

‘Those who want to use it, and those who can’

**INTERNET AND INEQUALITY AMONG THE RURAL HOUSEHOLDS IN
RAJASTHAN, INDIA**

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DEPARTMENT OF MANAGEMENT STUDIES

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**INTERNET AND INEQUALITY AMONG THE RURAL HOUSEHOLDS IN
RAJASTHAN, INDIA**

by

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Department of Management Studies

Submitted

in fulfillment of the requirements of the degree of

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CERTIFICATE

This is to certify that the thesis entitled ‘**Those who want to use it, and those who can’ Internet and Inequality among the Rural Households in Rajasthan, India**’ being submitted by **Anushruti Vagrani** to the Indian Institute of Technology Delhi for the award of the degree of **Doctor of Philosophy (Ph.D.)**, is a record of *bona fide* research work carried out by her. She has worked under my guidance and supervision and fulfilled the requirements for the submission of the thesis, which has attained the standard required for a Ph.D. degree of the Institute. The results presented in this thesis have not been submitted elsewhere for the award of any degree or diploma.

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To my Family

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Abstract

The present thesis explores shades of inequalities concerning information and communication technologies (ICTs) in India's rural societies. In the modern digital era, digital technology and society have a tangled and fascinating relationship. While the growth of ICT has been linked with development, these technologies also interact with the existing inequalities in society. These interactions are particularly complex in the Indian rural societies that are inherently convoluted and relatively inscrutable for the outsiders. Information communication technology for development (ICTD) research has focused on the development aspect in rural societies. The disparities in the development impact across socio-cultural-economic stratus are also radially visible and established through research. However, the understanding of 'why' and 'how' of the interactions between the socio-cultural aspects and technology is relatively under-developed, especially in rural societies. This research aims to gain a deeper understanding of the ICT ecosystem in rural India while keeping the intricacies of the social and cultural aspects in focus.

For an in-depth understanding of Internet access, usage, and impact within this context of socio-cultural disparities in the rural areas, an inductive ethnographic research is designed. Through grounded qualitative research, the study provides cognitive insights into 'how' and 'why' in this context. For the research data was collected ethnographically from a village in Rajasthan over eight months while going into rounds of analysis simultaneously through constant comparison and theoretical sampling. NVIVO12 software was used to manage, index, and organize the text data.

The findings suggest that within the context created by the existing socio-cultural-economic scenarios leading to inequality in the form of various disparities, respondents show non-interactions (non-access) or interactions in the form of access, usage, and impact of the

Internet. These interactions or non-interactions, driven and moderated by the individual level conditions, lead to digital inequalities within this context. Digital inequalities, in turn, feed the existing inequalities creating a cyclic effect on society. A sub-study provides insights on the role of social constructs in people's sentiments concerning the habits and usage of social media, constituting a significant part of people's interaction with the Internet.

This research work significantly contributes to the existing body of knowledge in two primary ways. The first contribution concerns the construct of 'inequality'; the thesis describes the concept with causal elements and reflections on rural setup. Second, a novel grounded theory is built to explain how within the context of the socio-cultural inequalities, the strategic responses of rural people to technology are mediated by the intervening conditions and lead to ICT inequality. It also explains the cyclic nature of social and digital inequalities.

The research presents ground-level details in an abstract form suitable for practice and policymakers to base their decision upon. The findings from the research are detailed and accurate to the actual situation in the village and simultaneously are comprehensive enough to include and implement in a policy-making process.

सार

वर्तमान थीसिस भारत के ग्रामीण समाजों में सूचना और संचार प्रौद्योगिकियों (आईसीटी) से संबंधित असमानताओं की पड़ताल करती है। आधुनिक डिजिटल युग में, डिजिटल तकनीक और समाज का एक पेचीदा और आकर्षक रिश्ता है। हांलाकि आईसीटी में वृद्धि को विकास से जोड़ा गया है, ये प्रौद्योगिकियां समाज में मौजूदा असमानताओं के साथ भी अंतःक्रिया करती हैं। ये अंतःक्रियाएं भारतीय ग्रामीण समाजों में विशेष रूप से क्लिष्ट हैं, जो कि बाहरी लोगों के लिए स्वाभाविक रूप से जटिल और अपेक्षाकृत समझ से बाहर हैं। विकास के लिए सूचना संचार प्रौद्योगिकी (आईसीटीडी) अनुसंधान ने ग्रामीण समाजों में विकास के पहलू पर ध्यान केंद्रित किया है। सामाजिक-सांस्कृतिक-आर्थिक स्तरों पर विकास प्रभाव में असमानताएं भी मौलिक रूप से दिखाई देती हैं, और अनुसंधान के माध्यम से स्थापित होती हैं। तथापि, सामाजिक-सांस्कृतिक पहलुओं और प्रौद्योगिकी के बीच अंतःक्रिया के 'क्यों' और 'कैसे' की समझ अपेक्षाकृत कम विकसित है, खासकर ग्रामीण समाजों में। इस शोध का उद्देश्य सामाजिक और सांस्कृतिक पहलुओं की पेचीदगियों को ध्यान में रखते हुए ग्रामीण भारत में आईसीटी पारिस्थितिकी तंत्र की गहरी समझ हासिल करना है।

ग्रामीण क्षेत्रों में सामाजिक-सांस्कृतिक असमानताओं के इस संदर्भ में इंटरनेट की पहुंच, उपयोग और प्रभाव की गहन समझ के लिए एक आगमनात्मक नृवंशविज्ञान अनुसंधान तैयार किया गया है। आधारभूत गुणात्मक शोध के माध्यम से अध्ययन इस संदर्भ में 'कैसे' और 'क्यों' की संज्ञानात्मक अंतर्दृष्टि प्रदान करता है। अनुसंधान के लिए लगातार तुलना और सैद्धांतिक नमूने के माध्यम से सामानांतर विश्लेषण के दौर में जाने के दौरान, आठ महीनों में राजस्थान के एक गांव से नृवंशविज्ञान के आंकड़ों को एकत्र किया गया था। NVIVO12 सॉफ्टवेयर का उपयोग टेक्स्ट डाटा को प्रबंधित करने, अनुक्रमित करने और व्यवस्थित करने के लिए किया गया था।

निष्कर्ष बताते हैं कि मौजूदा सामाजिक-सांस्कृतिक-आर्थिक परिदृश्यों द्वारा निर्मित संदर्भ, जो विभिन्न विषमताओं के रूप में असमानता की ओर ले जाता है, के भीतर उत्तरदाता गैर-अंतःक्रिया (गैर-पहुंच) या इंटरनेट के पहुंच, उपयोग और प्रभाव के रूप में अंतःक्रिया दिखाते हैं। व्यक्तिगत स्तर की स्थितियों द्वारा संचालित और संयमित ये अंतःक्रिया या गैर-अंतःक्रिया, इस संदर्भ के अंतर्गत डिजिटल असमानताओं को जन्म देते हैं। डिजिटल असमानताएं, बदले में, समाज पर चक्रीय प्रभाव पैदा करते हुए मौजूदा असमानताओं को पोषित करती हैं। एक उप-अध्ययन सोशल मीडिया, जो इंटरनेट के साथ लोगों की अंतःक्रिया का एक महत्वपूर्ण हिस्सा है, की आदतों और उपयोग से संबंधित लोगों की भावनाओं में सामाजिक संरचनाओं की भूमिका पर अंतर्दृष्टि प्रदान करता है।

यह शोध कार्य दो प्राथमिक तरीकों से ज्ञान के मौजूदा निकाय में महत्वपूर्ण योगदान देता है। पहला योगदान 'असमानता' की अवधारणा से संबंधित है; यह थीसिस ग्रामीण व्यवस्था में कारक तत्वों और प्रतिबिंबों के साथ इस अवधारणा का वर्णन करती है। दूसरा, यह समझने के लिए एक नया सैद्धांतिक ढांचा तैयार किया गया है, कि कैसे सामाजिक-सांस्कृतिक असमानताओं के संदर्भ के अंतर्गत, ग्रामीण लोगों की प्रौद्योगिकी के प्रति रणनीतिक प्रतिक्रियाएं, अन्तःस्थ स्थितियों की मध्यस्थता में डिजिटल असमानता की ओर ले जाती हैं। यह सामाजिक और डिजिटल असमानताओं की चक्रीय प्रकृति की भी व्याख्या करता है।

यह अनुसंधान अभ्यास और नीति निर्माताओं के निर्णय को आधार प्रदान करने के लिए उपयुक्त, एक अमूर्त रूप में जमीनी स्तर का विवरण प्रस्तुत करता है। शोध के निष्कर्ष गांव में वास्तविक स्थिति के अनुसार विस्तृत और सटीक हैं और साथ ही नीति-निर्माण प्रक्रिया में शामिल करने और लागू करने के लिए पर्याप्त व्यापक हैं।

Contents

Certificate	i
Acknowledgements	iii
Abstract	vi
Abstract (Hindi)	viii
Contents	x
List of Tables	xiv
List of Figures	xv
List of Abbreviations	xvi

CHAPTER 1: INTRODUCTION	1
1.1 BACKGROUND.....	1
1.1.1 <i>The Context</i>	3
1.1.2 <i>Rural India</i>	10
1.1.3 <i>Internet In Rural India</i>	13
1.2 MOTIVATION AND NEED FOR THE RESEARCH.....	16
1.3 OUTLINE OF THE RESEARCH	17
1.4 THESIS STRUCTURE	19
CHAPTER 2: REVIEW OF LITERATURE	22
2.1 EMPIRICAL RESEARCH IN ICTD SPACE	23
2.1.1 <i>ICT Access and Ownership</i>	24
2.1.2 <i>ICT Usage</i>	30
2.1.3 <i>ICT Impact</i>	35

2.1.4	<i>Digital Divide</i>	38
2.1.5	<i>Inequality beyond Digital Divide</i>	40
2.2	THEORETICAL CONCEPTS AND FRAMEWORKS IN ICTD SPACE	44
2.2.1	<i>The Development Concept</i>	45
2.2.2	<i>Capability approach</i>	47
2.2.3	<i>Sustainable livelihoods approach</i>	49
2.2.4	<i>Affordance theory</i>	50
2.2.5	<i>The Concept of Capital</i>	51
2.2.6	<i>Social Capital Theory</i>	52
2.2.7	<i>Digital Capital</i>	53
2.2.8	<i>Actor-Network Theory</i>	54
2.3	SUMMARY	56
CHAPTER 3: METHODOLOGY		57
3.1	RESEARCH QUESTIONS AND OBJECTIVES	57
3.2	RESEARCH APPROACH: PHILOSOPHICAL ASSUMPTIONS	59
3.3	RESEARCH DESIGN	62
3.3.1	<i>Ethnographic Research</i>	65
3.3.2	<i>Grounded Theory</i>	66
3.4	ADDRESSING REFLEXIVITY IN THE RESEARCH	69
3.5	THE RESEARCH STORY	71
3.5.1	<i>Selection of the village</i>	71
3.5.2	<i>Sampling Strategy, Participants, and getting acceptance in the village</i>	77
3.5.3	<i>Generating Data</i>	80
3.5.4	<i>Data Preparation</i>	83
3.5.5	<i>Analysis</i>	84
3.6	SUMMARY	93
CHAPTER 4: FINDINGS		94

4.1	DEMOGRAPHICS	94
4.2	FINDINGS	96
4.2.1	<i>Core Category – Existing Socio- cultural-economic Inequalities</i>	100
4.2.2	<i>Not Interacting with the Internet</i>	125
4.2.3	<i>Interacting with the Internet</i>	129
4.2.4	<i>Individual-level conditions</i>	163
4.3	SUMMARY	170
CHAPTER 5: THE INEQUALITY CONCEPT		171
5.1	DEVELOPING THE GROUNDED THEORY	171
5.1.1	<i>Causal Conditions Leading to Inequality</i>	173
5.1.2	<i>Central phenomena: the inequality</i>	175
5.1.3	<i>The properties of inequalities: context</i>	176
5.1.4	<i>The intervening conditions</i>	178
5.1.5	<i>The actions and interactions of the people and Internet</i>	179
5.1.6	<i>The consequence</i>	180
5.1.7	<i>Diagrammatic representation of the grounded theory</i>	181
5.2	SUMMARY	183
CHAPTER 6: SOCIAL MEDIA AND SENTIMENTS		184
6.1	METHODOLOGY	185
6.1.1	<i>Selection of a social media platform</i>	186
6.1.2	<i>Research Method Triangulation</i>	187
6.2	ANALYSIS AND FINDINGS	191
6.2.1	<i>Word Cloud</i>	191
6.2.2	<i>Polarity Analysis</i>	192
6.2.3	<i>Emotion Analysis</i>	193
6.2.4	<i>Thematic Analysis</i>	196
6.3	CONCLUSION.....	200

CHAPTER 7: DISCUSSION.....	202
7.1 REVISITING THE RESEARCH QUESTIONS AND OBJECTIVES.....	202
7.2 DISCUSSION OF FINDINGS.....	203
7.3 SUMMARY.....	211
CHAPTER 8: CONCLUSION.....	212
8.1 SUMMARY.....	212
8.2 IMPLICATIONS FROM THE STUDY.....	217
8.2.1 <i>Policy Implications</i>	217
8.2.2 <i>Practice Implications</i>	219
8.2.3 <i>Research Implications</i>	220
8.3 LIMITATIONS AND STRENGTHS OF THE STUDY METHODOLOGY.....	221
8.3.1 <i>Sampling Strategy</i>	222
8.3.2 <i>Data Collection</i>	222
8.3.3 <i>Data Analysis</i>	224
8.4 FUTURE RESEARCH.....	224
REFERENCES.....	226
ANNEXURE. 1.....	266

List of Tables

Table 1	Philosophical Assumptions for the research	60
Table 2	Description of the field of research.....	73
Table 3	Description of data points	82
Table 4	Example of comparative coding- grouping categories and properties	90
Table 5	Demographic details of the Participants	95
Table 6	Findings Brief- Categories, Concepts & Properties.....	97

List of Figures

Figure 1 A still capturing a routine day in a rural village in Rajasthan, India	12
Figure 2 Specifying the need of the research	17
Figure 4 Summary of empirical literature review discussion points	43
Figure 3 Choice Framework adopted from (Kleine, 2009).....	48
Figure 5 Summary of theoretical discourses studies for the research.....	56
Figure 6 Households in the village	73
Figure 7 Small general store being run by women in a small area of a house.....	76
Figure 8 Women gathered at Anganwadi to celebrate 'god bhara' for a mother to be.....	78
Figure 9 Example of rough on the spot short notes	82
Figure 10 Constructivist Grounded Theory Coding Process- Adopted from Oakley, (2015)	88
Figure 11 Initial codes generated through preliminary rounds of coding.....	89
Figure 12 Theoretical coding model reproduced from Morrow and Smith (1995)	91
Figure 13 A women practicing 'Ghunghat'	102
Figure 14 'Chaupal' in the village	104
Figure 15 Keypad based multimedia mobile with Internet connection playing a news video ..	133
Figure 16 A) Druva: the content available B) Druv in a household in Baral	136
Figure 17 Girl showing her craft work learnt through watching YouTube videos.....	145
Figure 18 Model framework reproduced from Morrow and Smith (1995)	172
Figure 19 Grounded theory of Internet and inequalities in rural Indian society.....	182
Figure 20 Methodological triangulation with thematic analysis and content analysis	188
Figure 21 Word Cloud showing the ideas reflected upon in the responses	192
Figure 22 Polarity Analysis Results.....	193
Figure 23 Emotion Analysis for various categories of WhatsApp Usage	194

List of Abbreviations

ANT	Actor-Network Theory
AT	Affordance Theory
BI	Behavioral Intention
CA	Capability Approach
CSC	Computer Service Center
DFID	Department of international development
GDP	Gross Domestic Product
GP	Gram Panchayat
HCI	Human Computer Interactions
I	Interviewer
ICT	Information Communication Technology
ICTD	Information Communication Technology for Development
IS	Information Systems
MDG	Millennial Development Goals
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
NOFN	National Optical Fiber Network
OBC	Other Backward Castes
PRI	Panchayat Raj Institutions
R (1/2/3..)	Respondents
SC	Scheduled Caste
SDG	Sustainable Development Goals
SLA	Sustainable Livelihood Approach
ST	Scheduled Tribe
TRA	Theory of Reasoned Action
TAM	Technology Acceptance Model
UIDAI	Unique Identification Authority of India
UTAUT	United Theory of Acceptance and Use of Technology
USOF	Universal Service Obligation Fund