips and many hours with the guys in the leather shop (probably more than with the clay or metal makers) - well if we think about it the making that we did in the clay village was minimal, but a way that you became clay brothers with them - but with the leather guys making and prototyping together made an environment where we could just be there comfortably through quite a slow process

**S:** That's right, actually we have got three quite interesting case studies, shall we say, because both of us were in places that were our core skills then the third place which wasn't (leather) which means our skills and understanding of making sort of worked fine in the leather place even though it wasn't our material - that is quite interesting that

**J:** Irini said something interesting yesterday when we'd left the leather place, (because we'd had hugs with the makers and photos on our cameras and theirs and they'd wanted to take photographs of us with the things they had made for us) she said we have to work with them – we have to do a project with them because there's clearly chemistry

**S:** Absolutely! I think that's what you were getting at at breakfast wasn't it – that you need people there, you know – sending a file of what you would like them to make isn't the same – it's all about the chemistry you build up with people that leads to the most interesting creative collaborations

**J:** And that's the huge challenge for the IoT in this space!

**S:** Aye

**J:** How can you maintain the chemistry through digital means when we're not here in India? I mean how could you maintain being a 'clay brother' with makers in the pottery village if you collaborated with them when you're back home through IoT? It's not that it's impossible I suppose, but it's a big question. It's not about channels of communication and sending data, whether through drawings or specifying dimensions, it's them getting to know us and our aesthetics through the things we make and finding joint shared aesthetics in pieces we're making together – you know like in the leather shop starting with a first prototype for a bag where they had sewn a seam with leather cord spiralling around the outer edge, to us refining how things were stitched with leather cord – to then them suggesting fine bright pink thread stitching to complement a pale coloured leather bag!

**S:** (laughs)

**J:** It's like a world apart isn't it? And through everything that we did – the TapWriter bags, case for Babitha, your phone pouch, the bags for me, Irini's shoes – all of that, each piece was like a new challenge – how do we make this uncommon object? So through the process we were trying to work out how you do it and making mock ups and they were trying to think through how they would make it from their perspective there was something very interesting about that – we weren't just commissioning a slightly bigger version of something they already make – in that challenging 'how do you make this weird thing?' there were lots of joint decisions that we all made together

**S:** Like a co-development kind of thing

**J:** There's definitely something that builds chemistry in that

**S:** Yeah – it does hark back to my research that I told you about – the MPhil, and teams – one of the core texts was Michael Schrage talking about how – he essentially says that teams don't make prototypes, prototypes make teams. His idea is that if you've got a project or prototype that you're working on with a group of people, if it's interesting enough it will really start to bond you and you get the chemistry – I think that's essentially what we're saying and because you know there was a core focus – it wasn't just that we were sitting there getting to know one another sort of thing, we actually had a purpose to it, and it's quite important in terms of getting a common interest – we worked together on it absolutely.

# Excerpts from a diary of a journey, 3pm daily

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*Irini Papadimitriou*

## **UnBox Caravan - Day 2**

It's day 2 at UnBox Caravan and I still haven't had a chance to explore the city, but we are about to join the students in small groups and head out to meet makers and explore some of the beautiful markets.

A former NID student has made a map showing the incredibly rich range of skills, materials and makers in and around Ahmedabad. From textiles, metalwork, ceramics, digital manufacturing to printing, glass and leather, the people of Ahmedabad can make virtually everything. It's extraordinary! I feel quite sad that this is lost in many countries across the world.

So for the rest of the day, I join Rachel Rayns and two students from NID, and we set out to explore an electronics market, an area with leather businesses and artisans and a colourful textiles market.

I soon realise that these are more streets packed with shops, sellers and makers rather than a covered market that I expected to find, so I feel a bit lost. There are so many sellers and makers, we don't know where to start. And it's very busy and noisy, but also incredibly fascinating. We start talking to some people working with electronics, and soon realise they can repair and make anything. The street feels like a production chain, so you can have things made as you go from one place to the other. It's pretty much the same with leather and other materials. I was hoping to see people making things today, but apart from the long line of repairers at the electronics markets, everywhere else we go it's mainly sellers. So, no woodblock printing today, but we find some beautiful ikat textiles and prints instead.

## **UnBox Caravan - Day 7**

Tanishka Kachru from NID's Exhibition Design faculty, has kindly offered to take us to the Sabarmati Riverfront Market, which takes place every Sunday. After a couple of days in and out of the hotel - well, mainly in, after being a bit adventurous with food - it feels so exciting to get out to the streets again and explore the city.

The Sabarmati Sunday Market is an open air market on the Riverfront, a recent and huge development along the banks of Sabarmati river, which apparently was quite a challenging project due to flooding concerns and of course the displacement of slum dwellers, who lived along the river banks.





The market covers a big area and it's arranged with platforms for the vendors, but also sitting and playing areas. As every market, to a visitor or outsider like me, it looks completely chaotic, but also super exciting with thousands of objects, colours, smells and obviously noise. There is a huge range of stuff, knick-knacks, antiques, house tools, clothes, furniture, and according to Tanishka also animals, although we don't see any animal sellers today. Like in other markets and areas in the city, here also you find a big supply of both materials and skills, and many sellers are makers. In fact we spot some of them as well as some repairers.

We also get a chance to meet the team running the market, who explains more about the way it works, how sellers register for stalls and how much the market has grown in the last couple of years.

### **UnBox Caravan - Day 8**

Today, I join Jayne and Sean, who are heading back to Sarkhej, a pottery village, for the third time. I have seen some of the wonderful and intricate incense pots that they brought back previously, so I jump at the chance to visit.

It's a slightly longer journey and the beeping and noises from horns are coming from every angle. Plus it's hot and dusty. It feels a bit surreal to be on a rickshaw on such a busy road, and with cars coming from every direction, but every journey in Ahmedabad is fascinating. The streets are where all the action happens. There are slums, sellers, recyclers, animals, kids running around, people eating and sleeping, but also a lot of materials, trash and smog.

But half an hour later we arrive in Sarkhej and I immediately know we are out of Ahmedabad and the madness of its streets. We walk into the courtyard of a house and at the entrance there is a big outdoor kiln. The kiln is covered by hundreds of small, delicate cups, which I guess will be fired later in the day. Sarkhej is an amazing place. Everyone here makes pottery. It's like walking into a huge ceramics studio, only these are people's homes and working places too. They are very excited to see Jayne and Sean again and they are incredibly generous and welcoming. They are so proud of their work and they want to share with us the process.



Sean is very excited to see the potter's wheel, so he can't resist jumping in and making some cups too. We can't speak a word in Gujarati and they hardly speak any English, but there is a common language, pottery making. Later in the day we get invited to a few more houses and studios and see more people at work.

We leave with a few small pots, some of which, Sean and Jayne will use later to remix in with their work. The result is amazing!

It's been a very long time since I made something. It was many years ago, while I was studying in Italy for an art conservation degree where I worked with wood carving, gilding and medieval and renaissance painting techniques. But, this was a long time ago, and even though I have been working closely with artists, designers and makers and understand a lot about their processes, it has mainly been from a distance, without making anything myself. So the opportunity to not only meet makers here, but also be able to make things, surrounded by so many extraordinary skilled people, has been an amazing part of this journey.

### **UnBox Caravan - Day 9**

Many of the UnBox participants have been creating things all these days, from wood work to metal work, leather objects, ceramics, electronics and more. It's been a very long time since I made something. It was many years ago, while I was studying in Italy for an art conservation degree where I worked with wood carving, gilding and medieval and renaissance painting techniques. But, this was a long time ago, and even though I have been working closely with artists, designers and makers and understand a lot about their processes, it has mainly been from a distance, without making anything myself. So the opportunity to not only meet makers here, but also be able to make things, surrounded by so many extraordinary skilled people, has been an amazing part of this journey.

I remember how exciting it was to see an object taking shape and life from materials, and although it was almost always a very imperfect object, I still loved the result and the process.



I just met a lovely group of people running a family leather business in the old city centre. It was again thanks to Jayne that I ended up there, as she was due to pick up a leather bag she designed and made with them a few days earlier. I was actually hoping to persuade them to try making a pair of sandals, but I didn't have high hopes as they seemed quite busy. I also happened to wear a pair of sandals I got in Greece a few years back. They were made by one of the oldest sandal makers in Athens, so it's a traditional design. The folks of Laxmi Leather Arts (as the business is called) were very curious about my Greek sandals, so we started chatting about sandal-making in both countries.

I then decided to draw a basic design of sandals, and check if they would be willing to make them. It was simply made of two wide strips of leather at the front creating a cross design, with a traditional stitching at the borders. Although they looked a bit hesitant at the beginning, over a cup of chai, they started asking me about where the stitching would go, the leather strips at the top and materials; yes, the drawing was so bad, they couldn't figure it from that! So we slowly started looking at different materials, types of leather that could be used and colours. Prototyping and fitting came next, trying out some samples for the top, the leather width, and holes for the stitches. So, in a few hours, we ended up with an amazing pair of sandals, made from scratch, layer after layer. It might not be the most brilliant design in the world, but it is such an incredible experience to make something that we usually take for granted and not think how much time, labour, skill and team work it takes. I thought this was an amazing exchange and judging from how happy they were with the results, showing them off to other people, I think they certainly enjoyed this process too. ■

# 4

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## Digital Futures / Future Digital

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### **Digital India**

*Jon Rogers*

### **Learning from Openness**

*David Ascher*

### **The Jugaad of Code**

*Bobby Richter*

### **An Ethical Guide to the Internet of Things**

*Michelle Thorne*

*Bobby Richter*

*Michael Henretty*

*David Ascher*

*Vladan Joler*

### **The Order of the Dark Temple**

*Vladan Joler*

# Digital India

*Jon Rogers*

OK. Spoiler alert. This text contains a pretty big Jon Grenade – this time against the use of ‘Maker’.

Let me start with saying:

I LOVE PEOPLE WHO MAKE THINGS

I LOVE PEOPLE WHO CARE ABOUT MAKING THINGS

I LOVE HAVING THINGS MADE FOR ME

I LOVE BUYING THINGS FROM PEOPLE WHO HAVE MADE THINGS

MAKING THINGS SAYS LOVE LIKE NOTHING ELSE

FULL STOP

END OF MESSAGE

I do not call myself a maker. Yes, I build and craft behaviours in electronics and code that cross between physical and digital. While I make lots of food – you'll know that if you know me – I don't call myself a maker. It would sound pretty pretentious – a bit hipster – a bit, well, wanky, to say that the things I make at home make me a maker. In the same way as baking bread doesn't make me a baker. That wiring up a plug doesn't make me an electrician. ‘Oh Jon’, I can hear you say, ‘you're not getting it’. The point of the Maker Movement is to be inclusive, to bring people of all skill levels into a level playing field and promote the very good thing that making is, which I completely sign up to. So why am I in this moment of crisis? Why is ‘Making’ making me so frustrated?

I think it's about quality.

*Being in India, seeing the things that are crafted by people who have honed their craft over generations is making me feel a bit embarrassed about the triviality of the maker movement. That villages of people dedicated to making things to provide food for their children is a very different thing from popping into a Maker Space to tinker, play and tell people you're a ‘maker’.*

I'm frequently seeing computer science conferences calling for themes of ‘making’, in an attempt to try and add value to a discipline that has been losing its way for some time, and in a space where people are ‘users’ and human computer interaction is a human way to describe how people interact with computers.

What's exciting about India is to find a space between the craft of making physical things and the craft of coding digital/physical experiences. If we can bring the incredible cultural value of the crafts people of India and the craft way of thinking into the immense economic value for those that can write code, then we will be





future proofing a digital movement that I for one would create a profile for and sign in to. That it could provide the leap in development that is never going to come from Silicon Valley and open up a new creative digital economy that could challenge that dominance of the employers of the 90,000 people from India that the Valley employs. That a digital India would embrace all of our senses – could be messy (tick), will be crowd based (tick), will be constantly re-invented (tick) and could provide a level of quality and trust that digital surely needs right now. Now what do you make of that?

The western world landfills millions of tons of electrical waste every year. This is a disaster in terms of sunk costs in replacement, embedded energy in their production and the looming spectre of megatons of non-biodegradable materials sitting in landfills.

Makerspaces have the tools and their users have the skills to repair electronics that may only be a short step away from being fully functional – what challenges could be framed that would treat the repair of an appliance as a geek gauntlet thrown down? How about a cost of entry to a makerspace that demands a number of successful repairs to unlock the resources for your own project? A badging system that gamifies your repair skills, maybe based on points accrued for number of items multiplied and agreed difficulty rating? Bonus points for novel use of technology and tools to effect a repair, or for documenting the repair for others to learn from? Did you need to 3D print a spare part to get that washing machine working again? Release the .stl and get extra points and kudos. It is also important to be aware of challenges including intellectual property of 3D printed spare parts, electrical safety ratings, clarity of ownership of the repaired object, and most importantly setting expectations. ■



## Learning from openness

India saw two quite different events unfolding in the two weeks of the Caravan (although it probably only noticed one).

The telecom regulator prohibited discriminatory tariffs for data, thereby making Facebook's Free Basics unviable as is. This is part of a broader discussion around net neutrality and the Indian public is remarkably aware of the issues around fairness and access, as I found out when chatting with one of the design students at NID. This graphic designer was well aware of the issues around Free Basics and the challenge of subsidizing partial Internet access. For him, the notion and importance of the open Internet as an unlimited and deeply open space was as crisp as it is to me, someone who grew up with a very different Internet and in a very different place.

While these policy and business decisions were being made, NID saw a convening of a very diverse group of people, all keen to collaborate, to learn from one another and explore sometimes difficult topics and situations. I suspect it'll take time for the results of this convening to emerge, as much will likely depend on how these collaborations continue, and on which ideas and projects born here find root, while others are allowed to wither. I came here to learn about India and from Indians (and others) about how the values of the open web may be relevant in a post-browser world, taking a non-western perspective as much as possible.

My first reflection is that, of course, India and Indians aren't that different from Americans or Europeans - living in such a physically connected world, the memes, tropes and habits of one culture cheerfully blend and adapt to different geographies and cultures. The news stories about startups, large online companies, and executive shake-ups commingle with stories about pop stars, sexual assault scandals, and human interest stories about soldiers caught in avalanches and scared elephants running over vehicles. The structure of it all feels quite familiar, as do the vast majority of interactions with Indians at all layers of society. Even when language barriers make communication hard, drawings, gift exchanges and mutual smiles make the commonalities obvious. Good tea, also. The exceptions, however, are worth noting.

First, Indians seem to have a very specific, deliberate and thorough understanding of the issues around technological dependence, independence and interdependence. Since the national independence campaign, India has invested decades in building an independent industry in all sectors, from textile manufacturing to auto makers<sup>1</sup>. Gandhi also emphasized the need for self-reliance, and there appears to be a cultural resistance against middlemen and intermediaries.

As India is a globally connected economy however, even this independence-centric industrial model requires connections with others. As an example, I met with some local entrepreneurs who are specialists in making wooden handles for striking tools (hammers, chisels, etc.). They were both

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<sup>1</sup> en.wikipedia.org/wiki/Hindustan\_Ambassador



proud of their local expertise and deeply aware of their part in the global supply chain, using a Swiss-designed, Chinese-made computer controlled lathe to cut both Indian and American lumber for export back to the West and assembly into consumer products. Pride of Indian craftsmanship and enterprise combined with a global role.

*These connections between people, countries, and value exchange are relatively transparent when it comes to physical goods—you can see the trucks moving stuff. When it comes to digital goods and services, these connections are much more opaque.* Especially given the

widespread use of English, there are few obvious markers of origin on websites. Booking a flight on ClearTrip feels much like Travelocity, but the former is Indian. Zomato is just as effective as Yelp at finding a restaurant, but it, too, is Indian. Flipkart is a \$15B e-commerce giant that is defending against an incursion from Amazon. Those are just a few examples I picked up after a few days of exposure. The global services that seem to be widely used (Gmail, WhatsApp) are, as in much of the world, considered infrastructure without much thought as to the country of origin.

It seems to me that digital India differs from many other countries in two specific ways: first, because of its technical education system, Indians are well aware of their contribution of talent to digital giants. Papers publish stories about recent graduates who get highly lucrative jobs at Microsoft; we learn that 75% of Oracle's management team is from India. Engineers from Bangalore are clearly among the wealthier tourists in popular destinations, and being a software engineer is clearly a broadly appreciated path to success. In addition, the size of the Indian market means that companies can grow very large before they need to tackle international markets.

Much more locally, a reflection on the design students, NID has a stellar reputation worldwide. NID students are, by definition, exceptional – rumour has it that there are 2000 applicants for each available slot.

The conversations I've had with the students do nothing to dispel that reputation-- they are all bright, engaging, curious, ambitious, thoughtful, and from what I can tell, talented. As graduates from a world-class design school, I am keen to see what work they'll do to shape the world. They are younger than the Web, grew up with a smartphone mobile ecosystem, and are imbued with both a sense of place and heritage, and the cheerful ambition of youth. After only two weeks, I don't have worthwhile predictions to make about the future of India, so I'll instead comment on how I'd like to learn from this caravan experience, when thinking about the future of the open Internet and the critical issues it's facing today.

*First*, it's never been clearer to me that the smart bet is on those who find ways to elicit collaborative projects by bringing in a diversity of minds, skills and experiences. It is hard to make this more complex chemistry work, but any other approach to envisioning or designing the future will either rely on the blind luck of genius or fall back on known patterns. I'm drawn to Jon Rogers' quote: "Ignore notions of discipline. Bring people who want to collaborate." As my high school math teacher would attest, I've always had a hard time with discipline. These days, I find that concept is often used to exclude, at a time when all of the interesting and important problems lie at the intersection of disciplines defined in a prior era and for a vastly different problem set.

*The second point* is a demographic one: many of my concerns around ensuring an inclusive Internet, working towards an Internet that represents the diversity of people around the world, that keeps people secure and respects their privacy, are concerns that come from a position of privilege. I've enjoyed and benefitted from an Internet with fairly few restrictions, and I worry that various concentrations of power will restrict that access and opportunity for others. But after these two weeks, I am more hopeful that, because the world is constantly being replenished with young people who, as a matter of course, understand the power of technology to shape their societies, they will just make it happen. In this way, the Internet is not special - it is just another facet of society that evolves as people get a chance to shape it.

*Finally*, it seems to me important to realize that big things start small, and even big ideas start small. This makes me confident that we need to find and refine ways of eliciting good conversations, nourishing them, and then watch them grow. And we need to do this all over the place, in many kinds of ways, with all kinds of people. In some ways we're just starting this process of inviting more people to help shape our own thinking. I look forward to see what starts to emerge. **■**



# The jugaad of code

*Bobby Richter*

Right now, I'm at NID in Ahmedabad, India. Walls and closed windows are sparse, letting the noise of the city pour into workspaces. The city feels alive, and it's full of makers, fixers, cooks, and entrepreneurs. Here, the way I write, and learn to write code feels very natural. It's part of the process that I've been trying to instill in students since I started to help them with their own projects during the caravan. However, there was already a great colloquialism that described this problem solving method in one word: Jugaad. Asking someone to explain the concept is difficult and interesting, but it's obvious when you get to see it or use it to build or learn something.

At some point, learning any new piece of technology has to extend beyond the Wiki/manual etc. In fact, when I learn a new programming language, there's a certain magic phase somewhere near the beginning where I know very little about what's really going on, but I know enough to force pieces together until they do generally what I need: somewhere between running the interpreter/compiler and writing a tiny game. Then comes hours of teasing it apart, learning more about how each piece actually works.

But, those first "Ah-hah!" moments are so gratifying: they are what inspire you to forge on and see what else you can do. They are also the reference frame for building things. Most of my first projects/experiments are new pieces of scaffolding stacked on top of old pieces of scaffolding. And every once in awhile, when I figure out a new trick, I iterate on things I've already done to make them better, smaller, and faster. I can't think of a better way to learn something.

The problem-solving environment that a text editor and a debugger provide is special: it lets you constantly make safe mistakes, and learn from them instantly (provided that you find the semicolon that you were missing). And when you have that sort of setup somewhere in life, it's an incredible

experience (like having Mr. Miyagi at your side). There are lots of safe learning situations in which you can learn to, say, use a baseball bat, drive a car (in a parking lot, at least), or take pictures with a DSLR. In fact, I would say this whole Unbox caravan is run with a sense of Jugaad; people are being inventive and producing solutions, making the best out of the benefits and affordances of the places and the events in which the group is immersed.

In computing, however, decades of work have been devoted to making just this problem of delay comparatively miniscule. So, when you're used to that response—that freedom—being around students who don't yet have an appreciation for it, is sort of thrilling. You can just say, “well, just comment that bit out, and try it.” Or, “hmm, there are 8 values we could use here. Let's just try them all.” Not only does it give you a response from the machine that feels more intimate than reading a [poorly-written/ incomplete/ boring] Wiki article, but it teaches you a little bit more about how machines work, how flexible they can be, and how they'll do exactly what you tell them to do (most of the time) whether or not your logic really accomplishes what you think it should. As a programmer, I can rely on those decades of iteration on machine systems, to isolate potential problems to bugs in code that I've probably introduced myself, and I can work on removing those problems without a lot of interference from the machine or environment itself.

But, this week, Jugaad was a real asset when dealing with hardware: resistors-pulled-out-of-plastic-bag-and-shoved-into-a-breadboard-and-squeezed-between-the-wires-of-an-LED-and-a-button kind of hardware. Students were tasked to use Arduinos (several, if necessary) to demonstrate some interesting ideas related to the Internet of Things, which translates to humans rubbing up against machines in ways in which I'd expect only experienced manufacturers to feel comfortable. Consequently, we learned lessons immediately about noisy inputs, faulty components, unexpectedly disconnected wires, and more. *Everyone—especially me— was taught or reminded about how undependable machines are without those layers of precision and redundancy. Like a slap in a face that says, “think analog!”*

The result was a great depiction of Jugaad: problem-solving, piece by piece, until we cobbled together the results we needed in a very convincing fashion. Our code fits the description well: patchwork and little hacks to make sense of hardware quirks, timing, and interfacing with other machines. Most importantly, everything works! It works super well. Of course, nobody should ever launch a satellite into orbit with this approach. (Please use rigor and redundant checks, hundreds of careful peer reviews, etc..etc.) But, at least with machines, when you're trying to demonstrate an idea or have limited (or interesting) resources, you don't need speed or perfection. You just need to solve the small, disconnected problems and make a whole project come together. —

The Unbox Caravan offered a space for us to reflect on the ethics of what we make. Many of us were interested in the Internet of Things as an emerging field where questions about privacy, security, openness and more will be teased out. For this reason, we wanted to discuss the ethics of making the Internet of Things.

As a reference, we began by examining existing manifestos and ethical guidelines. These documents included the Mozilla Manifesto <sup>1</sup>, the Four Software Freedoms <sup>2</sup>, the IoT Design Manifesto <sup>3</sup> and the Three Laws of Robotics <sup>4</sup>.

We discussed whether the values outlined in these documents are relevant for IoT: what has changed since they were written, what is missing and what is still compelling. We were also interested in how these texts interact with each other. For example, the Four Software Freedoms define what Free Software is, and this term is later incorporated in the Mozilla Manifesto as an important contributor to the Internet as a public resource.

Instead of creating a new manifesto, we decided that a useful next step would be to synthesize the values we think are essential to the Internet of Things and to then create tools that help people who use and produce technology make informed decisions about products and services. In this way, we can directly put our values into action.

One way we anticipate this project taking shape is as an Internet of Things Scorecard. Inspired by nutritional facts on food packaging and projects like Greenpeace's Click Green Scorecard, our project would rate IoT products along several key indicators such as privacy, security and openness. We anticipate many uses for this scorecard. One would be as a research tool in Mozilla's annual State of the Web report, where we could track changes in the IoT landscape over time. We would also be interested in speaking with consumer rights groups to apply the scorecard further and in using it as a guideline when beginning and assessing our own projects. —

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<sup>1</sup> [mozilla.org/en-US/about/manifesto/](https://mozilla.org/en-US/about/manifesto/)

<sup>2</sup> [fsfe.org/freesoftware/basics/4freedoms.en.html](https://fsfe.org/freesoftware/basics/4freedoms.en.html)

<sup>3</sup> [iotmanifesto.com/](https://iotmanifesto.com/)

<sup>4</sup> [en.wikipedia.org/wiki/Three\\_Laws\\_of\\_Robotics](https://en.wikipedia.org/wiki/Three_Laws_of_Robotics)

## An ethical guide to the internet of things

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*Michelle Thorne , Bobby Richter, Michael Henretty,*

*David Ascher & Vladan Joler*



# Code of the dark temple

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*Vladan Joler*

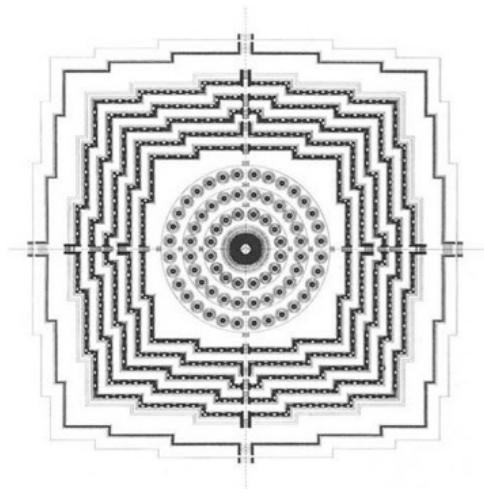
The story of the Dark Temple begins at a really small city square ( 23°01'07.9" N 72°35'30.2"E) in the heart of the old city of Ahmedabad. This square is hidden in the labyrinth of hundreds of small streets and squares and it is a common space for the small neighbourhood community. In the middle of the square there is a small Jain temple, an architectural structure created for religious rituals and activities of small neighbourhood community, practicing an ancient Indian religion that prescribes the path of Ahimsa (nonviolence) towards all living beings.

After few days of observing this unique place I was intrigued with the question: In the world of Internet of Things, electronic communication and artificial sensors what will take a place and extend the idea of temple? What can be the temple in context of Internet of Things?

Exploring this idea became an adventure. Social, philosophical and technological investigation that created numerous exciting discussions within our group and with amazing local experts coming from the field of architecture, design and philosophy and religion. Ideas emerged from this adventure formed The Code of the Dark Temple, a set of concepts associated with creation of the immaterial and meta-architectural structures in the realm of electromagnetic spectrum that can be potential Temple for the era of the Internet of Things.

Dark Temple is a Void in the spectrum, an absence of signal, sphere of not-self in the ocean of electromagnetic waves.

In the age of electronic communication, wireless transmissions, mass surveillance and total transparency of the Individual, the Dark Temple represents a non-place, an emptiness in which one can be alone with their inner self or with others without interference from the world of electronic communication, artificial sensors and the world of Immaterial Work. It is a non-place which one neither adds anything to nor takes anything away from. It is a black hole that does not allow wireless data and meta-data to escape, and therefore cannot be directly observed.



### Architecture Of the dark temple

A Dark Temple is a meta-architectural structure mostly existing in the realm of electromagnetic spectrum.

There are natural and artificial Dark Temples. Natural temples are a scarcity, disappearing existence of places without signals. The one who wants to conquer all frontiers and control the waves will tend to transform all the natural Dark Temples into the network and exploit, privatise and control the resources of the electromagnetic void.

An artificial Dark Temple is the void in the electromagnetic waves usually artificially created with a use of different techniques, technology and structures performed or built by monks of the Dark Temple.

An artificial Dark Temple has the shape of a sphere. This sphere is filled with an electromagnetic signal that creates noise and by that transforms the inside of the sphere into a field of invisibility and emptiness. The inside of the sphere is fullness and emptiness at the same time. It can be understood as a Dark Temple or a White Temple simultaneously. The Temple can be ephemeral or eternal. It is omnipresent. It can be small or large. The membrane, border or walls of the Dark Temple are fields of disturbance.

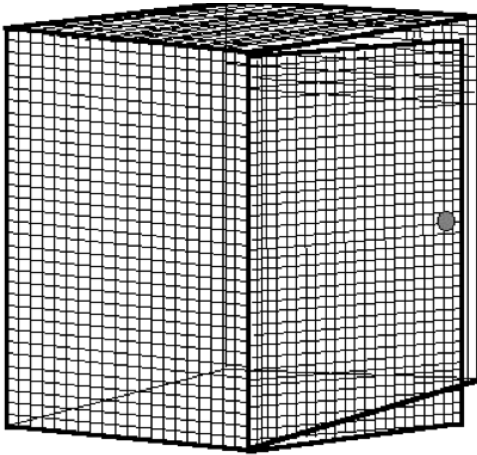
Anyone entering the Dark Temple eventually leaves a trace, a signal of lost connection with the network. The sum of those signals can trace the shape of The Dark Temple. This is how the one who controls will have a power over the realm of waves and the network can see the existence of the Dark Temple within its domain. Similar to the theory of the event horizon surrounding a black hole, the all-watching eye of the one who controls the waves can observe events on the horizon, the border of the Dark Temple but nothing behind it.

### Order Of the dark temple

The Order of the Dark Temple is not an order. It does not have a specific structure but has a set of fuzzy ethical principles that can evolve, be modified or disappear. The order consists of all beings (human, non-human, transhuman or posthuman ) that create or enjoy electromagnetic voids.

### Dark temple dynamics

Even the Dark temple is a void, and there can be just one void - there can be many Dark temples. The Dark Temple can move, appear or disappear and merge with other Dark Temples.



Faraday cage

Dark Temples are nodes of the abstract network, The Internet of Nothing, that is the sum of all nodes existing in the present moment.

### **Ethics of the order of the dark temple**

Electronic nonviolence is the fundamental principle forming the cornerstone of the ethics and doctrine of the Order of the Dark Temple. Electromagnetic void, the substance of the Dark Temple should not be imposed on others without their consent. A Dark Temple is not about jamming others, it is about creating a void for the purpose of enjoying personal freedoms and gaining a silence in the world of noise. The choice to step out from the world of noise into the Dark Temple should be the choice of the individual.

The Dark Temple is neither a manifestation of technophobia or neo-Luddism philosophy nor an advocate for complete absence of digital communication. The Dark Temple Order advocates for balance and the possibility that one should be able to isolate him/herself and should have a right to create electromagnetic voids.

The Order of the Dark Temple practices different forms of Digital Veganism outside of the Temples according to individual needs and choices.

### **Code of the dark temple and its existence**

Code of the Dark Temple can be changed, modified or distributed by anyone. The Code does not belong to anyone but belongs to everyone. There is no one Code, there can be many in different forms and substance.

### **Legality of dark temple or right to be disconnected**

In the realm of the State, electromagnetic spectrum is highly regulated and owned by governments or private entities. Creation of void, disturbance or interference in electromagnetic spectrum is considered illegal in most of the countries. This is against the values of the Dark Temple Order which believes that anyone should have the right to be disconnected and to create a void in a nonviolent way.

### **How to create a dark temple**

There is no one way to create a Dark Temple, there are many. One should seek the open knowledge of the Do-It-Yourself in the fields of signal jamming, electromagnetic interference or Faraday cage. —

# 5

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## The Ending

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**A Quest in Fog Juggling**

*Jon Rogers*

**What is a Chai Gate?**

*A few people*

## A quest into fog juggling

Cellardyke, a village of 2,000 people, nestled on the edge of the North Sea in the East Neuk of Fife, is the place I call home. We have our own tiny harbour that is rarely used by other people – occasionally you see tourists taking selfies at the harbour's edge or casting a hopeful line out for a mythical and near extinct cod. For me, it is a very special place and I go there a lot throughout the year. It is where I used to sit for hours staring out to sea while my mum was in hospital with terminal bone cancer. It's where we've had numerous kids' (and a tiger called Tigey's) parties and more than our fair share of late night impromptu gatherings involving a fire, something to cook and a dram or two.

It's also where I swim as much as possible all year round. No wetsuit. It's 5°C around now. Recently I've extended the hours I can swim by swimming in the dark. It is pretty much pitch black. But it is amazing. The first time was in late October as the autumn stars were finding their position – the plough directly north and the possibility of the northern lights. Babitha was visiting and she much couldn't believe what my friend and I were proposing. A 3m jump off the harbour into complete blackness. It was incredible. Just jumping off into the dark freezing water. Knowing that it was safe (we do this all the time) but also being completely unsure about what it would be like. As I hit the freezing dark water and waited while my eyes adjusted to the dark and my body to the temperature, the stars started to come out of hiding revealing a night sky from a perspective I don't usually see. The moon was low, the water flat, the warm village lights and the ghosts of sailors lost at sea swimming all around. It was weird – especially as at night you can see your whole body under water but not the water itself – it was as if I was a ghost. Perhaps I was.

It was around then that Babitha and I started to think about the idea of gathering people on a caravan. A caravan to explore without knowing the destination and without knowing what would happen along the way. But a way to gain a new perspective, to ask people to jump in and immerse themselves in a new environment for collaboration – that might include a body shock (for some this is India and the process of design).

We didn't have a clear idea. We just knew that somehow it felt right. Perhaps it was a lost soul of the sea that had somehow suggested the idea. Who knows. The swim was amazing and I've continued to go for a weekly night swim ever since (well at least until I arrived in Ahmedabad- I'm not sure that the 'river' here is ready for one of my particularly well timed bomb jumps...)

So while we wanted the caravan to be messy, unexpected and emergent we also wanted it to be enjoyable, playful and personal. There was a sense that if you build it, people will come – which also shifted to if you bring people together, things will come. The ‘how’ is an altogether much trickier thing to answer. The ‘how’ then is my quest that I joined the caravan with. A quest on how we work in chaotic, messy, unclear ways that provide beautiful, enjoyable, nurturing experiences for people from different backgrounds, skills, and places.

### **A bit on the how**

This much I know: I don’t want to be a facilitator of an ‘innovation process’ – goodness knows I’ve been to enough “sandpits, hackathons, sandboxes, workshops” to last me a lego-lifetime. Yet these facilitated, stage-gated events and processes do seem to work; at least in the sense that they bring people through a defined problem (“explore the digital economy”) and into a proposal for a project (“IoT for the connected world”). I’ve made lots of new friends on these events, won a lot of funding and helped further my career. The only problem is, I NEVER WANT TO GO TO ANOTHER ONE OF THESE AGAIN. I’ve always left feeling like I’ve given away a lot of me. That I’ve entered a Faustian contract, that I’ve taken part in a little too much fun-gineering and that how I felt at these events was way down the priority list compared to how many things were made, how many grants I could win, or how many ways I could prove myself better than my peers in some shallow minded way. Ctrl-Alt-Del Escape!

So the ‘how’ is drawn from a need to not do things in a synchronized, controlled, practiced, well-defined way...that the experience, or journey, of people through an event is more important than the outcome of an event. Reflecting on this, I’m not sure we got all of it right – and we’ve some way to go! BUT I’d like to share this. That when we all went for dinner at Gopi’s last night, Aanchal pointed out how many people were laughing and looked happy. And I feel we are. I certainly am. I feel that it’s a caravan that I want to stay a part of and that we’ve a lot of journeys to travel together...

### **On conversations**

There’s a current meme of “having a conversation” –

recruiters use it, governments use it, marketing mad-men use it. Networking and new forms of working together seem to require that we have conversations. And I hope this doesn’t read too much as a Jon Grenade, but I’d like to push back on the focus on conversations and talk more about the language of collaboration. Collaboration takes many many forms. Conversation is important for how we collaborate and understand each other – yet it’s not the be-all-and-end-all right? On a caravan I feel it is more about the many shared experiences we all had – from the gathering at the chai gate, to working with the students, to sitting and watching the craft of Laxmi Leather master in action. Did it change my perspective? I’m not sure. It certainly enriched my thinking of future possibilities – hearing about the ‘Dark Temple’ on the bus to dinner or stumbling across a mobile phone repair shop in a tiny village two hours north of the city; all added to my thinking about what the future could be. Conversations are great, but let’s not limit how we share knowledge and experiences – after all talking is for networking meetings and sandpit events. Doing, being, walking (or stumbling), listening, learning, forgetting, hanging out – that is the language of insights that comes from an UnBox experience in my view.

### **Did I see through the fog**

In terms of highlights of clarity, this might sound a bit simplified (and in fact may not just sound it, but might actually \*be\* it) but for me working with the caravaners and the design team helped me to crystalize the distinction between Smart and Connected. It’s a rather sad reality but the word smart has been land-grabbed (like so many of the world’s resources!) by corporate technologists as a definer of future digital experiences. It was in the audience of ThingsCon in Berlin in the spring of 2015 that the science fiction writer Warren Ellis bemoaned the perversion of “Smart” from being well dressed into meaning intelligent. “What’s wrong with Clever?”, he asked. This link of Smart to artificial intelligence or digital sensing is a mass sterilization of how technology can be for people. Smart Phones, Smart Houses, Smart Cities, Smart Watches – do any of these really appeal? What’s next? Smarty Pants? Hmm.



Connectedness is a far more human word. Which is kind of ironic as connectors used to be about the things used to join wires together and now starts to mean human connection over the web. Connectedness is also more ambiguous; where Smart is a statement, connectedness is a proposition, a proposition that I'd like to take for a walk in future caravans. So did I get anywhere on my quest for Fog Juggling – yes, definitely! Answers, maybe not at this point, but certainly insights, reflections, thoughts and possibilities. Here are a few:

### *Getting the people right*

Ignoring notions of discipline. Bringing people who want to collaborate.

### *Quiet voices*

A caravan needs quiet voices maybe more than it needs loud voices. That creative leaders are fantastic at self-motivating, joining teams, forming ideas, telling the world about them. Which is all important – we need people like that (I'm definitely not a quiet voice so I'd say that wouldn't be I)! But these two weeks have made me think about how we listen to the quieter voices – how we bring them onto caravans (does this need more 'search' rather than 'apply' as a model?)

### *Making the ride clearer*

We definitely need to write up the journey through the caravan – managing people's expectations of the level of fog! That fog juggling works for me, but that it might not work for everyone joining. Are there ways in which this kind of event can work better – that we're not afraid to be unclear, but we don't want people to feel anxious (there was a definite 'week one' phase of anxiety on the caravan).

### *Structures of the future*

A next step is to map out the kinds of caravan and caravanserais – this one was a pretty cold-start for people (many of whom were arriving in India for their first time). I think we need two days of acclimatizing to the fog and the location. Lots of people were physically unwell. First time in India – not a big surprise – so we should have given an easier welcome – just be, don't work, adjust, see the city, enjoy the new world you're in... And breathe...

The journey is new, it's going to continue. In what forms, I don't know – but Italy, Mexico, Scotland (we do fog big time!) and Germany are all on my personal horizon and I'd love to bring you with me – up for that? Let's go find the fog and throw things around in a way that may or may not resemble the historic entertainment form of caravaners – the art of juggling. ■

# What is the chai gate?

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*Is the Chai Gate a geographic destination? No, it's more a state of mind, a place in the flux of day-to-day living giving one a chance to pause, reflect, cogitate or simply muse. The route to such an altered state of contemplation is found within the volume of a small, whimsical plastic cup. Its contents burn with the fires of curiosity, testing the bonds of the very molecules of the flimsy container, daring it to release the tea in a plasma gush. It's the constant reminder of this state of inflammatory peril, this fourth state of matter that reminds one of the fragility of life, or in Nietzsche's words "To live is to suffer, to survive is to find some meaning in the suffering."*

*When one fully commits to enter the Chai Gate and accepts upon oneself the burden of the Minimum Effective Dose of the fiery infusion, one truly finds the path to a higher level of understanding the loops, whorls and spirals of design thinking. The requisite pause in the turmoil of the day serving to soothe the creative furnace and rub spiced balm into the tired dendrites of right-brained thinkers.*

*The nature of the chai gate as a portal defines it's nether-like status; neither material nor immaterial, a gap in between the dimensions of within and without -- a Styx of sorts, offering the traveller a moment to define the gestalt of their day.*

*To truly understand the chai gate one must, in every sense, become the chai gate.*  
– Adrian Cockle

*Our Fate: The Chai Gate  
Dear Chai Gate, Through you, I find creativity.  
Through you, I find love. From you, I taste delicious things. But you are not delicious. You are metal.*  
– Anonymous

*Chai flows through the bars.  
Friends and security guards.  
Don't spill on the ground.*  
– Anonymous

*The Chai Gate brings back nuances of passionate conversations, heated debates and acrid smells of Ahmedabad's dust, traffic, cigarettes and human sweat. The Chai Gate is a meditation on the juxtaposition of daily street life, high philosophies and design thinking. It is the physical representation of the permeable, sometimes invisible lines between, privilege, circumstance, poverty, progressive thinking, wealth, conservatism, bureaucracy, buoyancy, cultures and countries. It is that conflicted desire to enter, mix, exit and stay of this milieu of people, animals, and dust, delightfully trapped together in a time warp.*  
– Archana Prasad

*Chai Gate is the entrance to chaos, brightness, heat, colour, fumes, horns, cows, Christopher the auto driver and wonder. Wonder in the sense of "I'm wondering what I am doing on this side of the chai gate". It is the entrance to respite, calm, cool, green and birds.*  
– Sean Kingsley

*A chai gate is a mythical portal to a caravansarai. If you dial up the right symbols on the chai gate a portal opens that you can walk into and arrive at another point of time in another place. To change discipline. To change direction. To change yourself. Lalu is the keeper of the NID Chaigate — through him all knowledge is accessed, remixed and served up — hot, never cold.*  
– Jon Rogers

*The caravan conversations were probably the most fun and also the most mentally invigorating parts of the whole experience, most of which took place at the Chai Gate. I didn't need an excuse to go for a smoke and a chai, and most of the time I would end up sipping cold chai as I would have ignored it, fully engrossed in conversations about Internet securities, musical influences, dark temples, brown temples, grey temples and ghantas (bells).*  
– Reuben Jacob

UnBox makes and sustains meaningful dialogues and projects between unlikely allies across disciplines. This book captures reflections and ideas that started off in the UnBox LABS: Caravan edition in February 2016 and are continuing in different format and locations. You can read about the journeys at [medium.com/the-unbox-caravan](https://medium.com/the-unbox-caravan)  
*We thank you all for your continued support.*

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