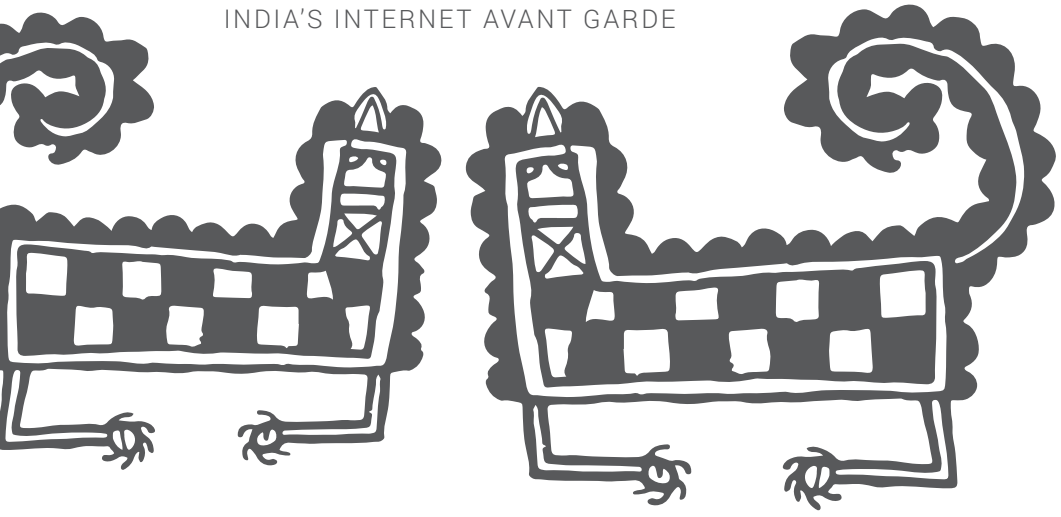
RIGHT TO KNOW

INDIA'S INTERNET AVANT GARDE



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Australia India Institute is Australia's only centre for the study of contemporary India and the Australia-India relationship. The AII delivers a range of programmes aimed at supporting the Institute's ongoing goals across academia, business, education and engagement.

Established in 2002, Digital Empowerment Foundation (DEF) aims to connect unreached and underserved communities of India in an effort to bring them out of digital darkness and equip them with access to information. With the belief 'Inform, Communicate and Empower,' DEF finds sustainable digital interventions to overcome information poverty in rural and remote locations of India, and empower communities with digital literacy, digital tools and last mile connectivity.

Dedication

Ocean in a Drop and Right to Know is dedicated to the memory of Moti Lal Ji, co-founder of Sankalp Sansthan.

Moti Lal Ji passed away in his beloved home among the Sahariya tribe in Mamoni, Rajasthan, on September 14, 2016. His contributions have been instrumental in freeing thousands of tribals from bonded labour practices; establishing schools and computer information resource centres for children of tribal families. He was especially motivated to ensure that girls in the community receive the same opportunities as the boys in their village.

"A challenge is a joy." - Moti Lal Ji

Gratitude

Ocean in a Drop, the film that inspired this book, has crept through the dust, tumbled through the noise and hiked through multiple means of communication. We survived, and we made it through. We cannot wave goodbyes without expressing our gratitude to those who pulled and pushed us through this adventure. Digital Empowerment Foundation's contacts, connections and ongoing support; the trust of our supporters, funders and crowdfunding contributors, and our film crew who conversed with each other over many cups of chai, enjoying our few weeks together and learning from each other whenever the opportunity presented itself. We had also matured friendships in spite of the minutiae of cultural and language differences.

We would also like to share our gratitude for the hospitality and patience of our interviewees, villagers, many NGO staff, local fixers and guides. Their curiosity welcomed us and our experiences with them accompanied us on our journey. At all our rural locations we met people who patiently waited for our crew to set up, providing us with space and time so that we may familiarise ourselves with their homes, villages and workplaces. And they all fed us, too, with delicious local cuisine. Last but not least, we salute our chai makers. The presence of chai continues to bind ourselves to each other, reminding us to take a breather.

Andrew Garton & Cathy Chen

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Foreword
by Anriette Esterhuysen
Executive Director,
Association for Progressive Communications

Right to Know: India's Internet Avant-garde takes the reader on a journey rich in stories, learning and reflection, and powerful images. Paging through the book feels like slipping inside a fable: a fable about connectivity, about how connections are always more about people, their lives and struggles, than about cables or computers. Like all good fables it pulls together its many strands with wise words:

> ...it's clearly not just about the technology. It's a story about people at the base of each tower and how they respond to local needs, what they learn from and teach each other. It's about the literacy in illiteracy; that in each person who is unable to read and write are traditions and knowledge shared and known when the means to read or write were unknown or not required. (page 27)

For me, this book evoked my own personal story of discovering the power of people, information and connectivity in the late 1980s, which is also the story of the Association for Progressive Communications (APC): stories about people working together to change the worlds they found themselves in for the better, and in doing so, building and using technology, but always driven by action, and shaped by content and purpose.[1]

Andrew Garton tells the story of how he and Osama Manzar met in 2011 at an APC member meeting in the Philippines. Here are the stories of how I met them.

I first met Andrew in Prague (Czech Republic) in 1994 during INET.[2] The venue was Hotel Krystal, at that time a fully un-reconstructed Soviet-era institution – linked to a management school – with a front-of-house person who resembled the prison camp commandant in that wonderful Lina Wertmuller film, Seven Beauties.[3] It was a huge, tall, square structure on the outskirts of the city, surrounded by grey broken-down apartment buildings. But nearby was a wonderful nature reserve, full of birds, hidden streams and waterfalls. In lieu of guest information, Hotel Krystal had rules. Rule statements were everywhere, in the elevators, in the rooms, the bathrooms, the lobby, the dining room. At mealtimes you would be assigned a seat. Vegetarians were treated as subversive enemies of the state. The whole bunch of us – a rather chaotic group of techies, internet pioneers and information activists from all over the world, participants in the pre-INET training events for people from developing countries organised by Internet Society (ISOC) with help from APC people at a nearby university – were a source of great stress to the staff of Hotel Krystal.

One day, Andrew was just there, sitting in the lobby emitting an aura of adventure, glamour. He had just completed the travel through Southeast Asia that he mentions in this book. I sensed immediately that this serious, thoughtful person, an artist and an activist, would be important in my life and work, and so he has been. Andrew takes nothing for granted. He tries to get into the texture of things, of issues, unpacking layers of history, meaning, impact. This is rare in the field of ICTs. Andrew approaches his work as a documenter like the composer that he is: feeling, hearing and deconstructing harmony and disharmony in order to understand it, and share that understanding with others.

My memory of meeting Osama is equally vivid. It was 2008, I was at the Internet Governance Forum in Hyderabad (India). A valued colleague, a senior civil servant working in the Indian government whom I had known for many years, dragged me from the APC booth to that of Digital Empowerment Foundation saying, "You must meet Osama! They must join APC!" The DEF booth was completely not what I expected. There was nothing "NGO" about it. It was huge, flashy, engaging, staffed with a small band of energetic young people. It shouted out: "We can do it!" and "No challenge is too big for us!" And there was Osama and the Osama smile. There are few smiles like the Osama smile. Helen of Troy is supposed to have had the face that launched a thousand ships. Osama has the smile that has launched a thousand projects. But behind the smile is a very special mix of compassion, courage and creativity. Even

1. Read more about APC's early days here: https://www.apc.org/en/about/history
2. At the time, the Internet Society's annual conference preceded by a training event for people from developing countries.
3. https://en.wikipedia.org/wiki/Seven_Beauties

fearlessness. It is this fearlessness that led Osama, and the people that walk with him, down the road towards the *Right to Know*.

Below is an extract from a meeting of the APC community working in Africa that took place 20 years ago. Keep in mind that it was written by people providing and building local access at a time when the commercial internet had only just discovered Africa:

> Many of us have worked in African networking from the early days and welcome the blooming of internet access across the continent. But the network is not an end in itself. This technology has the potential to bring about dramatic social, political and economic changes in Africa.
>
> We work in a variety of roles in the progressive and non-profit sectors to support thousands of users in Africa with the connections and the information they need. We will continue to work together to pursue our vision of a network with a purpose. Our goals of low-cost, cooperative internet working, quality local content, and the widest possible participation will remain even if and when the current internet mania dies away. A historic opportunity to develop technology for the good presents itself. However, without action on a number of issues, too, many African people will be relegated to the role of passive spectators as the global information society takes off. As a grouping of interested parties under the aegis of the APC, we hope to raise awareness of these key problem areas:
>
> - Relevant African information ("content") needs to be produced, managed and delivered appropriately within Africa. The raw information heritage is too valuable to be trusted to others. Almost no resources are directed to this need.
> - [C]ommunication infrastructure beyond the cities remains under-funded – a problem that liberalisation cannot solve. Private investment in deregulated markets has so far generally concentrated in the major cities.
> - The little international investment that there is in technical training and capacity building – a critical need, especially to bring more women into networking – too often neglects the particular needs of Africa.
> - Alliances are being developed between some donors and parastatal PTTs which are giving governments a stranglehold on national bandwidth. Donors are mainly focussing on the pipes, not the people.
> - We seek greater consultation from the various initiatives which aim to steer telematics developments in Africa (...). **There is a difference between being used as cheap advisors and then ignored, and becoming valued as key stakeholders in an ongoing process.**
>
> [U]nless [these concerns] are addressed, the development of the African Information Society will be skewed and the prospect of greater marginalisation will be increased."[4]

When we wrote that statement we had no idea that mobile internet would grow the way it did. Nevertheless, most of the concerns we raised were not fully addressed, and greater marginalisation has taken place. With more and more everyday activity taking place online, from registering a vehicle to applying for a place for a child in secondary school, people who do not have access, usually because they are already socially and economically excluded, are doubly excluded.

I do not believe in full circles, but I do believe in spirals. A spiral of people, challenges and solutions connect APC's work in Africa in the 1990s with the work described in *Right to Know* and now with a new APC initiative that will launch in mid 2017.[5] The power of *Right to Know* is that it is not about "connecting the next billion" – a slogan that not only diminishes the problem[6] and disregards the economic and social divides that underpin unequal access to the internet in the first place, but also diminishes the people themselves by anonymising them, reducing them to a statistic, and homogenising their contexts.

Right to Know and the work done by DEF and documented so movingly by Andrew are about agency and resilience, about people building and discovering the value of internet access on their own terms.

4. The Holy Family Communique from African Electronic Communicators at the Association for Progressive Communications (APC) Africa Strategy Meeting, Holy Family Centre, Johannesburg, South Africa, 8-11 February 1997.
5. Local Access Networks: Can the Unconnected Connect Themselves? An APC Action Research Project in partnership with Rhizomatica and the Internet Society (ISOC), due to start in July or August 2017.
6. Over four billion people remain unconnected to the internet, including around a billion who do not have access to basic telephony services. (see: http://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx). This digital gap is more acute for women, as it is estimated that 12% fewer women than men can benefit from internet access worldwide;, rising to 15% in developing countries and almost 29% in least developed countries (ITU, 2016see: http://www.itu.int/en/mediacentre/Pages/2016-PR30.aspx).

In a recent document in which we try to shift the "connect the next billion" debate towards a focus on how people can connect themselves, APC says:

> It has been widely assumed in the debate over how to achieve universal access to the internet that connecting the unconnected will largely take place through mobile broadband (3G and 4G/LTE). Most of the efforts to bring connectivity to the lowest income groups have assumed that by extending this business model, mobile broadband will eventually reach everyone, if necessary through government subsidies.[7] But, for many people in low-income groups and rural areas, this is not likely to be the case, as prevailing business models of existing network operators are not oriented toward the least profitable, low-income and rural services. In rural settings with dispersed populations, these revenue levels are inadequate to provide sufficient return on investment for a national mobile operator burdened by the fixed costs inherent in their technology and business models. In Brazil, for example, there are many locations where mobile base stations have been set up only to be abandoned by operators due to lack of sufficient revenue generation.
>
> As a result of growing awareness of the limitations in the national operator mobile broadband model, there is increasing interest in exploring alternative strategies for reaching the unconnected. Innovations in low-cost communication technology have created new possibilities for the development of affordable, locally owned and managed communication infrastructure. As a result, a growing number of communities and small, local and regional operators have taken a more pragmatic approach, using off-the-shelf low-cost commodity networking equipment to provide themselves and others with Wi-Fi, GSM and fibre connections. In some cases these networks are now connecting thousands of people and there are increasing indications that community-based infrastructure building models could provide a viable alternative.[8]

Right to Know demonstrates the breadth and depth of the impact of such alternative strategies. It gives them a human face, colours them in, and makes them sound out in song and rhythm.

7. Or through providing exclusivity incentives, such as in Argentina, which has just instituted a 15-year period in which national operators who build last-mile broadband networks will not be forced to open them up to third parties, which acts as an incentive for incumbent telephony companies. For other examples see: http://a4ai.org/affordability-report/report/2015
8. From "Local Access Networks: Can the Unconnected Connect Themselves? An APC Action Research Project", April 2017. The authors are Steve Song, Carlos Rey-Moreno, Mike Jensen, Peter Bloom and Anriette Esterhuysen.

Foreword

by Mishi Choudhary
Legal Director,
Software Freedom Law Centre

No one will remember much of what I say here but of the book about which I write and the way it will make you feel, both those that Andrew Garton has done and that which remains to be done, will never be forgotten. Neither the book nor these remarks are long but succinct and moving.

Whether you are here for the depth of the photographs or for the heart-warming writing, the experience is akin to occupying orchestra seats to peek into lives of real people. "Authentic", these days, is a word used often but meant rarely. This book delivers by cutting through the gimmicks and noises of "Incredible India" to let the human race shine authentically.

Right to Know is not Humans of Digital Empowerment Foundation — though it sometimes feel as poignant — but a treasure trove, documenting what happens when every brain on earth is allowed to learn. It forces you to think — when everyone is allowed to satiate their curiosity — how many Einsteins will emerge when knowledge is free and barriers are removed?

The author deliberately fade in the background even when he is narrating the story and gives you a chance to witness changing patterns in learning for women in a society that sets barriers to that learning in form of busyness, expectations. Once there is even one device, she is suddenly transformed by the possibility of what can be found, discovering a curiosity about herself and world in a different way.

You will meet a variety of characters in their now-turned natural surroundings asking questions. In Antoine de Saint-Exupéry's words, longing for the immensity of knowledge. ("If you want people to build a boat, do not teach them naval architecture or to gather wood. Teach them to long for the immensity of the sea").

In the current times, when illiberalism is on the rise, this journey uplifts you and shows you how DEF's work and desire to learn has opened doors to the immensity of knowledge; and now there is no looking back as they are all just asking questions. It reaffirms my belief in my own work as a civil liberties activist by telling me what it means for Komal and Rameshwar Prasad who may have no idea who all of us — who work on internet freedom — are but motivate us nevertheless to ask questions, to authority, to the powers that may be because, "They are all pretty much asking questions".

"When talking to young people, I'd ask what they did when online. More often than not people responded with 'Google'. They are all, pretty much, asking questions."

Fredrick Douglass, the slave who ran away to lead the abolitionist movement, told us that reading was the pathway from slavery to freedom. Socrates tells us about the creative tension in minds of individuals required to rise from the bondage of myths and half-truths towards objective appraisal. This is what access has done for these people.

Let me also talk about the ones who have made this possible: Andrew, Osama Manzar and others.

To know Andrew is to know compassion, someone who can make you feel, something one never forgets with his child-like curiosity. This venture of his another masterpiece where he shows the change in human society the internet is causing. I first met Andrew at the Internet Governance Forum in Bali (Indonesia). This was the first international meeting after the Edward Snowden revelations had exposed the procedures of totalitarianism on our society. A non-chalant dreamer, dapper in his casuals throwing hardball questions with a demeanor so endearing that every passing soul seemed to be charmed by. We had a short but indelible conversation. Movies that are a great mechanism for conversation, reflection and change are not his only preferred tool. Here was someone whose text messages are akin to haikus that are to be savored, therefore, still eating my phone's memory.

The heroes and sheroes in this story are several but one who I know personally and have admired for many years is Osama. Osama is what you get when you put gumption, moxie, unlimited energy and charm to make a heady concoction and decorate it with colourful and chic headgears. To be in his presence is to feel a few inches taller about yourself and the human race. If you are in a social media glut and have lost all hope for humanity, go spend 30 minutes with him. I first met Osama in 2012 in New Delhi at a round-table meeting and joined his fan base after an intervention he made. Cutting through the noise and forcing the high highfalutin conversation to drive to real questions about real people had the policy wonks in awe and the industry claimants' jaws on the floor.

We in India are feeling the respect for the 'right to know' viscerally, a real belief in the net as the bloodstream of future imposes upon us not just some phrase — Digital India — but a real effort to recreate education and access. Knowledge cannot be kept from moving, no matter how many barriers the world may erect now.

The attempts aimed at excluding people will defeat the ones that are aimed at inclusion. Go ahead, don't wait to dive and come out on our side, rooting for the next few billion that will join us online.

They are all, pretty much,
asking questions

INTRODUCTION

I began writing these stories as a means to understand all I'd been told in contrast to what I'd seen, heard and experienced throughout the making of my first feature, the documentary *Ocean in a Drop*. The film explores the impact, or rather the consequences and ripple effects, of internet reach within India's rural and tribal communities. On completing the film, I'd returned to these stories and found that my reflections required a deeper unfurling given the struggles I'd encountered during post-production.

In essence, *Right to Know* describes both the right of all peoples to know their rights, to know what to make of the world changing around them, to make informed decisions. It is also about my personal observations and concerns regarding the kind of development work I had witnessed and both its remarkable, unexpected outcomes and where its s hortcomings are all too obvious.

Right to Know is not a critique of the development practices observed in my film, but rather a series of observations and anecdotal stories of the complex challenges technicians, information communication trainers, community workers and entrepreneurs face in rural India. These parts of the country are difficult to get to, places where even the most adventurous of private enterprises have not yet reached. Then there are the challenges entailed with training millions of people who are unable to read nor write.

In the early 1990s, similar projects were conceived, with Australia's vast rural and desert townships as beneficiaries. Government funded programmes left participating communities with Apple Mac Plus computers; some became door-stops. Others sat idle, unused, soon to be out of date. When trainers left these townships, there was little left to maintain the programmes they had introduced. I know this because I worked with an organisation that had made access to the then fledgeling internet possible to such projects. I knew some of the trainers and had read their reports. I'd seen the same outcomes in failed development projects in Southeast Asia, publishing my observations in newsgroups and Australia's national broadsheet, Green Left Weekly.

Though conditions in India's rural villages may be similar, the internet is established and far cheaper to access now. Computers are also cheaper and far more portable. They're less likely to end up as furniture in India. Computers and access to the outside world afford the promise of opportunity to those seeking refuge from poverty, from isolation. More surprisingly, some information technology initiatives dilute, if but gradually, cultural practices that constrain women's active participation in village life and those that profit from child labour, child marriage and the myriad forms of corruption that thrive on the vulnerable and ill-informed.

To come to some understanding of all of this both the film, *Ocean in a Drop,* and these stories follows the work of a single organisation, New Delhi-based Digital Empowerment Foundation (DEF). DEF is constantly crafting solutions to take the unconnected Indians online.

There are many organisations in India, such as the Barefoot College[1] and Video Volunteers[2], providing remote communities with access to information and communication technologies. The scope of both the film and these stories is such that it was not possible to enquire into the work of many more than just the one example. For all I know, DEF may well have been the catalyst for many innovative initiatives carrying out such work where they are unable to.

Terminology

In describing their work, DEF uses terms such as information and the digital divide. They also talk of digital exclusion and information darkness. I find these descriptors somewhat incomprehensible. There is no information divide where there is already information. There is no digital divide when communication technologies can comprise a mix of analogue and digital. UNESCO refers to regions that "struggle to get their voices heard and of receiving critical and locally relevant information" as being in the media dark. Rather than use terms such as digital literacy, UNESCO refers instead to media development, described as ensuring rural and regional voices are not absent from "an environment dominated by the mainstream media..." As such, throughout *Right to Know*, I have replaced information divide with media dark, and digital literacy with media development.

A LIFE IN INFORMATION COMMUNICATIONS

Dense, chaotic thickets of electricity and phone cabling slung perilously over rusted scaffolding, window frames and bamboo poles. A canopy overhead woven throughout the urban fringe of Phnom Penh, Ho Chin Minh City, Hanoi, Manila, Jakarta, Beijing, Nanjing and Guangzhou. In the dark, rubble and garbage, amid the unruly mess, ragged and shadowy people would emerge, risking their scant lives, draping raw cables one over the other, adding to an illegal maze of brazen off-grid grids, syphoning power to light their ramshackle dwellings.

It was 1994. I had a Macintosh PowerBook 160, a Zyxel 14000 baud rate modem, a Sony Hi-8 video camera, fine tipped pens and a journal slung over my shoulder. I also carried a small tool kit and cables to hardwire modems into hotel room telephone sockets. In most cases, it was the only way to get a line out. At that time you were only online for as long as it took to place a call to whichever server you had an account on, to make that modem connection happen, and whatever time remained to send pre-drafted emails and download any that were waiting for you. In my case, making an international call to the Pactok[3] server in Sydney. Pactok, a store-and-forward email service, collected all my Australian and international messages, mailing lists and posts to and from open newsgroups. You had to be frugal, quick and efficient.

I travelled with Jagdish Parikh, legendary exponent of computer networking for workers' lobbyist groups in South and Southeast Asia. We were researching the Indo-China and Southeast Asia component of the first study of information communication technology (ICT) use in the region. Commissioned by the International Development and Research Centre (IDRC)[4], the consultancy also required us to introduce the fledgeling World Wide Web to universities, governments and telecommunication providers, to gauge their interest and possible uptake. Our findings were published in the landmark PAN Asia Report[5].

Twenty-two years later I found myself in rural India. You would expect similar canopies of raw data and electricity in abundance here, but they barely exist. Where such an entanglement would thrive is instead progressively drawn by invisible threads of unlicensed wireless communications, broadband Internet and clusters of licensed spectrum that host today's digital telephony. Book-ending the PAN Asia Report of sorts I find myself writing and directing a film with DEF. It's about the impact these technologies are making on communities where your literacy means you can write your name, where local and traditional knowledge is undervalued, where ancient prejudices continue to undermine the lives of women, farmers and people of tribal or lower caste origins.

I still carry a laptop, video camera, fine tipped pens and a journal. I arrived in India with a smartphone and a tablet for e-books, music and research. Twenty-two years ago phones were not yet mobile. Today there's no more need for hard-wired jacking into cable infrastructure. Pre-paid broadband is cheap in India and increasingly abundant. Yet vast areas of rural India remain hidden from the internet. Basic mobile telephony is widespread with many innovative messaging services providing information to villagers through a series of text commands and voice-mail services. Oral communication is imperative in a population where the illiterate outnumber the literate.

FROM PANGLOA ISLAND TO DELHI

It was at the 11th face-to-face Association for Progressive Communications (APC)[6] Council meeting that I met Osama Manzar. Held on Panglao Island in the Philippines, it was less than a fortnight since the 2011 tsunami devastated Japan's east coast. Many of us were still uneasy about the consequences of the tragedy. Amid the concern, one face stood out. Osama was setting up a small stall of saris and other fabrics from Chanderiyaan, one of DEF's many rural initiatives. DEF was at that time new to APC. We were to find we had much in common, much to share and much to learn from each other. DEF, Osama explained, is an organisation dedicated to bridging the information divide in India. That is, providing the means and training to access critical information presently unreachable by the majority of the country. Seventy percent of its population, its invisible majority, is based in vast rural areas where telecommunications infrastructure is patchy to non-existent. In 2016, over 460 million out of India's total population of 1.2 billion found their way to the Internet. As many as 323 million are online via mobiles, 26.7 million use Twitter and 195 million are on Facebook, the largest Facebook user population on the planet.

Osama also described rural India as not lacking in information richness, only the means to share it. That an ancient culture with so many people, with such historical significance, was not yet able to disseminate its information to the world, India, Osama informed, was creating its own information divide, both internally and externally. Until it has the where-with-all to do so, Osama continued, how could it expect to contribute to our planet, to influence the governance and care of it in ways that could be fruitful to all?

I wanted to know whether this is what rural Indian wanted as well? To share what Osama describes as their information richness with the world, to influence global affairs and have a say in our shared future? I also wanted to understand what Osama meant by an "information divide", given he had also stated that India was by no means lacking in "information richness".

In January 2015, I arrived in India where I would step into what UNESCO describes as India's media dark, where the means to access critical and locally relevant information through anything other than a basic mobile phone is not only non-existent, it is unknown. These are communities in vast rural regions where millions of people have barely seen products made from plastic and those that are not yet aware of its inability to dissolve harmlessly into the environment.

It is near incomprehensible to come to grips with the fact that over a quarter of the population, a controversial figure at best, still lives below the poverty line. The official figures from a 2012 study[7] states 21.9 percent of Indians are subject to below poverty line status. However, rice subsidies via a national food security scheme support a massive 67 percent[8]. These figures suggest the number of people

Osama Manzar in his home village in West Champaran district, Bihar.

living below the poverty line are higher than represented in the official data[9].

Either way, there are millions of people with little or no access to education and few means to know their rights let alone their country. Community radio stations, which would otherwise reach many of these people, struggle to access licenses[10] and where there is no electricity, there is no telephony, and certainly no Internet access.

Having grown up in the small and once remote village of Islampur in West Champaran district in the Indian state of Bihar, Osama saw the media dark and the opportunity it presented; very few had access to everything, the many to little. Osama established the Foundation to reach the unreachable many – providing access to critical and relevant information, the technologies to enable that access and the training to support it.

The Foundation's plan is to use whatever creative, strategic and entrepreneurial means available to encourage, stimulate and mobilise a billion people with the education and the tools — digital literacy — required to step out of the media dark. That's one billion people presently considered illiterate, one billion unaware of their rights and least of all their right to know that they indeed do have rights. Being digitally literate isn't about having a computer, the skills to use it and an internet connection in your home, but the means to know how to make use of them; knowing what information is relevant to one's needs and where to access it. It's quite a vision.

I came to India to see what kind of impact these goals are having in the rural communities where DEF is most active, and to find out from the social entrepreneurs, community leaders, technicians, young women and men, why they are committed to making this happen. But getting to them and where they were to be found, illustrated just how difficult it can be getting essential services out to these communities.

INTO THE MEDIA DARK

We visited 14 villages located in nine districts across Rajasthan, Madhya Pradesh and Bihar. We travelled across highways reduced to rubble, mud, sand and surfaces, so uneven that large vehicles could be seen toppled and abandoned on the roadside. One route led us into a jungle in the middle of the night. We had to retrace our steps for fear of being bogged. Tigers, we were told, roamed this area.

We took trains to get to the furthermost locations, amazed that we could lug cameras, lights, tripods, along with our backpacks, jammed into every available space within our sleeper compartment, with passengers everywhere in our carriage. Apart from sleep, we didn't lose a thing. It takes great determination to get to these remote communities and even more to install communication towers, computer centres and the training that follows. We returned with over one hundred interviews — visiting, analysing, filming and experiencing the core of the Foundation's multi — layered programme work, its collaborations and their impact.

We filmed where:

- extensive wireless broadband networks (Wireless for Communities) are making use of unlicensed spectrum in off-grid villages;
- information resource centres and kiosks (Community Information Resource Centres) shaped to local needs are providing free to low-cost access to computers, tablets, the internet, online banking, basic computer courses and a myriad of services one can only know about by visiting each and every one;
- labour market information hubs (Soochna Seva) serve to provide communities with access to government benefits and entitlements they're eligible for;
- there are collaborations with aspirant community radio broadcasters;
- the foundation is providing the tools and expertise to capture, archive and publish traditional folk music, arts and cultural practices.

In fact, one doesn't have to travel far to find the need for media development. The outer rim of India's rural media dark begins less than 200kms away from New Delhi. Entering the village of Chandauli, on the outskirts of the city of Alwar in the state of Rajasthan, I feel that if it weren't for the massive electricity towers protruding from fields of cheerful mustard plants, you could be anywhere back in time, anywhere other than the 20th or 21st centuries.

Electricity towers near Chandauli village in Alwar district, Rajasthan

It's here where our story begins, in Rajasthan, from mustard fields to soothe the eye by day to jackals howling lullabies by night.

Wireless for Communities and Information Resource Centres

In Rajasthan, an ambitious network of community built and owned communication towers have delivered wireless broadband into villages that have barely heard a radio. I found this incredible. The first tower in the Wireless for Communities (W4C) project run out of the Sankalp Sansthan, an organisation based in the village of Mamoni, was erected in the village of Bakanpura located in Baran district, Rajasthan, and built from junk. Collected on the back of a trailer by Sankalp Santhan co-founder Moti Lal Ji, as he drove from village to village looking for scrap metal and piping. The final nine-metre construction was welded and erected by villagers with no engineering expertise.

The junk tower, which I might add is not without character, was erected in 2011. It transmits wireless broadband to a network of similar towers 35 kilometres apart reaching up to 10 villages comprising mostly Sahariyas and Bheels, tribal communities at the low-end of the caste food chain. So low in fact that thousands of Sahariyas, former forest dwellers, had worked on their tribal lands for the people who claimed ownership over them. Entrapped in an illegal bonded labour scheme, they were left poor and impoverished as their tribal lands were stripped of their forests.

Thanks to Moti Lal Ji and his Sankalp Sansthan, the Sahariya villagers of Mamoni village are no longer bound to the bonded labour market. It was one of his most astounding achievements[11].

Bakanpura's junk tower, students and staff.

Housed at each site in the Baran network is one of DEF's Community Information Resource Centres (CIRC). Equipped with computers, software, activities unique to the needs of each location with trainers drawn from surrounding villages. But that's not all. DEF's W4C network managed under the Sankalp Sansthan in the region can even function independently of the Internet through a network of intranet. Much like the computer networked bulletin boards of the 1980s, though now with an internet protocol backbone, this network miraculously supports functional video conferencing and a telemedicine service. You can have your blood pressure checked remotely, for example! I've never seen a wireless network, let alone a community built one quite like it.

Moti Lal Ji.

The will to make such projects work is impressive. No one thing is an obstacle, simply one more thing to overcome.

We watched a video conferencing session in action. Three locations logged in. No lag. No adds. Just kids from each of the wireless connected villages who check in on each other once a day, and they are doing so without any pre-determined agenda set by either Sankalp Santhan, DEF or their staff on the ground there. These kids seem to be getting to know each other irrespective of tribal or caste origins. In fact, caste prejudice among these burgeoning cyberspace travellers has all but eroded. One CIRC tutor, Shraban, in the village of Bhamargarh, Baran, pointed to an earthenware water pot from which every single student drinks. While their parents are unlikely to be found in the same room together, their children are growing up devoid of the prejudices that inhibited inter-caste relationships in countless past generations. These are small steps in a vast country of complex origins.

That these networks exist at all, that these towers were built and erected in spite of considerable technical challenges, and bureaucratic hurdles is a testimony to an organisation that sees opportunity at the very juncture of need. Sankalp Santhan works with people unbridled by constraints, which see a challenge, as Moti Lal Ji was to tell me, as a joy.

But it's clearly not just about the technology. It's a story about people at the base of each tower and how they respond to local needs, what they learn from and teach each other. It's about the literacy in illiteracy; that in each person who is unable to read and write are traditions and knowledge shared and known when the means to read or write were unknown or not required.

By all accounts, women and children are the greatest beneficiaries. Former trainees are becoming trainers, earning a living from the CIRCs many are now dedicated to and expressing disinterest in the uncertainty in urban migration. Access to legal information and support networks is eroding the practice of bonded labour. The right to know that one has is impacting across the network. Tutors are themselves innovating, adapting new technologies, such as tablets and specialised apps, to aid in teaching English and enhancing cognitive skills by way of easy-to-learn drawing packages. The work amid the invisible currents of data is epic! It may be the most significant change in the lives of the Sahariya since being forced out of their forests and giving up their lands.

REACHING OUT FROM THE MEDIA DARK

Over and over I was told people are finding and making use of "information". But what kind of information are they looking for and how are they putting that information to use? If you give people, who have never seen a television nor barely heard a radio, access to broadband and a few desktop skills, what happens next?

The ripple effect

The ripple effects of Baran's home-made towers and CIRCs, or any of the other initiatives we visited in Madhya Pradesh and Bihar, are hard to track. Entering observations as data within a spreadsheet will give us a statistical analysis of quantifiable impacts, but we lose the human dimension to them entirely. They ought to be experienced, and to experience, one does not gaze over bar charts and graphs, one must observe, and in doing so, we were surprised and astounded. I wanted to know how do such people respond to instant access to the zettabytes[12] of data accessible to them. What do they want to know, what is meaningful to them and what do they share back to their families and friends? Will they participate in opinion or discerned discussion online? Will they join the attention deficit millions that philosopher Alain de Botton suggests are "crowding out contemplation"[13], to gradually find themselves removed from their daily, worldly interactions, consumed by social media?

It is not a one-size-fits-all kind of answer. The initial impacts are, well, ordinary, but one thing is clear: when the computers are switched off, barely anyone I had met in any of these centres takes the internet home. What many do is share the information they have found there. Some form self-help groups and talk to each other. Others, such as Komal Kumari, will go door to door. Komal works in her home village of Personi, close to the Nepalese border, about six hours drive out from Patna, the capital of Bihar. Most women there aren't aware of the benefits the government offers them. Komal ensures they're aware of the widow's pension, for example, and helps sign them up for it. Many women, without their knowledge, had been registered, their pensions drawn by corrupt officials whom Komal had outed. When I met her, she was 19, two years on from when she began her social activism.

Mansoorpur's outdoor cinema.

Gradually, CIRCs transform into meeting places and local hubs of information drawn off the net and shared by orally. A surprising example, which we would have missed entirely had our shoot not gone overtime there, the CIRC in Mansoorpur, located in Vaishali in the state of Bihar, hosts an outdoor cinema. Videos and documentaries are projected on the exterior wall of their building every night of the week, often attracting hundreds of passers-by.

Several of us took to our cameras and stood on the deck overlooking the main street, filming the growing crowd entirely oblivious to the horrendous roar of traffic thrusting its way through the throng. As night fell, a pall of dust and fumes crafted weirdly seductive and irregular shards of muted light as shadow bicycles, and ox carts emerged and disappeared through the coagulating smog. A lone government health worker wove through the assembling crowd, administering polio vaccinations to every child that came his way, checking for tell-tale markings should they have been vaccinated already. This is truly taking the Net to the streets. Information doesn't need to be read; it can be seen and heard by people who may not yet know, or may never learn to read and write.

Impacts on the young

A new generation of internet users is emerging from India's rural districts. Some attend school; others work with their parents in the corn or mustard fields. Some others tend oxen after walking long distances to and from school. Thousands attend after-school-hours computer courses to learn the basics, the very basics of desktop applications and internet usage.

When talking to young people, I'd ask what they did when online. More often than not people responded with "Google". They are all, pretty much, asking questions. Boys in Alwar wanted to know what Dehli looks like, or how to set up a bank account to make online purchases, what's new in the world of cricket and what are their favourite cricketers

Tilonia's community radio broadcast editor, Aarti Devi.

up to? Girls in Baran were looking for fashion and makeup tips as well as information on women's health that they would share with other women in their villages.

One young woman in Tilonia, community broadcaster Aarti, had taught herself to install and maintain the Linux operating system as well as a host of audio production tools. She can't read and write, but that didn't stop her from consulting YouTube. She achieved such self-learning without knowing a single word of English. In a way learning by watching video tutorials is little different to how the young are taught traditional skills there. They learn by rote, by doing the same thing over and over. Gradually, you get to know what an equaliser does and know how to use it.

The W4C project in Guna, in the Indian state of Madhya Pradesh, fostered a CIRC in Haripura village that was so popular among the young women there that some secretly jumped over brick walls, escaping the suspicious eyes of fathers, brothers and uncles. They learn basic computer skills on a single computer from sisters Sarita and Anju who had themselves gained such confidence that Anju became the first woman in Haripura to ride a motorbike.

Peel back the proverbial layers, step a few metres beyond any of these CIRCs, irrespective of the wireless towers that had brought them there, and one finds that the drop, as Rumi so eloquently depicted, is indeed an ocean. But you must make the time to swim in it to truly know what is taking place there, to follow the ripples up and down stream, to arrive at the confluence of modernity interwoven with tradition and complex cultural practices.

Information doesn't need to be read; it can be seen and heard by people who may not yet know, or may never learn to read and write.

ADVANCING MEDIA DEVELOPMENT

"We are certainly in an emergency situation where we should not take more than one government's period of governance to make sure that each and every school is broadband enabled, each and every business has a website, each and every panchayat and village council has a website, every woman who works at a health centre or health unit should be digitally literate, every health centre should be telecommunication-oriented, each and every NGO should be online, every government department up to the lowest level should be online and disseminating information. This is a national emergency now." – Osama Manzar. It's one thing providing a space filled with computers; it's another knowing what kind of information is meaningful to the millions that have no idea, for example, they're beneficiaries of government support via the web.

DEF appears to respond to the vast disparities in India's media-dark regions with the same urgency as one would during a national emergency. It has this well-honed reflexive capability to harness skills, equipment and deployment methodologies to roll out projects that bring people and the information they need together quickly, particularly in regions where the infrastructure to do so is lacking. The lack of anything isn't a hindrance. Overcoming them seems to make their projects stronger, resilient; and the people who drive them ever more creative.

One such response is Soochna Seva. This is a service providing access to thousands of government schemes for people living below the poverty line. The first of these hubs, established late 2014, yielded outcomes no one could have predicted. Soochna Seva[14] means information service. It registered 20,078 users in the first three months of its inauguration; 16,300 of whom signed up for public schemes they're entitled benefits from.[15] With office spaces barely furnished, Soochna Seva began informing legitimate retirees of their right to a pension. According to some Soochna Seva workers, many living in India's far-flung rural districts had no idea what a pension was.

But how do the unreachable, the uninformed and remotely located get to know about such services? The social and media activists involved in this work often take the leanest of equipment – sometimes a loud-hailer will do. It's at public meetings that their work often begins. I attended two in Bihar.

Getting to know Soochna Seva in Balthar

It was an early start at Balthar, a mere 6km from the Indo-Nepalese border. A suburb at the near edge of the city of Bettiah, famous for hosting Mahatma Gandhi's earliest forays into non-violent protest, is located in West Champaran district of Bihar. Everyone was invited to an open-air introduction to Soochna Seva.

A van with a small public address system would drive through backstreets, blasting out details of the meeting, almost certainly at the highest volume possible, targeting specific areas.

Local identity, activist and musician Rameshwar Prasad led the gathering. In dramatic oratory style, he pitched the project, informed them of the benefits they are eligible to claim, guiding Soochna Seva staff to register names as potential beneficiaries raised their hands in interest. It wasn't an easy sell. Many of the men, and rightly so, claimed they'd heard such promises before with nothing to show for them. Was Soochna Seva another in a legion of promises undelivered, promises broken?

The deal breaker was a combination of Rameshwar's local expertise and the respect he has accrued there, including the presence of the local Sarpanch, Sreekant Devi, the first woman to be elected head of Bettiah's local governing body, the panchayat. In fact, the first to be elected to such a position in the state.

The chemistry that made the meeting work relied on a combination of getting the message out by way of drivable speakers and live announcements, trusted locals to tell the story in a manner people were comfortable with and a strategic alignment with the Sarpanch to give the whole project legitimacy. The approach at the next of the two public meetings was slightly different, as was the audience.

"We get people to our meetings with this."

Balthar public meeting.

Getting to know Soochna Seva in Parsauni

It was a long drive to Parsauni, the bulk of it on roads fit for ox carts. Passing sugar cane fields we did indeed encounter ox carts, dozens of them, loaded with sugar cane, steadily hauled to a refinery barking smoke from its vast factory complex into a near pristine sky.

We arrived around 3 pm. It looked like it might rain. A small building, painted pink and blue, housed a fledgeling Soochna Seva hub, its meeting room full to brim with as many women as it could hold. I counted thirty-two. I'm not sure why no men were present. Perhaps women did all the work in Parsauni. It wouldn't be a surprise if that were the case. Where there's work to be done in rural India, you'll find women there, from dawn till dusk. The only men present stood outside. Others thrust their phones between my outstretched arms. I was holding a boom mic. They took photos when the meeting got under-way.

A most auspicious event marked the opening of the meeting. Just as the musicians were about to start, the building

was struck by lightning. I saw a ball of light, arriving at the rapid end of a bolt of a fulmination from the sky, explode about two metres in front of me. It was followed by a clap of thunder that should've split the building – it was so loud. It didn't. Our cameraman, Rohit's legs were suddenly numb, and the fuse to the building's power blew.

This discharge from the heavens landed directly in front of photo journalist, Mubeen, no more than a metre from where he stood. I seem to recall a yelp, his being the loudest of exclamations. Remarkably, no one was struck!

With barely a pause, the musicians began, performing three rousing tunes to a glum, perhaps exhausted audience. As soon as they had finished, packed up and stepped out of the room, Rameshwar began. This time he was even more animated, drawing curious comments, occasionally smiles from the women. I was impressed with his ability to adapt his presentation, responding to their concerns, and there were plenty, affording each woman dignity and praise.

This was the season for local council or panchayat elections. Rameshwar took the opportunity to focus his pitch directly to women who would vote in the coming weeks.

He began by asking what was it that determined the outcome of local elections.

"Corruption!" One woman answered.

"The one who gives a bribe gets preference in receiving benefits." Said another.

"This isn't fair then..." Rameshwar replied. Another woman added, "Many cheat in the process. Even politicians, they never return to our village once they win elections." From the back of the room, someone said, "They don't fulfil any of their promises."

Rameshwar asked, "What about before elections?"

"They come to us, begging for votes."

"They promise us that they will work for our better future."

Minutes before lightning struck, thunderstruck and rain fell from the sky in Parsauni.

Rameshwar and musicians.

Getting to the core of his pitch Rameshwar asked "What happens during elections? People sell their votes for a bottle of liquor."

"True."

Rameshwar added, "Somebody else sells his vote for money. Some vote on the basis of caste and ignore a 'good' candidate."

The women agreed. "Yes, people have won like that."

Rameshwar continued, "Some vote on religious grounds, saying they will vote for someone of the same faith. Muslims vote for Muslims. Hindus vote for Hindus. Everyone votes with a bias in mind. Can you pick a good candidate like this? We should think intelligently during elections." They all agreed, nodding and gesturing to each other.

"Elect a candidate who has time for your issues and the dedication to solve them too. I am warning you in advance. Don't vote in exchange for liquor and money or on the basis of caste or religion. And remember that women play the most crucial role in voting. Women can make a candidate win or lose. And how do they do that? Men go running around attending election campaigns in the hope of receiving money or alcohol while women sit home and yet are capable of making the right choice. Women's power is something that has the potential to bring about social change". That's why it's said, 'Without women's support, change is incomplete. Until women participate, there can't be change."

I asked Rameshwar why he placed so much emphasis on women's rights. "I envision a society based on equality," he answered. "Men and women should be treated equally. In the development of a region, society, a district or a country, the role of women is very important. However, our society still practices dowry due to which many girls are killed in the womb. People fail to understand that the girls could have grown up to be good humans, they could have made their nation proud. But they're killed in their mother's womb. It's called female foeticide. There needs to be an end to such practices. Women should be a given an equal opportunity to lead our nation's development."

Women gather at Parsauni's Soochna Seva Kendra.

Two young women staff the Parsauni hub. I interviewed Komal Kumari, a lightly framed, feisty and determined 19 years old who has already gained respect and praise for her work there.

Answering every one of my questions without pause for thought, she described the five-year programme laid out for Soochna Seva in Parsauni and how it needs to remain open for business for as long as feasible. In a few short years, she has run out of town many men who had exploited her fellow villagers. They'd been charging fees for individual job cards that should've been distributed for free to every person living and working below the poverty line.

Komal is another example of the type of person, one of the many determined, committed and far-seeing young people at the helm of many such projects DEF has created provision for. Adaptive, reflexive and responsive. That seems to be the model. It's leg work, and there's a lot more of it to come.

Rameshwar and his team are in for the long haul, describing information as a form of strength.

> *I feel that when I receive new information, I am motivated, and have the strength to do something. So I believe information creates some kind of energy within people that gives them immense strength. So where there's information, there's motivation and strength to lead them ahead! This is the reason I think information is important.*
>
> – Rameshwar Prasad

Interviewing Komal Kumari.

THE UNHEARD THAT WON'T
GO UNSEEN IN THE DARK

An urbanite transforms in Mamoni

Former urbanite Kapil Jain had a major life overhaul when he first met Moti Lal Ji. So much so that Kapil was encouraged to join him in Mamoni. Kapil shaved his head and left his cosy life. He now lives at Sankalp Santhan and is a teacher at its school and information resource centre. Kapil told me his students do not arrive at his classes with empty minds. They bring with them traditional knowledge, stories of the forests that no longer exist.

They can, he described, differentiate between trees that may look the same by simply throwing a rock at a clump of leaves and observing whether the leaves bounce back or drop to the ground. They know which plants heal them and those they can feed off. Some have learnt the stories that former generations would share beneath the dense canopy they had once lived under.

Kapil Jain in Mamoni, Rajasthan.

Kapil explained that he offers guidance, rather than teaches, adding, to the richness they already possess. In doing so, he has introduced a suite of Android OS[16] tablets into the CIRC on which text-to-speech applications are used to enhance English language lessons. By respecting the knowledge these children bring to school and providing an education they choose to embrace may well, from what I have observed, impart in them an agility and preparedness to contribute to society at large, rather than be obsessed by the trappings of modernity.

Kapil and his colleagues at Sankalp Santhan are enabling spaces for so many people to grow, to know themselves and their communities by, to listen and to be heard, to discover confidence where inner-strength had no other means to flourish. The results are indeed myriad and ongoing.

Basanti and Reena escape child marriage in Baran

In the once lush forests of Baran, in the southern region of Rajasthan, Basanti Bheel and Reena Sahariya tell me why the internet is so useful. “It’s great for fashion tips,” and burst out laughing. “Aloe vera is good for the skin!”

Now both in their late teens, it is incomprehensible to think that only a handful of years ago they were too frightened to speak. Both had attended a course at the DEF - Sankalp CIRC where they learned how to use computers and navigate the internet. They now teach there.

Where barely a radio had heard Basanti and Reena’s communities of former forest dwellers, now has access to video conferencing, telemedicine services, video on demand, email. Though they may adore aloe vera as any woman of their age might, both have high hopes for themselves and their communities. Basanti has already gathered around 500 women in her village with whom she shares information about women's health issues, sanitation, general access to the internet.

Though child marriage is still rife in Rajasthan, Basanti and Reena found that even a meagre education ensured their escape from this practice. Both their families and friends are supportive of their new-found strength and commitment to helping other women.

Trainee-turned-trainers, Reena and Basanti.

> *In our community, girls can’t study. They’re considered a burden. Parents force young girls into child marriages. Then they can’t step out of the house or speak in front of the elders. This is the status given to most of us girls in the communities. But our families feel that if we are educated, we will become independent and earn for ourselves. We won’t have to work in the fields. Our families think that if their daughters are educated, they will be recognised. If they find a job, they will become independent. They encourage us to study.*
>
> – Reena and Basanti

Women living below the poverty line find solidarity in Muzaffarpur

Indu Devi’s husband used to sell fish at nearby markets in Muzaffarpur, in nearby town in the Bajjikanchal region of Bihar[17], but then he fell ill. Indu describes it as a “brain disease”. Their family is now entirely dependent on her for their income. She is legally entitled to work at least 100 days per year on agricultural land. However, the work offered to her barely meets the quota allocated to all Indians who live below the poverty line.

Sanjay Sahni is an electrician. He works ten days a month in New Delhi and spends the rest among agricultural communities of Muzaffarpur. Within a dirt floor, stone and brick farm building, Sanjay fires up a laptop, a single internet connection and loads up a government website. Every day for the rest of each month, he will provide women such as Indu, who stream in from off the fields all day, with labour market information, hours worked, how much they ought to have earned and what to do if employers rip them off. Plenty of them do.

Many of these women are much worse off than Indu. Their husbands are abusive, refuse to work, and spend much of their days drunk, stoned or both. In spite of

Sanjay Sahni in Muzaffarpur, Bihar.

the harsh circumstances, the women of Muzaffarpur are finding strength and solidarity directly as a consequence of knowing their labour rights.

Led by the formidable Madina Begum, they have formed themselves into an organisation, the fabulously named Union to Empower Social Transformation, or Samaj Parivartan Shakti Sansthan (SPSS). They cry "solidarity" when talking about their strengths and when called upon, as a group, they'll humiliate husbands when their behaviour is abusive and entirely unacceptable. They have come to both protect and inform each other.

A job card that every below the poverty line worker is entitled to and a single net connection has seeded a movement among the women of Muzaffarpur, informed and emboldened them. Sanjay had been invited to establish a CIRC there but declined the offer, focusing his efforts on a single strand of information and supporting its many outcomes. Two days before we'd arrived, Sanjay and women from SPSS filed a police report naming an employer they alleged had underpaid SPSS members. By comparing job cards against data lodged by the employer with the government, it was clear the women were earning far less than they were due.

Madina Begum and the united fist.

It's women such as Indu, Madina, Basanti and Reena who are changing the perception of women in their villages. Small steps in a vast country.

> *Anyone can break fingers of an open palm.Our unity is our strength. We're like a tight fist! United and strong. With this unity, we fight for our rights.*
>
> – Madina Begum

Ancient looms and social enterprise in Chanderi

Chanderiyaan, in DEF terminology, is an Integrated Cluster of Chanderi Weavers[18], housed in Raj Mahal, an ancient palace and former bathhouse. It is one of many such impressive stone structures found in Chanderi, a little known town steeped in antiquity, located in Ashoknagar district of the state of Madhya Pradesh. In former times, Chanderi's magnificent forts protected the southern regions of India from the invading armies of the far north. Fertile agricultural lands, fresh water and the produce of 4,500 weavers are in abundance.

When I first met Osama, he described the ancient skills of the weavers of Chanderi. His description of a legion of weavers introduced to basic computer applications enthralled me. It was to grow into a successful social enterprise providing a means for weavers to value their labour, subsequently improving the well-being of their families.

While travelling to Chanderi, passing fully naked Jain worshippers walking insufferable distances to reach their holy monuments there, I would find the sound of looms somehow comforting. Every movement there is born of physical, if but repetitive, motion without even so much as a fossil fuelled spindle found in the finely engineered maze of timber and twine. A steadily increasing number of Chanderi's weavers are emboldened by new technologies, access to information and the means to protect both their heritage and historical enterprise. Traditionally, these craftspeople are at the behest of Master Weavers, resellers of their labour. Chanderiyaan began with the creation of a centre for design where participating weavers would work up their own designs, some based on the exotic stone carvings found throughout Chanderi. This included computer controlled lathes that turn out wooden stencils and punch cards that resemble piano rolls and complex patterns printed out on grid paper that are re-cast over intricate looms.

The Chanderiyaan enterprise also installed the first wireless network in Chanderi; a fee-for-service utility for townsfolk. An e-commerce website soon followed so that Chanderiyaan weavers could reach national and global markets. The entire operation was initially underpinned by local self-help groups formed to reach out to weavers across Chanderi, inviting their participation in the social enterprise. All this in a town that until 2009 had no motorised transport competing for space on their tiny streets and lane-ways.

Since 2010, motor scooters have been screaming past the elderly that sit in Chanderi's doorways as they have done for centuries. Cars squeeze through, barely making it. Ours, loaded with crew and gear, had to backtrack twice when faced with impossible routes to the bemusement of onlookers. The process of outreach to the broader community of weavers in Chanderi is ongoing. While many are benefiting from the changes that have given Chanderi the status of being one of the first "smart cities" in India, others are still finding their way in the slums at the rear of the city. We found two young women here, both weavers. Their room, a rooftop dwelling upon a house built on skyward-reaching floors formed a labyrinth of rooms supporting 120 people. These women live with two looms facing each other, sharing this space with another ten women and children who sleep, eat and live here. Barely enough room for their looms, they work day in, day out seemingly content knowing they often earned less than they were due.

Chanderi's rooftop weavers.

They know little of the world below. Razia and Nasreen described not knowing what to do had they to fend for themselves. If they had to go to the nearby markets, they explained, they would not know where

to find anything let alone know how to purchase the goods they may need. They feared to leave their room. They told us they didn't know about Chanderiyaan. They had heard of the computer centre, but they had no idea how they could avail of its services. Even if they did, these young rooftop weavers preferred the certainty of a smaller monthly income guaranteed by the Master Weaver they were contracted to.

Radio love in Mansoorpur

In a village at the rear of the small town of Mansoorpur, located in Vaishali district of Bihgar, also in the state of Bihar, is the home of Raghav Mahto and his wife, Kiran Kumari. Kiran received an education that took her to university. Raghav is self-taught and, by and large, considered illiterate. They are a formidable duo. Raghav, a soft

Raghav's radio repair shop in Mansoorpur, Bihar

spoken man, used to build and repair radios when he, by fluke, learnt to amplify the signal of a wireless microphone to broadcast music within a 15-km radius from his home village.

In the heydey of Raghav's self-made community radio station, 15,000 were tuned into his morning broadcasts. His station was extremely popular among the women in Mansoorpur. Kiran explained that the local music her husband would play connected Mansoorpur's women to each other, giving them something to listen as they churned through their daily chores.

A radio transistor made by Raghav, entirely from recycled components.

His frugally-designed radio transistors were popular buys during festivals such as Holi, often selling in thousands at a time. He had both the skills to build the means of transmission, host and produce content, and to build and distribute the means to receive his broadcasts. This was a micro-media empire! I asked if he had any idea how many radios he'd made? He smiled. "Uncountable!"

Word got around about this unlicensed, young and illiterate broadcaster reaching villagers on home-made equipment. His popularity backfired, bringing his broadcasting career to a short-lived end. The Indian government had shut down his community radio station, threatening this aspirant DJ with exorbitant fines. So humble is Raghav he insists his radio station had robbed the government of broadcast licensing fees.

Kiran, discouraged from marrying him by her family, was committed to spending her life, as she explained, with a man who had the energy and capacity to teach himself rather than someone who had no respect for her education. Their relationship, she said, would always be interesting and there would be much they could do together. She aspires to set-up a licensed community radio station and centre for learning, teaching both computer skills and solar engineering.

By the time we arrived in Mansoorpur, their partnership had yielded a popular, yet modest CIRC in Mansoorpur. With DEF's support, they conduct daily computer and internet trainings for both young and elderly. Even members of the local Panchayat take lessons there but do so after hours. Kiran tells me they don't want the youth to see how illiterate they are. The CIRC supports itself through modest fees both from courses and user pays for wireless broadband.

Kiran dreams of the day Raghav will play local music on the airwaves again. When, once more, women will be united through music, when their chores will become less demanding, when their ramshackle training and cultural centre will match what the best institutions — such as Tilonia's Barefoot College — can provide, when their community will prosper from their marriage and love for radio.

Kiran and Raghav.

THE PERILS OF
SOCIAL ACTIVISM

Parsauni's local hero.

I do not want to foresee the future. I am concerned with taking care of the present. God has given me no control over the moment following. – Mahatma Gandhi

Sanjay Sani mentioned he'd been threatened with violence. His work in Muzaffarpur has not only ensured the rights of the women are upheld, but the corruption that had prevented them from being fully rewarded for the work they had been employed to do has also seen his internet connection terminated, access to the building they work in thwarted. Husbands of many of the women Sanjay has helped, accuse him of breaking up their families, totally unaware that without his help little money would enter their homes. It is perilous work.

Fear not, friend

In spite of not being able to read nor write, everyone who turned up to the Parsauni village Soochna Seva meeting received a colourful brochure printed in Hindi. Through our interpreter I asked one fellow, intensely reviewing his copy, turning it this way and that, what he thought of the service and would he sign up? "I don't know," he replied, smiling. "I can't read." I became less interested in the brochure and more curious about this fellow. As we set up for our shoot, I'd often make eye contact with him, acknowledging each other with head nods and smiles.

Later in the day, as the shoot came to an end and with our gear packed, I asked about him. He's our Hero, Komal Kumari replied. The Hero had dragged himself through the village and into the entrance-way of the Soochna Seva hub. In spite of a limp leg and a paralysed arm, he maintained a dignified posture, smiling all the time.

The Hero, Komal described, inspired her to tackle corruption in Parsauni. In former times, he challenged corrupt officials who would skim money off benefits flowing into the village through numerous government schemes. I had heard that people doing this kind of work would often endure severe beatings. Corrupt officials at all levels protected their black income any way they could. I wondered whether The Hero's paralysis was a result of such violence. Komal told me he'd had stroke that left half of his body paralysed. The stroke seemed to have affected his speech as well. We tried to interview him, but he was unable to string a meaningful sentence together.

The Hero was not yet done with life. In spite of his challenges and preferring not to spend his life idle, he would spend some hours of each day helping his wife with the crop picking she does nearby, their only source of income since the stroke. He had been a toll collector.

We were winding up three months of shooting and reflecting on all the stories we had been told. The Hero of Parsauni's was the last in a series of social activist stories that had begun in Bakanpura. Through a series of coincidences, I became aware of the disturbing story of social activist Lalit Mehta who had been "brutally" murdered in the Kandra jungles of Palamu district in Jharkhand.

Lalit was a well educated young man, an engineer who had involved himself in rights campaigns from advancing rural employment, access to health facilities, right to food and detailed social audits of the MGNREGA[19] scheme. These reviews identified systemic and widespread corruption in the implementation of MGNREGA in Palamu. He disappeared on 14 May, 2008. His mutilated body was discovered the following day. He was 32. The police made no effort to identify him, burying him that same day. Family and friends had the body exhumed, identifying him by his shirt and sandals.

His story stirred impoverished communities across India. So much so that the song, *Fear Not Friend*, emerged and spread quickly. I first heard the song, unaware of its origin or meaning, in Bakanpura. About 30 young women sang it for us. We filmed them. The melody of the chorus is unforgettable.

The local hero with Kamal.

Pirs are saying, Fakirs are saying
Bulleh is Saying, Kabir is saying
Ranjhas are saying, Heers are saying
Arrows of Birsa Munda, Tilka are saying
Fear Not, Friend

Walls of the burnt homes are saying
Flames in Adivasi tears are saying
Destinies erased by the bullets are saying
E-west north-south, all four are saying
Fear Not, Friend

Lalit is saying, Binayak is saying
Bars and the chains of prisons are saying
Slogans written on the walls are saying
The lines in raised hands are saying
Fear Not, Friend

Farms are saying, mines are saying
Dead dried springs in the forests are saying
The weeping soil and machines are saying
Dreams of your life and mine are saying
Fear Not, Friend

Left: Young women in Bakanpura singing Fear not, Friend.
Right: Vijay Singh Metah listens as young women sing Fear not, Friend.

When we were filming the women singing this song, Mubeen Siddiqui, the photojournalist who accompanied us, was interviewing Vijay Singh Metah, one of Moti Lal Ji's co-workers nearby. They heard the song. Vijay began to sing along. He stood up and walked around the building to where the girls were; Mubeen following behind him. He continued to sing.

As the song came to a close, he turned to Mubeen and said, "Lalit Mehta worked on MGNREGA-related employment issues... He did a lot of good work, got people jobs, made sure they got paid on time. He also tried to set up a union. But Lalit was beaten to death. This song is a tribute to him, 'Friend, don't be scared'. This song can give you goosebumps if you understand it well."

UPLIFT

On leaving India, I wondered whether providing access and the means to search the web, to sell one's wares there or to know how to open and close desktop applications will prepare a billion newcomers to the diversity of views, opinions and beliefs they will encounter online. But perhaps it's less about the outside world than it is about providing internet access so that Indian's may reach, inform and know of each other. Some members of our Indian film crew were themselves astonished by the diversity of Hindi dialects in the north of the country we travelled through. They, too, were learning about their country as much as I was learning about theirs.

Beneath centuries of prejudice and indifference are vast stores of knowledge embedded in dying languages, folklore, arts and cultural practices little known to many Indians themselves. This is the literacy that exists within the so-called illiterate.

Poured into servers located who knows where are zettabytes of information updated daily – approximately two million emails and 6,000 tweets every second – ready for the millions of off-grid communities yet to know of its availability. Countless have yet no idea that theirs is a right to know how to access this information, nor have they the skills to discern what is meaningful to them and how they may publish their own information should they want to.

That both traditional literacy and contemporary information literacy find common ground online, one to share and the other to be serviced, is core, to my understanding of DEF's vision. What happens when such streams merge, remains to be seen. However a glimpse of what it may deliver can be observed in the young.

You need only look at India's rural young, a generation that has not found comfort in materialism, certainly not enough to be distracted by it, to recognise they need all the support and encouragement we can afford them.

A generation of young women, like Baran's Reena and Basanti, have alluded child marriages, found remedies for the teenage pimples on the internet and shared this and other information with hundreds of women in their respective villages.

Guna's aspirant enginners attend weekend workshops for women and girls under a broadband wireless tower; young boys barely in their teens, such as Chandauli's Saharun Khan encourages friends to join him at the local CIRC; and Haripura village's Amit Yadav, yet to breach 10 years of age, names every single part of a computer in a language no one in his village can speak – English!

Wireless workshop for women and girls, Guna.

For Umer Farooq and his family, who in spite of having found an international audience for their talking drum, it's the transfer of his knowledge to the upcoming internet literate generations in his family that concerns his interests.

The mere arrival of a single laptop in Muzzafarpur saw the first gathering of women on such a scale that they set up their own organisation to protect and inform each other. Old and young alike are exploring their own country, visiting locations and watching annual events online that bring them closer to traditions and locations they would not experience otherwise.

Moti Lal Ji's networks are creating perhaps the first spaces for children to meet, learn and play together, irrespective of their caste origins; and young women have found through education the means to overcome child marriage.

This is a generation inspiring change in their villages, overcoming poverty and prejudice from the youth up. These are young people increasingly more confident and able to make their own decisions. They are the voices to listen out for as they reach beyond the media-dark knowing that theirs truly is a right to know – to know they have been gifted with intuitive tools, the foundations of culture and tradition. They will have our support to change the world, so that we may uplift each other together from the misdeeds and follies of the past and the present.

Umer Farooq's family of bhapang (talking drum) musicians.

EPILOGUE - PRECIPITATION

The means by which DEF staff and their legion of trainers reach their communities are by no means restricted to ICTs. Infor mation finds its routes much like water. When it rains, only the most sophisticated of measures can both contain and mitigate its reach – for a time! Water is persistent. As is information. Where there is need it finds a way, gradually, in time. But sometimes one needs to precipitate the fall, to plant trees, for example, so that water vapour may reach the atmosphere and become heavy enough to fall – precipitation.

The Foundation's reach has found people that have made use of theatre, puppetry, mobile public address systems, graffiti and music. I have met all of these people, but I will never truly know the cultural complexities at play within them, what makes them so adept at communicating to their Indian brothers and sisters with such profound gestures and yet remain entirely indifferent to others. I would often then find myself in a quandary, perplexed and confused, like standing at the edge of a cliff feeling the pull to fall and yet having the common sense not to, and yet the pull remains.

At such times, my thoughts would reflect on indifference and what it is I came to India to do, to make a film.

Indifference in difference

Just as there was a flourishing of flowers that brought colour and shape of all manner to the forests of planet Earth, so too was there a burst of humans reflecting the diverse landscapes and climates across the great continents. These were grand brush strokes of language, song and dance, creed and shade, all speaking to their lands and their lands through them. Nowhere much more so than in India where diversity is of a scale only comparable to the densest of rain forests. Some of which — the depth of species, flora and fauna there — we are still uncertain of. Such worlds we have yet to know and learn from.

Between Alwar and Baran in Rajasthan, we passed a forest from which trees emerged, penetrating the early morning mist as broken arms clutching at the air, a landscape rent and torn by illegal sand mining. Three camel-drawn carts were loaded up with sand quarried by hand. We stopped to shoot this enterprise and in doing so sought permission from the villagers there. They agreed, for a small fee and we obliged.

When the villagers were done, we moved deeper into the forest to capture material for the serene, reflective cutaways and soundscapes I'd envisaged would bridge stories within *Ocean in a Drop*. Each of us found a zone of our own, documenting what we saw there either on camera or through personal reflection. I sought to walk and look deep into the mist. It was at such a moment that a shepherd emerged. His crook was almost twice as tall as he. We spoke through hand signs and gestures both curious about each other. Clearly, I wasn't someone he would regularly meet there, an alien on his homeland, and I certainly wasn't expecting to chat quietly with a shepherd.

As we gestured to each other a member of my crew raced towards us, almost at a gallop, whipped out his smartphone,

Conversations with a shepherd.

remarked on the length of the shepherd's crook and prepared to take photos. I asked would he mind requesting permission first, to which he replied, "Here we don't ask." "With all due respect," I responded, "on my shoot we ask." To which photos were merrily taken, my request ignored.

Communication between the shepherd and I, discovered in silence and respect, in mere moments, was extinguished.

Indifference and disregard were themes that I would find a constant challenge throughout the shoot, described to me as commonplace attitudes found throughout the country. What is commonplace is that there is nothing common between regions, states, tribes, the minutiae of lives buried in slums and the makeshift dwellings nomads and the homeless construct on the open road, in fields, beneath freeways. If there was ever a place more deserving of suspended assumption — to leave your preconceptions and prejudices behind — it is India.

It's not so much that people are indifferent to each other, there is a learned system of responses hewn from a culture of many cultures. There is no one India. It can't be personified in any single artefact nor language. It can't be drawn, exposed nor compared to anything. There are simply too many variances, too many nuances, too many histories and layered differences animated simultaneously.

Indifference, by my reckoning, is a strategy. I try to be open to everyone, to all experiences, but there is a kind of madness that comes with that. Because one cannot know the layers, one cannot know why people say one thing to someone else and another to you, both statements contradicting each other, but to someone who does know it makes sense – it makes sense that it makes no sense! Try experiencing this a dozen or more times each day for a month.

Best see India as a complex country of enduring differences where every shadow cast is contoured by the dust of millennia lives decomposed and transformed into nutrients absorbed into every single tree left standing.

On the making of a film

I had come to India to make a film. A communal voice if you like, comprising what British film-maker Adam Curtis describes as a series of "complicated, fragmentary and emotional images [that] evoke the chaos of real experience."[20] This film is intended as a sensory fusion that brings to the screen those voices moved and mobilised by an organisation taking a bottom-up approach towards an informed and digitally literate society; communities living on the margins of India's rural and information divide.

As a non-fiction film, my approach is to evoke rather than demand the attention of audiences. I am seeking to emphasise empathy through sensory experiences, through images that connect ourselves to each other and by way of carefully articulated sound and motion; to sense the unseen and listen for the unheard.

Danish film-maker Joshua Oppenheimer says, "We can inundate an audience with facts and hopeful possibilities and not dare to let them think and pause and reflect on what they're seeing." Or we can immerse them in our stories, letting them sit quietly in them and then make it little easier with beauty and poetic imagery and sound so that our stories can sink in.

Ocean in a Drop is a moment, a moment in which we may take a pause to see ourselves in each other, each an ocean in Rumi's ocean of drops. "Empathy," Oppenheimer says, "is a practice. A practice... worth practising."

But one can never know the true impact of a work, whether it be a film or a billion digitally literate people, by any means at one's disposal. Werner Herzog, the internationally respected director of some 60 films, reminds us "… art doesn't make a difference till it does."

The weeping soil and
Machines are saying
Dreams of your life and
mine are saying

Fear Not, Friend

Us

Ako Esther is a 37-year-old cocoa farmer from Cameroon participating in the Solar Mamas training programme at Barefoot College, Tilonia, Rajasthan.

Arti Gujjar, 28, is a radio presenter and audio archivist at Tilonia Community Radio, Rajasthan.

Aman Khan, the youngest member
of a family of musicians in Mungaska
village, Rajasthan.

Sahrun Khan, 11, is a student
at the Minority Cybergram,
Alwar, Rajasthan.

Villager in Tilonia, Rajasthan.

Crew member Cathy Chen on location in Chanderi, Madhya Pradesh.

Bhagwatnandan, a solar electricity engineer at Barefoot College in Tilonia, Rajasthan.

Ku Anju Yadav (right) with her younger sister. Anju is a trainer at CIRC Haripur Village in Guna, Madhya Pradesh.

In Haripur village of Guna, Madhya Pradesh, Sheel Kunwar Yadav watches YouTube videos for information on farming practices and pilgrimages.

Wireless technician who climbed a communication tower for a scene in Ocean in a Drop.

Nagma Khan, former student,
now a trainer at CIRC Baran in
Guna, Madhya Pradesh.

Muzaffar Ansari is a historian, linguist, author
and tour guide. He is also a co-founder of the
Chanderiyaan - Integrated Digital Cluster of
Chanderi Weavers in the ancient city of
Chanderi, Madhya Pradesh.

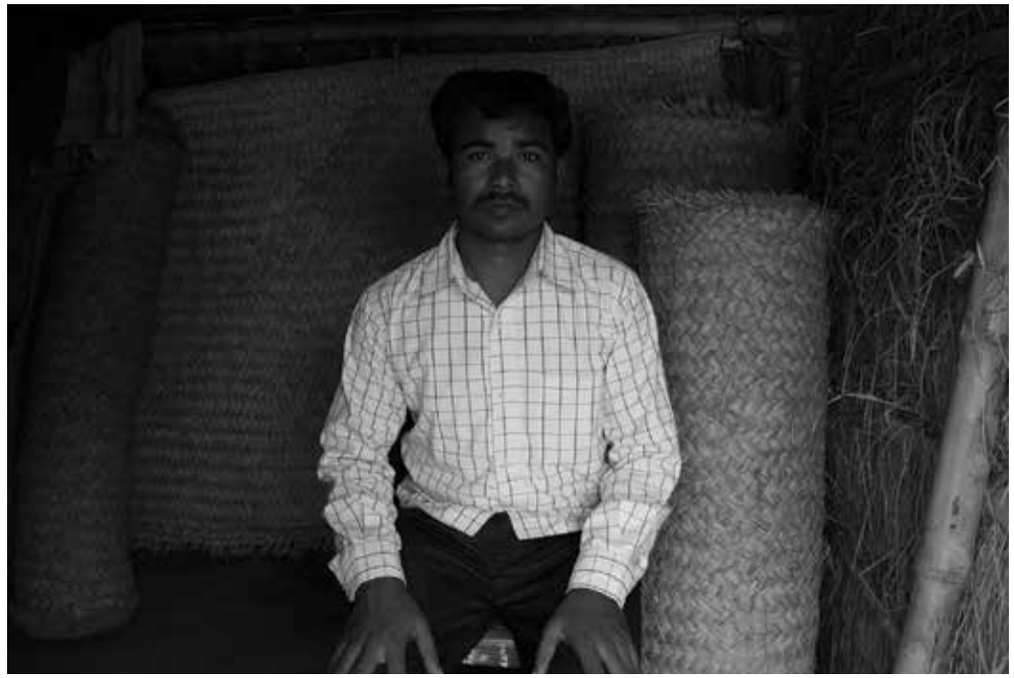
Boy in a remote market place
on route to Chanderi,
Madhya Pradesh.

Sarwan Banjara, 21, trainer
at Bakanpura dCIRC in
Baran, Rajasthan.

Umar Khan, composer, community activist, poet and musician. He plays the bhapang, a variable tension string instrument local to Mungaska village in Alwar, Rajasthan.

Yusuf and Zakir Khan. Yusuf is the manager of CIRC Mungaska village CIRC. Both are bhapang musicians.

Meena Sen, cook at CIRC Baran
in Guna, Madhya Pradesh.



Raghav Mahto, an illiterate and yet self-taught
radio technician who had built a community
radio station transmitter from spare parts, in
Mansoorpur village, Uttar Pradesh.

Jary Nemo, Director of Photography, Ocean in a Drop, on location on the outskirts of Alwar, Rajasthan.

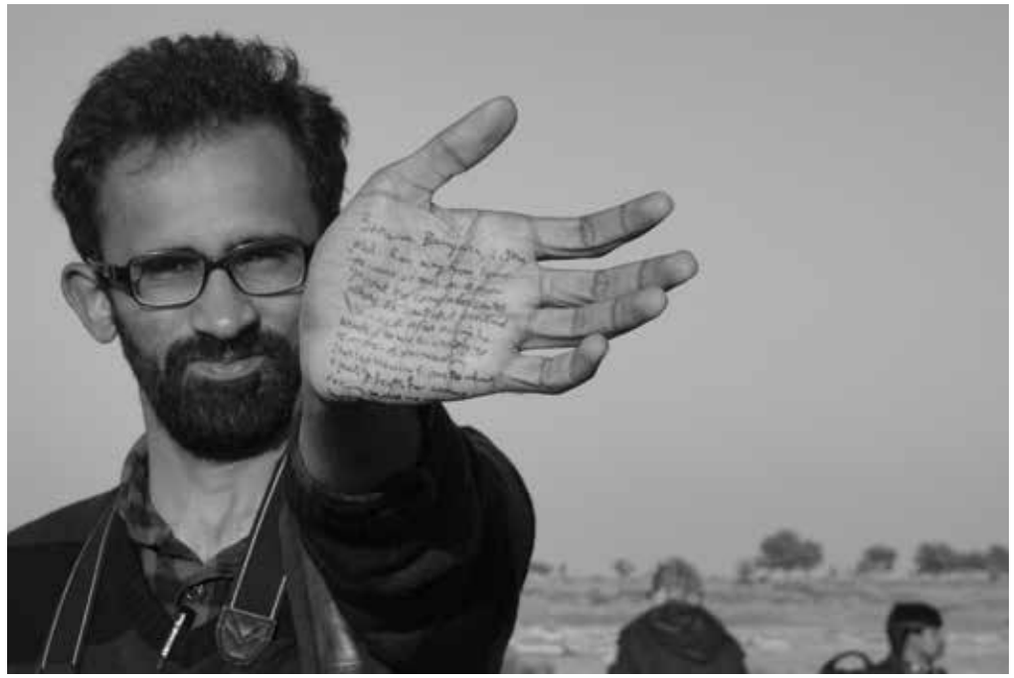


Photo Journalist Mubeen Siddiqui with text for a Tumblr post about the shoot in Bakanpura written on his hand.

PHOTO CREDITS

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2. Page 18 Freeway construction with birds. Photo - Andrew Garton
3. Page 18 Communication tower. Photo - Cathy Chen
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10. Page 27 Autos in Delhi. - Andrew Garton
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35. Page 45 Balthar public meeting. Photo - Cathy Chen
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37. Page 47 Rameshwar and musicians. Camera – Rohit Dhall
38. Page 47 Women gather at Parsauni's Soochna Seva hub. Camera – Mubeen Siddiqui
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51. Page 56 Raghav's radio repair shop in Mansoorpur, Bihar. Photo – Mubeen Siddique
52. Page 56 A radio transistor made by Raghav, entirely from recycled components. Photo – Andrew Garton
53. Page 57 Kiran and Raghav. Photo - Mubeen Siddiqui
54. Page 58 Bakanpura girls dancing. Photo - Mubeen Siddiqui
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66. Page 71 Conversations with a shepherd. Photo - Cathy Chen
67. Page 74 Puppets. Photo - Mubeen Siddiqui
68. Page 76 to page 94 US - faces from the shoot. Photos - Mubeen Siddiqui.
69. Page 95 Photo Journalist Mubeen Siddiqui- Cathy Chen

ENDNOTES

1. Barefoot College is a voluntary organisation working in the fields of education, skill development, health, drinking water, women empowerment and electrification through solar power for the upliftment of rural people. Barefoot College is a partner organisation fo Digital Empowerment Foundation. www.barefootcollege.org
2. Video Volunteers is a media and human rights organisations that is committed to creating community journalists among the poorest in media-dark districts of India. www.videovolunteers.org
3. Pactok was a low-cost electronic mail network founded in 1991, serving community groups and non-government organisations working throughout the Pacific Islands and Southeast Asia. It operated custom-built store-and-forward software for both Pactok hubs and nodes. Nodes would dial hubs, which would in-turn dial the Pactok server in Sydney, which would, in turn, make a UUCP connection to Pegasus Networks further up the Australian East Coast. Pegasus would then transfer all international messages from Pactok to and from its partner APC (Association for Progressive Communications) networks worldwide.
   The Pactok network was, by and large, automated. Calls were placed at scheduled intervals. An article published in 1996 described Pactok as looking "for ways to explore cyberspace's promise of publishing without a printing press with little more than a computer and a phone line (Fogg, 1996). The last Pactok hub, Pacific Media Watch based in Fiji, was decommissioned in 1999. http://bit.ly/2tPzZKF
4. International Development Research Centre (IDRC) is a Canada-based aid and development agency. www.idrc.ca
5. Garton, A. Parikh, J. Nanda, S. Fernandez, L. (1994) 'PAN Asia Networking Report', International Development and Research Centre, Singapore / Canada, ISBN 981006389X
6. Association for Progressive Communications (APC) believes the internet is a global public good. Founded in 1990, they are an international network and non-profit organisation that wants everyone to have access to a free and open internet to improve their lives and create a more just world. www.apc.org
7. Plan commission to use Tendulkar approach for measuring poverty, Rao, Kirthi. LiveMint, Aug 8, 2012. http://bit.ly/2toBNJu
8. A new poverty line that shows 67% of India is poor, Kaul, Vivek. Firstpost, Jul 30, 2013. goo.gl/xtx1gU
9. New poverty line: Rs 32 in villages, Rs 47 in cities, Sing, Mahendra Kumar. The Times of India, Jul 7, 2014. http://bit.ly/2tx73EX
10. The Government of India has recognised community radio through its guidelines in 2002 and amended guidelines in 2006. In the domain of community media, a large gap remains between policy and practice. Communities from the media-dark regions of India continue to struggle to get their voices heard or receive critical and locally relevant information. Their voices remain absent in an environment dominated by the mainstream media, disseminating only entertainment and national-level or state-level information. Ground Realities – Community Radio in India, UNESCO 2011, ISBN: 978-81-89218-44-7. http://bit.ly/2tPmryJ
11. In Rajasthan, Sahariyas throw off generations of slavery, Yadav, Anumeha, 2013, The Hindu. http://bit.ly/2tojqod
12. A zettabyte equals one sextillion bytes or 1,000 exabytes. By the end of 2016, global Internet traffic was to reach 1.1 zettabytes per year, according to Cisco, and by 2019, global traffic is expected to hit two zettabytes per year. How Big is the Internet Really? Live Science, Mar 18, 2016. http://bit.ly/2sNWEYf
13. A noted philosopher's argument for signing off social media... and enjoying 'the brief time' you have left. http://bit.ly/2tosOrU
14. Soochna Seva is a project implemented by Digital Empowerment Foundation with support from the European Union to facilitate information flow and access to public schemes and entitlements in backwards districts of India. www.soochnaseva.org
    Soochna Seva staff provided these statistics drafted in an initial report titled Soochna Seva Journey. www.defindia.org/soochna-seva-journey/
15. Android is a mobile operating system developed by Google, based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. www.android.com
16. A 2013 study identified Bihar as having one of the highest rates of domestic violence and violence against women in India. Gender Violence in India: Perspective, Issues and Way Forward, edited by Dr A.K. Singh, S.P. Singh & S.K. Biswas (2013) Bal Vikas Prakashan Pvt. Ltd., Delhi, in association with Sree Veerbhadra Swamy Educational Society, Tumkur, Karnataka, ISBN: 1-7669-016-3
17. Chanderiyaan is the brand name of a project initiated by Digital Empowerment Foundation to create a digitally integrated cluster for Chanderi weavers. The project primarily involves inclusive and decentralised use of ICT and other digital tools in critical aspects of cluster development, especially improving and scaling up weaving skills, designs, marketing and entrepreneurship, besides creating sustainable livelihood options for the youth in the clusters. www.chanderiyaan.net
18. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
    Endnote: Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an Indian labour law and social security measure that provides 100 days of wage employment in a financial year to every below-poverty line household whose adult members volunteer to do unskilled manual work.
19. Trailer Trash, Curtis, Adam. BBC Blogs, 9 Dec 2014. goo.gl/1QGqpK

ANDREW GARTON

is an independent film-maker, musician and writer with a background in community access video and broadcasting. After a decade of music-making in the 1980s, his interest in participatory democracy and the distribution of chemical-free food led him to co-establishing Pegasus Networks, a pre-internet service throughout Australia, the Pacific Islands and Southeast Asia. His articles on radio art, generative music, independent media and internet activism have been published in *Journal of New Musique Australia*, *Fibreculture Reader*, *RealTime* and *21C*, *At a Distance* (MIT Press, 2005), *Re-inventing Radio - Aspects of Radio as Art* (Revolver, 2008) *Global Information Society Watch Report* (Hivos, APC, 2010-2011). Andrew has co-authored the landmark P*an Asia Networking Report* (International Development and Research Centre, 1994). Spanning several disciplines and cultural influences, Andrew brings a vast repertoire of intuitive skills and capacities to his projects whether it be hands-on production in sound or video, mentorship or consultation. Andrew has produced public events on such wide-ranging topics as open licenses, community cultural origins and place-making, and media arts exhibition works with asylum seekers focusing on their connections to homeland. His films include *The Light Show* (a history of psychedelic lighting design in Melbourne) and *Sarawak Gone* (a series of shorts on land rights issues in East Malaysia). This included *TONG TANA*, a documentary drama for radio on the cosmology of the last forest dwellers of Sarawak. His first feature documentary is *Ocean in a Drop*. Andrew has a Master of Arts in Interactive Media and is an Adjunct Industry Fellow, Media and Communication, Swinburne University of Technology. He directs Secession Records and Films, an artistic led music and film production, and is a frequent guest lecturer. Andrew lives in the rural outskirts of Melbourne, exploring his interests in probiotics and regenerative agriculture. His website is andrewgarton.com