

# SIRCA III ANNUAL REPORT 2017 - TEN YEARS OF EXCELLENCE

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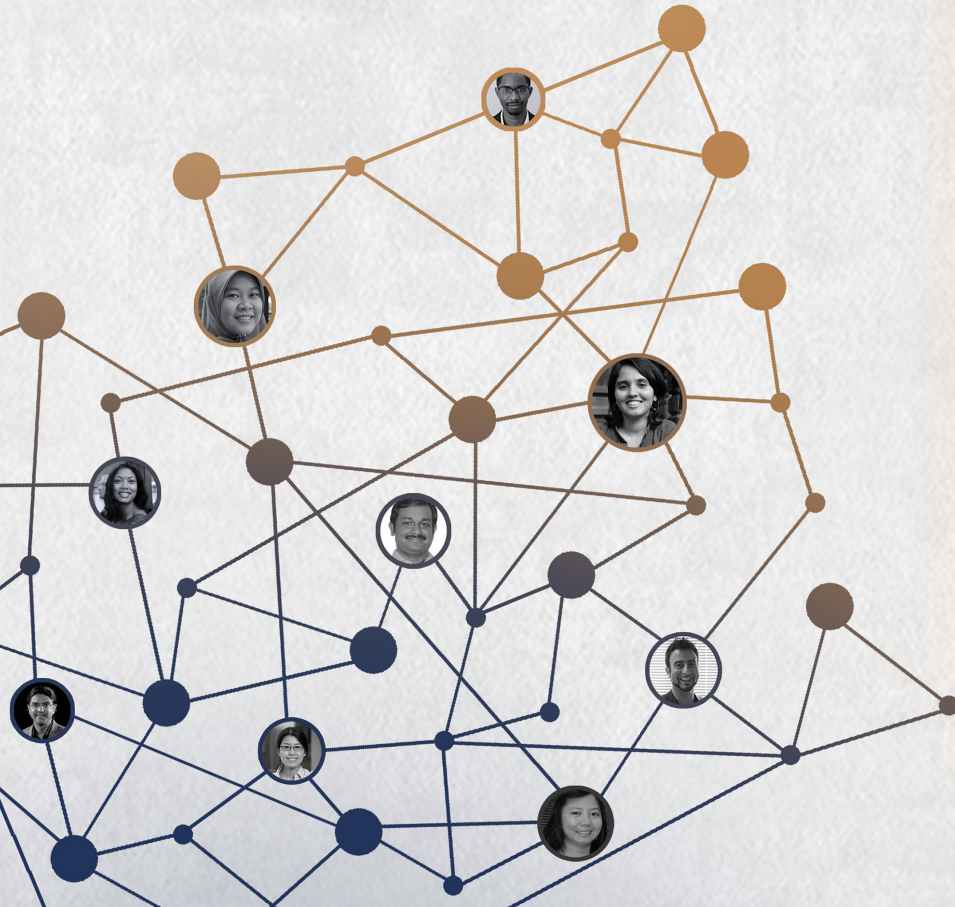
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# 10 YEARS OF EXCELLENCE

SPECIAL EDITION

SIRCA ANNUAL REPORT 2017





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## REFLECTION

2017 marks the end of a decade of excellence for SIRCA. What began as an intensive mentorship program for Asian scholars, soon expanded to include researchers from across the globe. Driven by a passion for social change through the application of ICT in developing countries, SIRCA scholars have demonstrated outstanding influence. They have shifted ICT4D discourses, and taken up leadership roles within their institutions. Now, at the end of SIRCA's third iteration, we have successfully developed a more concentrated research model focused on a central objective - to build the field of open development. Focusing on the impact of digitally-enabled openness to reduce global inequalities enables SIRCA to bring our transformed program design into effective action.

In 2015, we began theorizing open development by centring on whether, how, for whom, and in what circumstances does the free, networked, public sharing of digital (information and communication) resources contribute towards (or not) a process of positive social transformation. Six teams of leading scholars released white-papers to enable external researchers to respond via empirical research proposals. An additional six teams of researchers were selected in 2016 to test the conceptualization.

This simultaneous theoretical-empirical approach, with minimal conflicts-of-interest between the two sets of scholars, is novel in ICTD research. SIRCA's theory-driven and empirically tested research model has the potential to serve as a gold-standard practice for ICTD research program design. The SIRCA III program has culminated in a book volume to demonstrate the ground-breaking work that will define not only our special efforts, but the field of open development itself.

As we look to SIRCA's future, we have learned a great deal from the experience. Global challenges related to changes in geographies of poverty and population migration, as well as, severe social and gender inequalities are now markers of our time. Openness may indeed mitigate some of these global challenges, but it seems that a more targeted, aggressive research agenda focusing on reducing social inequalities is needed. We perfect in the next round of the SIRCA programme on ongoing efforts to reduce disparities related to gender and technology, culminating in actionable research. Yet again, there is much to look forward to.

**Arul Chib**  
Director

# ABOUT

## THE SIRCA PROGRAM

A LOOK AT OUR INFLUENCE  
WORLDWIDE, WHERE WE STARTED  
AND WHERE WE ARE TODAY

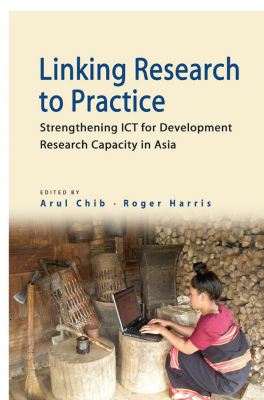


## VISION

SIRCA has developed high-quality and interdisciplinary theory on themes of information society and open development in Asia, Latin America and Africa. Each program emphasized the production of impactful research outputs, strengthened by capacity building and open collaboration. Ultimately, our network has had permanent and significant influence on the conceptual rigor, policy, and public opinion of many contemporary issues in ICT4D.

# ABOUT

## THE SIRCA PROGRAM



## SIRCA I

Build intellectual leadership and critical research skills amongst researchers in Asia through mentorship by senior researchers.

**Linking Research to Practice: Strengthening ICT for Development Research Capacity in Asia**  
 Edited by Arul Chib and Roger Harris  
 Publisher: Institute of Southeast Asian Studies

The pioneer volume of the SIRCA book series was published by Institute of Southeast Asian Studies in March 2012 and is currently being used in a course at the University of the Philippines-Open University, and at Nanyang Technological University, Singapore.

Under SIRCA, a number of experienced scholars served as mentors to principal investigators from all over Asia. Their collaboration has resulted in a range of research findings and lessons learnt compiled into three perspectives: (1) Management Perspectives; (2) Research Perspectives; and (3) Research Outputs. The book is freely available online under the “free and open information” policy of IDRC.

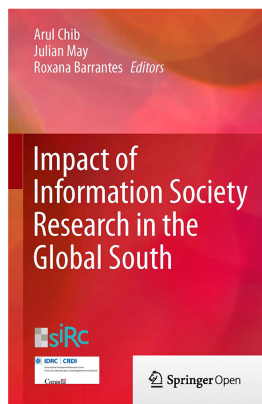
## WHERE ARE THEY NOW?

- **Alexander Flor** is a Professor, Scientist and Dean of the Faculty of Information and Communications Studies, University of Philippines Open University.
- **Ang Peng Hwa** is a Professor at the Wee Kim Wee School of Communication and Information, Nanyang Technological University, Singapore. He is the immediate past President of the International Communication Association.
- **Chivoin Peou** is a Lecturer at Royal University of Phnom Penh, Cambodia and has attained his PhD in Sociology at the University of Melbourne, Australia.
- **Huynh Van Chuong** is an Associate Professor at Hue University of Agriculture and Forestry, Vietnam.
- **John Traxler** is a Professor of Digital Learning in the Institute of Education, University of Wolverhampton, United Kingdom.
- **Komathi Ale** is a doctoral candidate in the Annenberg School for Communication and Journalism at the University of Southern California, USA and an Associate Instructor in the Communication Program at the Singapore University of Social Sciences.
- **Mary Grace Mirandilla-Santos** is a Lead Researcher for the Broadband Connectivity Project in the Philippines, Asia Foundation, and is also a Research Fellow at LIRNEasia.
- **May Lwin** is the Associate Dean of the College of Humanities, Arts and Social Sciences, Nanyang Technological University, Singapore.
- **Ma. Regina M. Hechanova** is a Professor in the Department of Psychology at the Ateneo de Manila University, Philippines.
- **Pham Huu Ty** is the Head of Department for the International Cooperation and Science-Technology at Hue University for Agriculture and Forestry, Vietnam.
- **Rahul Dé** is a Decision Sciences and Information Systems Professor, Chairperson at the Centre for Software & Information Technology Management and a Hewlett-Packard Chair Professor at Indian Institute of Management Bangalore, India.
- **Roger Harris** has been bestowed a new name, Gatum Paran, in honor of his work bringing internet connectivity to rural centers in Borneo.
- **Tahani Iqbal** is the Assistant Manager, Regulatory Strategy and Development, in the Group Regulatory Affairs Department of the Axiata Group Berhad, in Kuala Lumpur, Malaysia.
- **Yvonne Lim** is the Assistant Director of the University Scholars Program, Nanyang Technological University, Singapore.



# ABOUT

## THE SIRCA PROGRAM



## SIRCA II

Build intellectual leadership and critical research skills amongst researchers in Asia, Africa and Latin America through mentorship by senior researchers.

**The Impact of Information Society Research in the Global South**  
 Edited by Arul Chib, Julian May and Roxana Barrantes  
 Publisher: SpringerOpen

The second volume in the SIRCA book series investigates the impact of information society initiatives by extending the boundaries of academic research into the realm of practice. Global in scope, it includes contributions and research projects from Asia, Africa, and Latin America. The international scholarly community has taken a variety of approaches to question the impact of information society initiatives on populations in the Global South. This book addresses two aspects – (1) impact of research: how is the research on ICTs in the Global South playing a role in creating an information society? (e.g. policy formulation, media coverage, implementation in practice) and (2) research on impact: what is the evidence for the impact of ICTs on society? (e.g. the objectives of socio-economic development). This volume brings together a multiplicity of voices and approaches from social scientific research to produce an engaging volume for a variety of stakeholders including academics, researchers, practitioners, policymakers and those in the business and civil sectors of society.

SIRCA II Book published in 2015 is openly available on Springer Link and has been downloaded 47,200 times under an open access policy.

## WHERE ARE THEY NOW?

- **Andrea Ordóñez** is the Research Coordinator for Southern Voice based in India, a network of think tanks devoted to bringing research from the Global South to international debates on the post-2015 development agenda.
- **Baohua Zhou** is an Associate Professor at the Journalism School of Fudan University, Shanghai, China and Associate Director of Media and Public Opinion Research Centre.
- **Elinor May Cruz** is an University Research Associate of the Third World Studies Center in Philippines and Associate Editor of Kasarinlan.
- **Elsa Estevez** is an Assistant Professor at National University of the South Argentina, and Associate Visiting Professor at National University of Rio Negro, Argentina.
- **Ezmieralda Melissa** is a Lecturer at the Swiss German University, Indonesia.
- **Fabro Steibel** is a Professor at ESPM Rio and the Chief Project Officer at the Institute for Technology & Society of Rio de Janeiro ITSrio.org.
- **Julian May** is a Professor at University of Western Cape, and Director of Institute for Social Development and Centre of Excellence in Food Security in South Africa.
- **Kabran Aristide Djane** is an Ivorian independent researcher at the Université Peleforo Gon Coulibaly, Korhogo in Côte d'Ivoire.
- **Kathleen Diga** is the Research Project Manager (South African Research Chair) in Applied Poverty Assessment at University of KwaZulu-Natal, South Africa.
- **Laura León** is a Lecturer at the Pontifical Catholic University of Peru and University of Lima.
- **Maria Paz Olivera Rodríguez** is a research assistant at the Institute of Peruvian Studies in Lima, Peru.
- **Matías Dodel** is the Head of Research at Universidad Católica del Uruguay and a researcher and teacher at the Department of Social and Political Sciences and Communications.
- **Rajesh Kumar Chandwani** is an Assistant Professor at Indian Institute of Management, Ahmedabad, India.
- **Rich Ling** is the Shaw Foundation Professor of Media Technology at Nanyang Technological University, Singapore.
- **Roxana Barrantes** is a Senior Lecturer in the Department of Economics of the Pontifical Catholic University of Peru and Principal Investigator of the Institute of Peruvian Studies.

# ABOUT

## THE SIRCA PROGRAM

### SIRCA III

The Strengthening Information Society Research Capacity Alliance (SIRCA) III program has significantly evolved since its first and second iteration. The current program is a research grant award focused on developing cross-cutting theoretical frameworks in the area of Open Development. SIRCA III has funded projects led by twelve distinct teams of two to three senior researchers and/or practitioners that has been empirically investigated in developing countries globally.

SIRCA III has two phases in its research design – a theoretical phase (Phase I) and an empirical phase (Phase II). During the first year, senior research teams were awarded funding to develop a cross-cutting theoretical framework. This framework was tested during the empirical phase of the program in the second year. Additional researchers were selected through a second call for proposals to conduct the empirical research in close collaboration with the theoretical research teams. The program culminated in an edited volume published by a leading university press – coming soon.

**Critical Perspectives on Open Development:  
Empirical Interrogation of Theory Construction**

**SIRCA III Book - Coming soon!**  
*Edited by Arul Chib, Caitlin Bentley and Matthew Smith*

The edited volume explores cross-cutting open development themes and raises issues about the legitimacy and overall purpose of open development. This volume represents a remarkable evolution in the conceptualization and application of digitally-enabled openness to influence positive social transformation. *Critical Perspective on Open Development* pushes past a theoretical level of engagement with open development and puts the SIRCA III authors' ideas and theories to the test. In this ground-breaking research, cross-cutting themes were empirically tested in Asia and sub-Saharan Africa and the authors reflect on how to improve proposed theoretical lenses. *Critical Perspectives on Open Development* therefore combines theoretical views with their practical application. The authors likewise critically reflect on such an approach, yielding a valuable source of reference for this emerging area of research. The book also proposes a new model of research within the area of ICT4D as a means to reduce the growing disparities between the potential and realities of how and whether digitally-enabled sharing contributes towards a process of positive social transformation.



DIRECTOR  
ARUL CHIB



RESEARCH ASSOCIATE  
CAITLIN BENTLEY



FINANCE OFFICER  
SANDY PEK

This volume deepens our understanding of open development in three significant ways:

1. It focuses on generating cross-cutting theory that is widely applicable and contextually relevant. This contribution departs from the dominant functionalist approach in the field. It also centers on themes that have broad utility across a range of practice domains and institutions.
2. It emphasizes a transformational lens, such that power, marginalization, and the social-embedded nature of open development are core elements within theoretical development. This addresses a need to not only identify structural inequalities within open development processes, but to constructively address them at a fundamental level.
3. It takes a two-stage approach to confirm, test, deconstruct, modify, and improve proposed theory. Our approach offers significant empirical insights into open development by examining new and mature initiatives in four countries. It also enables a critically reflexive approach to theory building, which is grounded in realities faced by poor and marginalized people.



SIRCA III collaboration workshop held on June 1st and 2nd, 2016 in Ann Arbor, Michigan, USA where theory and empirical teams gathered to discuss the testing of cross-cutting theory.

## ABOUT THE BOOK

### THEORY

#### Chapter 1

##### Resources, Learning and Inclusion in Open Development

Engaging with open development (OD) necessitates learning in which people appropriate and adopt new technologies and socio-technical practices. This typically involves informal learning (i.e. outside of formal education), and will differ between reading relationships (as a user of OD resources) and writing relationships (for full ownership or authorship of OD). If potential participants are unable to connect with existing learning networks, OD initiatives will have limited impact. Communities that aim to be 'open' may exclude people by virtue of race, language, literacies, gender, sexuality, phone/computer ownership, access to Internet or other aspects of identity. If open development is to be truly inclusive and democratic, so that people can debate and shape the directions of development for themselves, such learning should address not only how to apply open services in reading relationships drawing on external resources to address their challenges, but also how to interact with these services, technologies and communication networks in writing relationships as authors and creators in their own right. This chapter explores some key theoretical frameworks of informal learning to highlight important resources and mechanisms that need to be considered if the idea of openness is to be related to development outcomes.



**Marion Walton, South Africa**

Associate Professor of Media Studies and Production at the University of Cape Town



**Andy Dearden, United Kingdom**

Professor of Interactive Systems Design at Sheffield Hallam University



**Melissa Densmore, South Africa**

Senior Lecturer in the Department of Computer Science at the University of Cape Town

### EMPIRICAL INVESTIGATION OF THEORY

#### Chapter 2

##### Does Real Data for Real Farmers Lead to Real Access? A Sri Lankan Case

This research aims to understand how selected export farmers in Sri Lanka currently access crop advisory information given by the Department of Agriculture, and the effect that opening up the information by providing it through a mobile phone application, has on access. This chapter applies activity theory to interrogate Dearden, Walton and Densmore's theoretical lens in two ways. First, it investigates the ways in which Sri Lankan farmers do or do not access agricultural information in their everyday lives. Second, it explores the mediating role and limits of a mobile phone-based app for improving access to agricultural information for these farmers. Specifically the project considers strategies that farmers use to support their learning, and different aspects of farmer 'identity' that become more or less relevant once the information is provided through the mobile application.



**Chiranthi Rajapakse, Sri Lanka**

Legal Researcher in the field of Public Law



**Piyumi Gamage, Sri Lanka**

Junior Researcher at LIRNEasia, Colombo



## ABOUT THE BOOK

### THEORY

#### *Chapter 3* Trust and Open Development

This chapter examines the role of trust in the creation and use of open development software. There is a particular focus on open development in the domains of education and urban services. Based on a review of the relevant literature, the chapter develops a model of stakeholders associated with open development and their positions in an ecosystem of trust. The chapter examines the various relationships between stakeholders and the role of trust in their interactions. The chapter also outlines a number of issues that need to be addressed in the analysis of trust in open systems. The chapter closes by posing the question as to how understanding trust can increase the efficacy of open development systems.



**Rich Ling, Singapore**  
Shaw Foundation Professor of Media Technology at Nanyang Technological University



**John Traxler, United Kingdom**  
Professor of Digital Learning in the Institute of Education, University of Wolverhampton



**Anuradha Rao, Singapore**  
Adjunct Lecturer in the Department of Communication and New Media at National University of Singapore



**Priya Parekh, Singapore**  
Digital Planner at OMD Worldwide

### EMPIRICAL INVESTIGATION OF THEORY

#### *Chapter 4* Trust in the Governance of Urban Services: Examining Openness in the Provision of Public Services in Chennai

The chapter examines contentious questions about the provision and governance of urban public services, including the use of digital or electronic services ('e-services') in India's cities. This case study, situated in Chennai – India's fourth largest urban region – draws upon a series of short interviews with elected officials, civil servants and civic groups. The project investigates how 'trust' and 'openness' may be shaping the governance of urban public services and infrastructures. Rather than seeing digital and e-services as fixed or even necessary paths for open development or building deeper trust in governmentality, the findings instead highlight the lack of mechanisms or processes for addressing (and redressing) public service and infrastructural needs and priorities. Although public digital initiatives and ICT-applications may demonstrate potential to facilitate openness in governmentality (i.e. transparency, accountability and collaboration or power sharing), research showed a lack of trust in Chennai seems to be reinforcing existing inequities and even seeding new asymmetries instead; concluding that even though Rao, Ling and Traxler's trust framework draws attention to key facets of open development, it needs greater contextual specificity to make relevant suggestions to work towards positive social transformation.



**Satyarupa Shekhar Swain, India**  
Director of Government Outreach and Advocacy at Citizen consumer and civic Action Group, Chennai



**David Sadoway, Canada**  
Visiting Social Scientist at the Centre of Engineering in Society in Concordia University

## ABOUT THE BOOK

### THEORY

#### Chapter 5

##### A Critical Capability Approach to Open Development

Drawing upon the critical theory of technology/information systems and Sen's capability approach, the Critical Capability Approach (CCA) serves as a conceptual basis for a research framework that could be applied to assess the design, implementation and evaluation of open development projects. Instead of measuring the achievement of technological or political goals, the project proposes sets of research questions that seek to explicate the ideological and political foundations of openness, and the extent to which openness enhances users' well-being and agency freedom. The research framework aims to equip researchers with some conceptual guidance and methodological suggestions to carry out independent evaluation of open development initiatives, and in this process start a dialogue with policy makers, donors and designers, to engage with all key stakeholders and to protect the interests of the marginalized and disadvantaged. The CCA Research Framework is not sector-specific and can be applied to any open development project. Researchers are encouraged to select, adapt and integrate some of the suggested research questions in accordance to the context and conditions of a particular project.



**Yingqin Zheng, United Kingdom**  
Senior Lecturer at the School of Management, Royal Holloway University of London



**Bernd Carsten Stahl, United Kingdom**  
Professor at De Montford University and Director of the Centre for Computing and Social Responsibility



**Becky Faith, United Kingdom**  
Research Officer and Deputy Leader of the Digital and Technology cluster, Institute of Development Studies, England

### EMPIRICAL INVESTIGATION OF THEORY

#### Chapter 6

##### Using the Critical Capability Approach towards an Open Government Initiative in Education Sector in Tanzania

Governments are promoting openness through publication of open data, believing that it will result in participatory policymaking and enable positive returns to society. Tanzania adopted the Open Data Initiative in 2011. It carried out its open government partnership (OGP) Action Plan I in 2012-2013, and was implementing the OGP Action Plan II during the time of research. In the current phase, the government of Tanzania is committed to publishing its data on prioritised sectors particularly Health, Education and Water on its open data portal ([www.opendata.go.tz](http://www.opendata.go.tz)). This study investigates the critical capability approach to evaluate the design and implementation of Open Data Initiative (ODI) in Tanzania within the education sector. The research analyzes whether the design and implementation of the program was responsible for bringing in a wide range of actors into policy processes and debates. Research found that the wide-ranging number of stakeholders common to open initiatives pose a significant CCA operationalization challenge. This is especially true when the project has existed for such a long duration.



**Goodiel C. Moshi, Tanzania**  
Director of Information Communications Technology at the University of Dodoma



**Deo Shao, Tanzania**  
Lecturer at the College of Informatics and Virtual Education at the University of Dodoma

## ABOUT THE BOOK

### THEORY

#### Chapter 7

##### Open Development – A Focus on Organizational Norms and Power Redistribution

Open development is the employment of ICT-enabled 'openness' towards an improved distribution of power across the intended community of impact. Typically, ICT-based affordances rapidly transform the organizational context of development practice, enhancing organizational outcomes. But affordances cannot be mistaken for norms; the interplay between affordances and norms, and crystallization of new norms, is critical for moving towards appropriate organizational outcomes. Further, improved distribution of power must occur not merely in the proximity of the '(networked) organizing space' but across the intended community of impact. The continuum between the organizing and community spaces in 'open initiatives' must be examined critically, especially with regard to governance and distribution of power. Empirical research to trace how norms related to development outcomes are built and sustained in open organizations, and how improved distribution of power in the wider community of impact is caused or not, would help understand and enhance the impact of 'open' practices and organizations on development.



**Anita Gurumurthy, India**  
Founding member and Executive Director of IT for Change



**Parminder Jeet Singh, India**  
Executive Director of IT for Change

### EMPIRICAL INVESTIGATION OF THEORY

#### Chapter 8

##### Openness and Reconfiguration of State Power: A Study of the BHUCHITRA Initiative for Digitalizing Land Records in West Bengal

In West Bengal, India, the BUCHITRA Initiative has operationalized an upgraded version of the land management information system titled 'BHUMI' that has been implemented in other states of India. The fundamental plan of BUCHITRA is to have an integrated database that brings together different land administration functions into a 'single window service' system available and accessible to the public in general. This research empirically evaluates and frames the transformation of the 'organizing space' of the BHUCHITRA initiative, and thus of land governance. The inquiry focuses on internal transformations in the structure of land governance – including knowledge and skill flows, internal distribution of power, and the making and reconfiguration of the functions of public and private actors – driven by the deployment of the BHUCHITRA initiative. Simultaneously, the study seeks to follow the 'governed' subject, or the recipient of government 'service,' into the field of land dispute settlements to understand the impact of this shift in the technologies of governance on the 'community space' of the citizens.



**Sumandro Chattapadhyay, India**  
Research Director at The Centre for Internet and Society



**Himadri Chatterjee, India**  
Doctoral candidate in the Centre for Political Studies, Jawaharlal Nehru University



## ABOUT THE BOOK

### THEORY

#### Chapter 9

##### Engaging Open Data: A Stewardship Approach

Early open development work assumed that the Internet and openness decentralized power and enabled public engagement by disintermediating knowledge production and dissemination. However, over time, new intermediaries have become involved in the delivery of open information and in the stewardship of open knowledge. The project has identified five models of intermediation in open development work: decentralized, arterial, ecosystem, bridging and communities of practice. The goal of this project is to produce exploratory research about trends in intermediation across three areas of openness work: open government, open education and open science. How do intermediaries add value, for whom, and where is this value accruing? Does intermediation serve to maintain openness and facilitate public engagement, or does it create new power structures? To answer such questions, it would be productive to identify common trends or tendencies in how different types of intermediaries take on the stewardship of open information across the different domains of open development work.



**Katherine Reilly, Canada**  
Associate Professor in the School of Communication at Simon Fraser University



**Juan Pablo Alperin, Canada**  
Assistant Professor in the Publishing Program at Simon Fraser University

### EMPIRICAL INVESTIGATION OF THEORY

#### Chapter 10

##### Stewardship of Open Data Resources in Kenya

Kenya has been at the forefront of open development initiatives since 2011. The open government initiative is the most celebrated, as it was the first to sensitize the country on the value of openness through the Kenya Open Data Initiative (KODI). This research identifies the mechanisms that intermediaries use to produce openness in three areas of open development namely open government, open science and open education. Mechanisms will be linked to the five schools of thought established by Reilly and Alperin, namely, decentralisation, arterial, ecosystems, bridging and communities of practice. This study concentrates on the arterial and ecosystems schools of thought because it intends to resolve the obstacles (marginalized) people face when accessing open data/information by introducing "info-mediaries". Secondly, the ecosystems school of thought seeks to ensure quality in data and production of value out of this data through intermediaries, and supporting policies and systems. These two schools of thought will act as a lens through which the mechanisms will be tested in the Kenyan context.



**Jean-Paul Van Belle, South Africa**  
Professor of Information Technology and Director at The Centre for Information Technology and National Development in Africa at the University of Cape Town



**Paul Mungai, South Africa**  
PhD candidate at the University of Cape Town – Center for Education Technology and Postdoctoral Fellow at Simon Fraser University, Canada

## ABOUT THE BOOK

### THEORY

#### Chapter 11

##### Learning as Development: Open Practices and the Production of Identities

This chapter proposes a theoretical framework to analyze how learning takes place among users of open information systems (OIS). In the analysis, the project treats learning as indicative of positive social transformation and development; drawing on practice-based theories of learning and critical development studies to understand how such learning takes place for different social actors. The project studies learning as an everyday practice that shapes individual identity, which can be then be leveraged to negotiate varied life situations beyond the immediate learning of how to use an OIS. Based on this understanding of learning, a framework that critically examines different levels of learning associated with the open practices of production, distribution and consumption around an information system was developed. Research suggests a role for communities of practice in enabling such learning. The broader objective of this framework is to unearth the different opportunities of learning (as development) that open practices provide which were hitherto unavailable to its users.



**Janaki Srinivasan, India**  
Assistant Professor at the International Institute of Information Technology, Bangalore



**Bidisha Chaudhuri, India**  
Assistant Professor at the International Institute of Information Technology, Bangalore

### EMPIRICAL INVESTIGATION OF THEORY

#### Chapter 12

##### Openness, Learning & Development in an Agricultural Weather Information System in West Bengal, India

In this chapter, the project investigates linkages between openness, learning and development. By applying Chaudhuri, Srinivasan and Hoysala's framework to a case study of an information system focused on the dissemination of weather information and agricultural advice. The study illustrates the way different actors involved in an open information system are able to use the weather system for learning. Grounding the research in a view of learning as based in participation in a community of practice (Wenger 1998), the focus is the way in which the introduction and maintenance of the open information system has been shaped by and in turn, shape the practice of the community where it has been placed. Thus, this chapter illuminates how the open system has been adopted by existing communities of practice (CoPs), how it has started to serve as a boundary object between such CoPs, and what kind of boundary practices can be observed. By doing so, an analysis of the mechanism of change in the intervention along with various characteristics of that mechanism can be derived.



**Purnabha Dasgupta, India**  
Action Research Coordinator for the non-profit Development Research Communication and Services Centre in West Bengal



**Linus Kendall, India**  
PhD scholar on human-computer interaction in development at Sheffield Hallam University, United Kingdom



## YEAR IN REVIEW: SIRCA III KEY MILESTONES

2017 marks the completion of the SIRCA III program. Empirical teams have completed rigorous investigation of open development theoretical frameworks in India, Kenya, Sri Lanka and Tanzania. Theoretical and empirical teams have each delivered outstanding book chapters discussing theory and its implications for the field.

On May 20th and 21st, SiRC organized the final SIRCA III publication workshop, in Yogyakarta, Indonesia. This workshop intended to develop greater coherence between theoretical and empirical chapters, and to discuss the overarching themes, turned out to be an intense and productive experience.

Day 1 focused on peer and editorial review of the chapters in small groups. Day 2 proceeded with discussions to finalize the direction of the book volume. The three core themes of structure, institutionalization and participation frame the contribution of our book to advance our understanding of open development.

Subsequently, SIRCA III contributed substantively to the IFIP 9.4 workshop conference. Andy Dearden organized a workshop on Ethics. Linus Kendall, Janaki Srinivasan, Bidisha Chaudhuri and Caitlin Bentley presented papers and posters linked to their research on open development. Caitlin Bentley also co-chaired a paper session on open innovation.

The end of this year culminates in the SIRCA III Book Volume that defines cross-cutting open development themes and establishes empirically tested theory. In December 2017, the SIRCA III program will come to an end, and we bid present and past SIRCA PIs great success in their future endeavours.





## FINANCIALS

The SIRCA III Program received a total of SGD 752,363.73 (equivalent to CAD 711,000) funding from IDRC to cover the expenditure incurred. The program has utilized the total funds received on research activities aimed at establishing the research capacity of the principal investigators, both senior researchers and empirical scholars. In addition, SiRC contributed an additional funding of 6% to the program in its capacity as the hosting institution.

These activities, apart from direct funding to 12 theoretical and empirical project teams, include capacity building for grantees through workshops, conferences and dissemination activities contributing directly to raise the program's profile. Invitations of distinguished policymakers and industry experts to the respective Theoretical, Collaboration and Publication workshops, Policy Insights Dialogue Session, Mini-unconference and open sessions at The International Conference on Information and Communication Technologies and Development (ICTD) 2016 and The 14th International Conference on Social Implications of Computers in Developing Countries - Working Group 9.4 Conference (IFIP) 2017 have presented grantees opportunities to explore research in their field and shaped their perspectives on prevailing public opinion.



SIRCA III Theoretical and Empirical Teams met over 2-day Collaboration workshop on June 1st and 2nd, 2016 in Ann Arbor, Michigan, USA.

## SIRCA ALUMNI NETWORK PUBLICATIONS

SIRCA I Graduate Awardee **Komathi Ale**, along with co-authors Yvonne Loh and **Director Arul Chib** published a journal article titled "*Contextualized-OLPC education project in rural India: Measuring learning impact and mediation of computer self-efficacy*". Published in the Journal of Educational Technology Research and Development, volume 65, issue 3 in 2017.

Another SIRCA I Graduate Awardee **Rajiv George Aricat** has published two important articles this year. His latest article titled "*Collective appropriation and cooperative uses of mobile telephony among Burmese fishers*," with co-author SIRCA III PI Rich Ling, was published in Information Development, July 2017. Earlier this year, along with **Director Arul Chib**, he published "*Belonging and communicating in a bounded cosmopolitanism: the role of mobile phones in the integration of transnational migrants in Singapore*" in the Information, Communication & Society Journal, volume 20, issue 3, pp. 482-496.

SIRCA II Coordinator **Roxana Barrantes** published a chapter with co-author Eduardo Vargas regarding "*Inequalities in the appropriation of digital spaces in metropolitan areas of Latin America*" in an edited book. The chapter appeared in "*Catalyzing Development through ICT Adoption*" edited by Harleen Kaur, Ewa Lechman and Adam Marszk.

SIRCA III team members **Bidisha Chaudhuri**, **Purnabha Dasgupta**, **Onkar Hoysala**, **Linus Kendall** and **Janaki Srinivasan** collaborated on a conference paper titled "*Actor-networks and 'practices' of development: impact of a weather information system in West Bengal*". Published in The Information and Communication Technologies for Development. ICT4D 2017. IFIP Advances in Information and Communication Technology, volume 504, pp. 809-815.

SIRCA I & II Author **Alexander Flor** summarized the field of knowledge management for development in the fourth edition of the Encyclopedia of Information Science and Technology (forthcoming).

SIRCA III PI **Katherine Reilly** contributed to an article co-authored by Andy Hira titled "*The emergence of the sharing economy: implications for development*". Published in the Journal of Developing Societies, volume 33, issue 2, 2017.

A paper titled "*The Impact of Open Development Initiatives in Lower and Middle Income Countries: A Review of the Literature*" by Research Associate **Caitlin Bentley** and **Director Arul Chib** was accepted for publication in the Electronic Journal of Information Systems in Developing Countries, volume 74, issue 6, pp. 1-20.

A paper titled "*An analysis of accountability concepts for open development*" by Research Associate **Caitlin Bentley** was accepted in the conference proceedings. Published in The Information and Communication Technologies for Development. ICT4D 2017. IFIP Advances in Information and Communication Technology, volume 504, pp. 793-802.



# ALUMNI SPOTLIGHT

## CAITLIN BENTLEY

"I arrived in Singapore in April 2015, ready to begin a new adventure working for the SIRCA program. It was supposed to be a post-doc, as I had submitted my PhD thesis earlier in February 2015, and was still waiting for my viva examination to be set in the UK. One of my former colleagues told me that doing a post-doc is like falling into a ditch, expecting to surface from the PhD only to discover that you have very little control and stability in your life. Luckily, and unluckily, I can say that I have not had the pleasure of falling into a ditch or of completing a post-doc, much to the surprise of everyone involved. Needless to say, my viva examination did not go according to plan, and I was left with a whack of revisions to tackle, all the while having committed myself already to a full-time research position. Most academics in my place might have been absolutely horrified, yet I am left remembering the whole situation with much gratitude – especially towards all of my SIRCA colleagues, PhD supervisors, friends and family. In many respects, having open development as a new avenue to explore during my day job kept me motivated throughout this period (although I am thankful to have my weekends back to myself now that I have submitted... again).

On a more serious note, there are likewise many academics who aren't as lucky as I was to have had a full time job and supportive network, and the eternal sadness that I feel for my dear late friend Paolo Brunello reminds me daily of this fact. He managed to complete his PhD successfully, but finally gave in to depression and took his own life in 2015. The toll that instability and temporary jobs have on academics is truly under-estimated.

There are innumerable ways in which the SIRCA program has inspired me intellectually, and in particular, working with Arul Chib has prepared me well for the academic side of my future career. What I am most thankful for, however, is having been given the opportunity to call Singapore home for two years, during which time the stability and support I received far outweighs any simple contributions to knowledge I have made. This is why the SIRCA program, which is just as concentrated on collaboration and mentorship as on research outputs, is an ideal model to continue much into the future. I hope I will have the opportunity to pay it forward during the next ten years of SIRCA's!"



## M SIRAJUL ISLAM

"My name is M Sirajul Islam (Siraj). I was born in Bangladesh and currently settled in Sweden with my family. I received my PhD in ICT4D from Örebro University School of Business, Sweden in 2011 and spent about two years as a post-doc researcher prior to joining at the same university as an Assistant Professor in Information Systems. I have currently been teaching at the Master's level and co-supervising PhD students in eGovernment from Rwanda. In addition, I am a Deputy Project Leader and coordinates a Master's program in Information System for The University of Rwanda (UR) under a capacity development programme funded by the Swedish Government (SIDA) called 'UR-Sweden Program for Research, Higher Education and Institutional Advancement'. The program aims to support the development of research at the University of Rwanda and increase the use of research and competence produced in the Rwandan Society at large.



To date, I have 30 scientific contributions which were published in reputed journals and conferences relating to ICT4D, eGovernment, information systems and practices. I have been a member of the Editorial Board of the Journal of Global Information Technology Management (JGITM), Guest Editor of a Special issue of the 'Information Technology for Development' (ITD) journal and member of the reviewers' committee of several journals and conferences. I had also served as a Program Co-chair for two highly respected ICT4D conferences - ICTD 2015 (Singapore) and IPiF WG9.4 2017 (Indonesia). Lastly, I was a coordinator and currently an adviser to the IPiD - the largest student network in IT4D research.

To this end, I must acknowledge with sincere gratitude that receiving a grant award from SIRCA almost 10 years ago in my personal capacity development process had been a significant step. The SIRCA I program had helped not only in boosting my interest in ICT4D research but also enriched my theoretical, as well as, methodological knowledge base. It had substantially contributed to my PhD thesis completion and promoted my research at an international level. As a result, it is notable to mention that my thesis received the 'Börje Langefors Best Doctoral Dissertation Award' in Sweden by the Swedish Information Systems Academy (SISA) in 2012. Thank you for a great experience! Kudos to SIRCA!"



## PAUL MUNGAI

"I joined SIRCA as an empirical researcher focusing on the intermediation models and factors promoting stewardship of open data in Kenya and integration of the country into a networked society. This resulted in great opportunities for a young researcher including workshops with leading scholars in Michigan and Yogyakarta, and a Post Doctorate Fellowship at Simon Fraser University (SFU). The fellowship was facilitated and supervised by Associate Professor Katherine Reilly. This was an excellent opportunity to improve my empirical chapter by having more frequent face-to-face meetings with Katherine, who happens to be the author of the theoretical framework for my research. In addition, I got the chance to teach an undergraduate course on Communication for Development in the fall 2017 semester. I am also grateful to International Research Development Centre (IDRC) for providing a grant to support my Post Doctorate Fellowship at SFU. SIRCA helped me improve my research skills, expand my research networks, get a once-in-a-lifetime chance to teach in North America, and publish a book chapter aimed at making an empirical contribution in open data research and practice. I am very grateful to SIRCA, IDRC and Prof Katherine Reilly, and it is my sincere hope that this initiative will remain active for the benefit of upcoming researchers like me."



## BAOHUA ZHOU

"It is a real great pleasure to reflect my own road to celebrate SIRCA's ten year-old birthday. When I joined SIRCA II luckily in 2011, I was still a young Associate Professor without rich research experiences. I love the whole organization style put in place by SIRCA - very inspiring theme design, friendly collaborators, helpful training workshops and writing bootcamp. I still remember those exciting and sweet days and nights we spent together in Atlanta, Jamaica and Cape Town."

I treasure insightful suggestions from senior scholars and friends like Peng Hwa Ang, Arul Chib, Jack Qiu, and Rich Ling, who have helped me in my contribution for our SIRCA II book. All these experiences I have encountered during the process helped me a lot in my academic research and service work thereafter. I am continuously researching on the SIRCA research project of ICT empowerment for Chinese migrant workers and have now expanded its scope with a broader landscape, focusing on the integration of academic research and practical policy implementation, especially when I lead the public opinion research projects as an Associate Director of Public Opinion Research Center at Fudan University. I also began my journey in helping more junior colleagues develop their research projects and funding proposals with prior experiences from SIRCA.

Lastly, I am honored to be awarded The Changjiang Young Scholar Prize by Chinese Ministry of Education. I appreciate what SIRCA has done for me; in particular the vision and ability cultivated and wish SIRCA a better new future."



## SINGAPORE INTERNET RESEARCH CENTER



(From left to right) Sue Helen, Sandy Pek, Arul Chib, Yvonne Lim, Caitlin Bentley and Natalie Pang

**Arul Chib** is the Director of the SIRCA III Program, and an Associate Professor at the Wee Kim Wee School of Communication and Information, Nanyang Technological University, Singapore.

**Caitlin Bentley** is the Research Associate of the SIRCA III Program, and was awarded her PhD in 2017. She is now the Principal Investigator on a project to investigate the impacts of travel platforms in Indonesia's travel sector as part of India's IT for Change's new research program on social inclusion policy for the platform economy.

**Natalie Pang** is the Senior Research Fellow, IPS Social Lab at the Institute of Policy Studies, Singapore. Prior to joining IPS, she was an Assistant Director at the Singapore Internet Research Center.

**Sandy Pek** is the Finance Officer of the SIRCA III Program. Following the completion of SIRCA III, she now works at the University Scholars Program, Nanyang Technological University, Singapore as an Assistant Manager.

**Sue Helen** was the Project Officer at the Singapore Internet Research Center. She is now the Sustainability Consultant at the South Pole Group in Thailand, helping corporations fight climate change.

**Yvonne Lim** is the Assistant Director of the University Scholars Program (USP), Nanyang Technological University, Singapore. Prior to joining USP, she was an Assistant Director at the Singapore Internet Research Center.

## SUPPORTING GENDER IN ICT4D: A DECADE OF SIRCA

The SIRCA program has aimed for gender equality in participation, capacity building, and administration as an internal objective with both our principal investigators (PIs) and administrative teams across iterations. In terms of administration, the program lead is currently shared with **Caitlin Bentley**, while in SIRCA II this role was performed by **Roxana Barrantes** leading the Latin America group. In terms of capacity building and mentorship, within the SIRCA III program, seven of 13 PIs in the theory teams are female, and three of the 12 empirical researchers. Two teams (out of 12) are composed entirely of women, while a majority (seven of 12 teams) are led by a female investigator. The female investigators were from diverse nationalities based in different parts of the globe such as Canada, China, United Kingdom, Singapore, Sri Lanka, South Africa, with the majority comprising Indians.

We are particularly proud to have supported a gender focus in research as seen in past and forthcoming publications across our network over the years. Three chapters within the SIRCA II volume entitled *"Impact of Information Society Research in the Global South"* focused upon gender and technology issues. **Ezmieralda Melissa, Anis Hamidati, Muninggar Saraswati** and **Alexander Flor** explored the impact of the internet for Indonesian women entrepreneurs. **Elinor Cruz** and **Trina Sajo** investigated *"Cybersex as affective labour"* within the Philippines, while **Paz Olivera, Komathi Ale** and **Arul Chib** looked at gender relations amongst technology initiatives within Peruvian primary schools.

In the forthcoming SIRCA III volume, entitled *"Critical Perspectives on Open Development: Empirical Interrogation of Theory Construction"*, one empirical chapter focuses on gendered differences within open development initiatives. **Linus Kendall** and **Purnabha Dasgupta** found that women and men engaged in open practices differently within a weather information system in West Bengal, India.

Furthermore, we wish to highlight significant contributions of SIRCA network members to the gender and technology field. Five female investigators within SIRCA III have recently published significant work in leading peer-reviewed journals. **Anita Gurumurthy, Nandini Chami** and co-author published an article titled *"Unpacking Digital India: A Feminist Commentary on Policy Agendas in the Digital Moment"* in the *Journal of Information Policy*, volume 6 issue 1, pp. 371-402. **Janaki Srinivasan** and co-author published *"ICT, Intermediaries, and the Transformation of Gendered Power Structures"* in *MIS Quarterly*, volume 40 issue 2, pp. 501-510. **Yingqin Zheng** and colleagues led a special issue on conceptualizing development in ICT4D in the *Journal of Technology for Development*. **Marion Walton** and co-author published a book chapter titled *"The Scripted Sandbox: Children's Gameplay and Ludic Gendering"* in the *Critical Perspectives on Technology and Education* book published by Palgrave Macmillan, pp. 105-125. Finally, **Director Arul Chib** and co-authors published *"Mobile Phones and Gender Empowerment: Negotiating the Essentialist-Aspirational Dialectic"* in a special issue of *Information Technologies & International Development*, volume 13, pp. 170-184.





## GENDER MAINSTREAMING: A NATURAL PROGRESSION

In 2018, SIRCA proposes a gender-focused approach aimed at addressing the challenges of navigating cultural diversity utilizing digital media in global development. The program focuses on the key development challenges associated with achieving gender equality and justice.

The 2030 Agenda for Sustainable Development marks a shift in the fundamental layout of the international development landscape. The Sustainable Development Goals are especially important because they include 17 goals and 169 targets, as well as 230 indicators, 53 of which relate to gender. Goal five on gender equality has 14 indicators. Whilst the importance of gender to achieving the 2030 Agenda seems clear, working towards gender equality and justice continues to be difficult to operationalize. This is especially true when considering that intersectionality frames how people experience forms of injustice and discrimination. A 'one-size-fits-all' solution is not on the horizon.

We emphasize the primacy of gender relations in theoretical development and empirical research along two trajectories: (i) by involving female populations to give first-hand accounts in participatory research, and to analyze differences along gender lines; (ii) by engaging with gender and feminist theories and scholars to explore the complex interplay of gender, technology and culture.

Led by Associate Professor Arul Chib, the program will employ a network-building and comparative approach. SiRC's current partners and network in Europe (Germany, Netherlands, England), Asia (Korea, China, Singapore, Hong Kong, Syria, Lebanon), and North America, who share similar values and concerns, will join. The global span of the project cultivates comparative studies across contexts. We aim to build on SIRCA's momentum that harnesses a global network of like-minded researchers and practitioners for advocacy and policy influence pertaining to the role of ICT in the intersections of technology development and gender.

*\*Refer to <http://reinform.org> for project information.*

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