



# **Digital Divide Working Group**

Abstracts of papers presented at the annual conference of the **International Association for Media and Communication Research**<sup>1</sup>

# **IAMCR**

Madrid, Spain 7-11 July 2019

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Version: 19/07/19

We have endeavoured to ensure that these are the abstracts of the papers actually presented at the conference. Nevertheless, due to cancellations, additions and other factors, abstracts may be included here that were not presented and abstracts that were presented may not be included.

**Title:** The Internet and Spanish children with learning and behavioural problems and other

disabilities

Session Type: Individual submission

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**Abstract:** This communication describes the uses, opportunities and online risks for children with learning and behavioural problems, and other disabilities. The data corresponds to a part of the sample used in the Spanish fieldwork for the European project Net Children Go Mobile. In this project 500 Spanish children who are Internet users aged between 9 and 16 were surveyed, together with either their father or mother. Within our sample, a group of 61 children with behavioural and learning problems, physical difficulties or, mental illnesses were recognized. Although the problems identified were very diverse, we can assume that they all share a common characteristic, i.e. the vulnerability that these problems generate. We have no knowledge of any specific diagnoses, the only information we have is that their parents stated that children had learning, behavioural or health problems.

Research about this type of children shows that the use of the Internet as a social medium allows them to communicate with others, thereby promoting their personal relationships and creating or safely participating in virtual communities (Raskind et al. 2006). Nevertheless, these children are often rejected by their peers and have more difficulties establishing and maintaining friendships, and, in turn, are at greater risk of experiencing loneliness, low self-esteem, anxiety and depression (Margalit et al., 2002; Wiener, 2004). Regarding the risks which these minors may face online, a study by Yen et al. (2014) showed that adolescent boys, those specifically suffering from attention deficit and problems of hyperactivity, were more frequently either victims or perpetrators of cyberbullying than those without these problems. Moreover, Ryhuei (2017) showed that these deficits and disorders, among others, are themselves risk factors for Internet addiction. Parental mediation is essential to prevent and manage Internet risks and inappropriate uses. Deficiencies detected in this area are due, in many cases, to the low level of computer literacy of the parents (Palacios-Cruz et al., 2011).

Our evidence shows that these children also lack the necessary digital skills and computer equipment in their homes to enable them to successfully complete some of their homework and

school tasks. They also frequently visit websites with potentially harmful content and claim their friends usually help them when something upsets them or that they provide them with advice much more often than do their parents.

Although there are no very pronounced differences in the number of unpleasant online experiences that children with problems have in comparison with those who do not, there is a significant difference in the harm caused by these experiences. As 32% of children in the vulnerable group have been either very or slightly upset by these experiences, whereas only 22.3% of children without problems have been adversely affected. Regarding the level of exposure to sexual content (words, drawings or videos), it is higher in the case of vulnerable children (41.5% versus 30%).

**Title:** The third digital divide and Pierre Bourdieu: Dialectic transformation between economic, cultural and social capital into and from digital capital among young people in Madrid.

**Session Type:** Individual submission

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**Abstract:** In this presentation we will focus on the third-level digital divide, regarding offline outcomes of Internet use, in relation with the Bourdieu's theory of capitals. Digital divide theory has traditionally focused on how social stratification affects both accessibility to digital devices – first-level of the digital divide— and people digital practices—second-level digital divide—. Therefore, third-level digital divide is concern about the dialect process of feedback between social and digital inequality, focusing on how people use of digital technologies can be transformed in tangible outcomes that improve their living conditions. Therefore, Bourdieu's perspective is appropriate to fulfil the lack of sociological theorization among digital divide research, because the operationalization of the concept of digital capital allow us to connect social structure with microsocial interaction, as well as structural forms of inequality with the three levels of the digital divide.

Using a qualitative methodology based on 30 in-depth interviews among young people living in the region of Madrid, we will analyze the mechanisms of transformation between the three main forms of capital —economic, cultural and social— into digital capital, as well as the feedback mechanisms of conversion of digital capital into economic, cultural and social capital. We conceptualize the concept of digital capital as a specific form of cultural capital associated with the digitally mediated social world and with a dual dimension: (1) as objectified digital capital, related to digital devices, technological services and platforms; and as (2) incorporated digital capital, including people's dispositions, perceptions towards technology and digital skills.

Regarding conclusions, we state that economic capital is the most basic and original form of digital inequality, imposing material barriers to technological devices and spaces in which digital technologies are commonly used. Cultural capital is transformed into digital capital by people processes of technological socialization, in which motivation and previous dispositions towards ICTs are extremely important. Finally, social capital is converted into digital capital by means of social spaces of Internet use and social support provided by people around the subject. On the other hand, digital capital can be transformed into economic capital by means of job searching practices, professional promotion and by digitally buying and selling goods and services; it can also be transformed into cultural capital, specifically in terms of granting direct access to information and knowledge; finally, it can be converted into social capital by generation new social connections, aiding to maintain previous social relations beyond physical communication barriers and enhancing subject's presence in the digital realm.

**Title:** Inequalities in data literacy - some initial findings

**Session Type:** Individual submission

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**Abstract:** This paper reports on the initial statistical findings from the recently awarded "Me and my big data project" funded by the UK Nuffield Foundation. The project seeks to understand the levels of and variations in UK citizens "data literacy", and to develop policy and educational materials to support improving this. A key component of citizens data literacy is an understanding of the uses of their personal data. Unfortunately, evidence indicates that many citizens have limited understanding of the data they share, its use by organisations, nor basic data protection behaviours. Nor are they aware of how they can utilise publicly available data to undertake both personal and civic action. This lack of data literacy opens citizens up to risks and limits their ability to operate as active citizens in a digital society. Also, evidence is growing of inequalities in data literacy that mirror broader social inequality. This paper reports on the project baseline findings from the reanalysis of UK Ofcom and UK Department of Digital, Culture, Media and Sport (DCMS) data sets. This analysis focuses on the differential levels of data literacy across a range of socio-economic and demographic variables to explore the intersectional aspects of data literacy. The paper will conclude with an outline of the next stage survey and focus group field work that build on these results. This work is the first element of four broad project activities: 1] exploring through survey data and citizen workshops the extent of citizens' data literacy; 2] analysing the social basis of variations and inequalities in data literacy across a range of factors; 3] developing training and support materials for schools, universities and third sector groups in order to enhance citizen's data literacy; and 4] developing policy recommendations for stakeholders on enhancing citizen data literacy.

**Title:** Digital divide as both technological and social problem: The case of Russian regions

**Session Type:** Individual submission

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**Abstract:** Despite the fact that the problem of digital divide in different national contexts has been in the spotlight of many academics across the world (e.g. Chipeva, Cruz-Jesus, Oliveira, & Irani, 2018; Dilmaghani, 2018; Fuchs, & Novak, 2008; Ragnedda, & Muschert, 2013; Ragnedda, & Kreitem, 2018; Smirnova, 2017; Vartanova, 2002, 2013), little attention has been given so far to the problem of digital inequality in Russia (e.g. Bykov, & Hall, 2011; Delitsyn, 2006; Vartanova, 2018; Volchenko, 2016). The number of research on digital divide in Russian regions – federal districts, oblasts, okrugs, krais and other territorial formations of different sizes – is even lower (e.g. Deviatko, 2013; Nagirnaya, 2015; Rykov, Nagornyy, & Koltsova, 2017). This study aims to fill in this gap by analyzing digital divide in eight federal districts of Russia (Central, Southern, Northwestern, Far Eastern, Siberian, Ural, Volga and North Caucasus), discussing their regional specifics together with the general trends, and approaching digital inequality in Russian regions as both technological and social problem.

While conducting research, we looked at three levels of the digital divide in Russia (access; skills; and benefits people can get through using ICTs) to ensure digital inequality in Russia is treated as a complex and multifaceted phenomenon. For this purpose, we examined such key criteria as the number of Internet users in Russia in general and in particular federal districts of Russia, monthly Internet audience, Internet penetration rate (broadband and mobile), the cost of Internet access, average speed, etc. Furthermore, we analyzed digital literacy in Russia in a comparative interregional perspective, analyzing similarities and differences across eight federal districts of Russia in this respect. Last but not least, in order to shed light upon digital inclusion process, we studied the index of Internet 'openness' of Russian regions (a measuring program implemented since 2017), and key directions of the state policy aimed at decreasing digital inequality in Russia on both federal and regional levels (Digital Russia Program, Digital Government Program, the Program of Eliminating Digital Inequality in Russia, etc.), as well as the availability and use of eservices in Russian regions.

As our research shows, Russian federal districts considerably differ on all three levels of the digital divide, with some regions (Central, Northwestern, Ural and (in a number of cases) Volga federal districts) taking up leading positions and other regions more or less lacking behind. We argue thus

that digital inequality in Russia is still on place and will require more time for complete elimination. However, the number of state and public initiatives aimed at creating a more balanced digital environment across federal districts and territorial formations, and overall positive dynamics of digitalization processes in the Russian regions make us believe that the process is going towards the right direction.

**Title:** Formations of the Unequal Subject in the Online Platform Economy

**Session Type:** Individual submission

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**Abstract:** The specificity of subject formation in the online platform economy is blurred into dominant progressions of subject formation in society more generally; The neoliberal turn since the 1970s has surely catalysed the entrepreneurial self, geared towards market success (Brockling, 2016), as well as the indebted self in an increasingly financialised and credit focused economy (Lazzarato, 2012, 2015). However, I argue that the mediating properties of sharing/gig economy platforms bring such formations into a particular moment of focus. These platforms emerge free from the restricted velocity of traditional industry (Srnicek, 2017) and often expand into unmapped regulatory space faster than policy can react (Katz, 2015). The result is capitalist interaction untethered from traditional labour relations and often beyond regulatory politics, approaching the neoliberal ideal of the freed market. I argue that this hyper-economisation extends to the subject who participates by seeking income in the 'Sharing Economy'. This subject is evaluated, assessed, ranked and categorised through platform algorithms and systems of rating acting on behalf of platform operators; but also, directly with 'the customers' in the context of their economic interactions where value judgement is persistently encouraged through rating functionality and, on some platforms, competitive pricing between income seekers; what results is a subject constantly aware of their market value. I therefore bring forward Bourdieu's (1986) conceptions of symbolic capitals to explain which different forms of capital become recognised as valuable within the fields of the sharing economy. But I also go further by calling upon the critiques of Bourdieu offered by Skeggs (2004) to ask who has the ability to be seen as a subject of value, reflecting dominant hierarchies of class, gender and race. This paper therefore interrogates the mechanisation of dominant normative expectations of subject value in mediatised environment of the platform economy and, secondly, how these normative horizons interact with offline inequalities in the perpetuation of outcomes (adding to the established digital inequalities "outcomes" debate (Helsper, 2012; van Deursen & Helsper, 2015, 2017)).

This paper constitutes a theoretical contribution arising from a PhD thesis focused on people who earn money using Uber, AirBnB and Amazon Flex within London, UK.

**Title:** Second Order Digital Divide: A case for Digital Social Capital

**Session Type:** Individual submission

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**Abstract:** Digital Divide Research over the years has focused on the inequalities in the use of the information and communication technologies. However many recent experiences in the Information and Communication for Development (ICT4D) projects have busted the myth that information and communication technology access would lead to a linear attainment of the stated development goals. One of the reasons of the failure of the ICT4D paradigm is the design-reality gap between the information systems of the developed countries and the developing societies that they were sought to be transferred. The second order digital divide looks beyond the inequality in access and concentrates on the differences among users' skills and motivations for usage. The interaction between culture and technology and individual user and technology hence become important considerations. This has led to recommendations for digital literacies for all citizens encompassing the theoretical, operational and evaluational aspects of ICT literacy. One of the major theoretical paradigms for the digital literacy approach has been the Capabilities Approach which posits the importance of the freedoms or valuable opportunities (capabilities) for individuals to achieve the functionings they consider important. Digital Literacy thus looks at the capabilities and its corresponding functionings that users are able to achieve. It is no longer a question of access but more of what people can or cannot do with the information and communication technologies made available to them. Other recent theoretical approaches are concerned with both access and participation. The network society theory on the other hand maps how the information and communication technologies have constituted new social paradigms in which new social relationships are based. A similar theme has been that of the Digital Human Capital which sees investment in human capital as being analogous to investing in other forms of capital for social development. A related concept in some ways is the 'social capital' concept. According to Bourdieu, social capital is the cumulative resource from the possession of a network of 'relationships of mutual acquaintance and recognition'. The amount of social capital depends not only on the breadth of the network of connections, an individual has but also on the pool of resources possessed by those to whom the individual is connected in the network. Bourdieu further believes that social capital, cultural capital and economic capital can be converted from one type to another. Drawing on Bourdieu's theory, the present paper suggests a digital social capital paradigm as an index for second order digital divide. It goes beyond the traditional digital human capital arguments of digital literacy and considers social capital from a capability perspective. In other words it indicates the social capital an individual deliberately chooses to acquire is reflective of the functionings he desires from the digital world, and the connectedness which would entail other forms of symbolic and cultural capital as well. People with more digital social capital have both more freedom to access other social networks and more control over others' access to their network resources.

Keywords: Digital Literacy, Human Capital, Second Order Digital Divide, Capabilities, Digital Social Capital

**Title:** Impacts of the digital divide on e-government portals of Nepal

**Session Type:** Individual submission

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**Abstract:** Nepal is a landlocked country in South Asia with 29 million population (Zuberi et al., 2018). According to the Internet Live Stats (2016), less than 20% of the population in Nepal have accessed on the Internet. The Capital city and other major urban areas have a higher concentration of the Internet facilities with 3G and 4G Internet services, but most of the rural areas rely on limited access to the Internet with slow 2G Internet in GSM and CDMA technologies (Nepali Telecom, 2018). Most of the Internet users have access to the Internet through mobile devices and primarily used for social networking and interactions (Nepali Telecom, 2018).

Nepal is struggling to cope with the rapid evolution of information and communication technologies (ICTs) since the country has been facing a severe energy crisis (electricity shortages) for decades (Poudyal, Khadka, & Loskot, 2017). Most of the people in the country have limited access to ICTs due to low income, and they hardly find access to the high-speed Internet due to poor and limited infrastructure (Pun, n.d.). By introducing a number of ICT policies and programs, the Government of Nepal (GoN) want to provide government services through e-government platforms and contribute to the national economy by 2030.

There are, however, several barriers to Nepali users in accessing and using Internet services, including low income, illiteracy, limited digital literacy skills, and reluctance to new media. Consequently, Nepal's digital presence in terms of providing government services and opportunities to the public, participating e-government program, and creating digital content is very limited. Nepal's e-government service, among 193 UN member countries, is ranked 117th position that signals very poor progress in the ICT infrastructure and government service delivery through digital platforms (UN Survey, 2018). Each of the 22 federal government ministry websites, according to Lyane and Lee's (2001) categorization, are in the preliminary stage of development, meaning the websites display government intended information with limited interactive features and financial transaction facilities.

In this presentation, I would argue that the digital divide seriously affects Nepal's efforts of government service delivery through digital platforms, and consequently, efforts of government service delivery through digital platforms are inadequate and ineffective. By employing Layne and Lee's four-stage model of e-government development, this study observes the official websites of 22 ministries of the federal GoN that are expected to deliver government services to the public effectively.

After nearly two decades of political ups and downs, Nepal currently has a stable government with more than a two-thirds of parliamentary majority (Shakya, 2017). One of the major political agendas during the last election campaign was to transform Nepal into a digital nation by building a number of smart cities, making free Wi-Fi available across cities, developing digital infrastructure, and providing government services and opportunities through online. In this context, this presentation will be very relevant in assessing the state of the digital divide in the country, and the services and opportunities provided to the public through e-government portals.

**Title:** Digital Inequality, Education Heterogeneity and Human Rights. The Conectar Igualdad Programme in rural and urban working-class schools of Salta (Argentina)

**Session Type:** Individual submission

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**Abstract:** Does the level of promotion and protection of education -as part of human rights and dignity- have any relation to the level of technological development of the society? Is there any correlation between digital inequalities and social inequalities when it comes to the rights to education in social and geographical marginalised areas? This paper bridges both questions in order to answer them via quantitative and qualitative data referred to a specific context and on a specific educative policy: the Conectar Igualdad Programme (CIP) as a social policy applied in an urban and a rural secondary school located in Salta (Argentina).

In this way, this case study allows us to generate evidence on digital-inequality issues facing adolescent citizens among social and geographical marginalized communities; and promotes evidence- informed policy change for the improvement of the access, the use, and the implementation of ICTs for educational, social and cultural development (van Dijk, 2005). Both in Latin America and in Argentina, inequality is a historical and severe structural condition (Kessler, 2010). In turn, the social uses of technology constitute an important field of debate in the area, and the technological equity conditions during childhood and adolescence are part of most of the political and educational agendas (Becerra, 2015; Morales, 2015; Reygadas 2008; Rivoir, 2009). We ask ourselves: What features does inequality acquire when questions are asked on the grounds of educational policies aimed at digital equity from a human rights perspective? To what extent is technological inequity part of wide and historical geographies of social inclusion/exclusion? How do digital inequalities relate with the public educational system and to what extent do they impact on the living conditions of the youth in diverse Latin American contexts?

First we work with comparative public statistical information, which allows us to address the presence/absence of various technological devices in Argentine households, pointing out the differences between regions and specifying the situation for the province of Salta. Said statistical

information is combined with an inclusive approach on the role, the valuation and the differential use of technologies according to contexts, regions and diverse socio-economic conditions. Our analysis indicates that CIP seem to have had a relevant impact in the educational system, though differences persist between sectors of different income levels and of rural or urban localizations. Positive variations indicate the extent to which public policies may positively influence the reduction of the material dimension of access. Fieldwork indicates that, even if the digital gap is narrower among the youth than among older-age groups, and among male students than among female students, it persists. Furthermore, the analysis shows that there are regions and sectors which remain disconnected, that there are digital services that are only accessed by the most favoured sectors, and that this disconnection has a growing weight in the general configuration of social inequality in Salta. Thus, the availability of a specific device incipiently reduces the structural fragmentation between incipiently connected and disconnected people, while it neither solves the connectivity issue nor those issues derived from digital literacy processes and the social uses of such technologies.

Title: e-Inclusive education in the Netherlands: A customized approach framed within 8 media

profiles

**Session Type:** Individual submission

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**Abstract:** In international statistics, the root causes of digital exclusion are still easily brought back to a series of sociodemographics such as income, jobs status, education level or gender (Van Dijk, 2005). Research, among others by Helsper (2012) and Reisdorf (2017) has shown that a more nuanced approach is needed in which aspects such as autonomy of use, personal daily practices and needs, participation in social networks and social support networks are taken into account as explanatory factors for digital exclusion.

The work of Mariën and Baelden (2015) proposes a conceptual model of eight media profiles, spread across a continuum between deep exclusion and deep inclusion, combining social and digital indicators, that explains the extent to which the various types of (non-)users are subject to digital exclusion. Moreover, the practical application of the conceptual model by e-inclusion initiatives in Flanders has proven to be worthwhile for developing a customized e-inclusion approach fitting each media profile (Mariën, 2016). It led to the insight that the strongest media profiles (cf. the Digital All-Stars) are in need of pedagogical support so as to more easily communicate and share their digital knowledge. It also showed that strong digital profiles are present among socially vulnerable groups, and moreover, that these 'Unexpected Digital Masters' are best equipped to become coaches for their peers.

This paper presents itself as an empirical application of the 8 media profiles and how they serve to develop customized e-inclusion strategies for secondary education in the Netherlands. A three-phased practice-oriented project was conducted in collaboration with ROC Leeuwenborgh (NL), a vocational traning center for teenagers and adults. Firstly, the conceptual model was transformed into an automated online self-assessment instrument built upon 13 indicators, of which 5 relate to the social field and 8 relate to the digital field; and subsequently tested and validated with a group of 10 MBO students in ROC Leeuwenborgh, Maastricht. Secondly, the validated self-assessment instrument was filled in by 300 MBO-students. Thirdly, participatory workshops were conducted with students and their lecturers, aimed to build an e-inclusive and customized approach suited to each media profile.

The preliminary results of this study shows the importance of developing soft skills (cf. self-confidence, self-steering competencies, critical self-reflection...) as primordial for the development of digital skills within an MBO-context. Finally, the participatory methodology used within this project provides an invaluable toolkit to empirically respond to the experiences and the needs of students. This aspect is important insofar the teacher is no longer perceived as dispensing all the knowledge to students supposed to stay quiet while soaking it in; rather, we put forward an idea of skills development where pupils with the strongest media profiles can become the coaches of their peers and provide support.

**Title:** A widening digital divide and its impacts on existing social inequalities and democracy in

Pakistan

Session Type: Individual submission

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**Abstract:** In Pakistan, concentrated efforts have been made for the proliferation of Information and Communication Technologies (ICT) infrastructure by the government during the past decade. Consequently, in terms of internet users, "Pakistan is the fourth-largest country in Asia – behind Indonesia, India and China" (Hussain, 2017). However, a large proportion of the Pakistani people still cannot access and use internet. For example, a report released by Pakistan Telecommunication Authority (PTA) in late 2017, Pakistan has a total population of 200 million people. Within 200 million people, there are 46 million 3G and 4G subscribers, 3 million fixed line subscribers and 48 million broadband subscribers (Khalid, 2017). These statistics indicate a bit slow growth of internet users in the country.

The matter of concern is not only Pakistan's slow progress towards the proliferation of internet access, but also there are various political, socio-cultural and other constraints that hinder the public's access and their usage of internet. Government of Pakistan often restricts internet access or limit the provision of internet services in certain areas of the country that serves to curb the public's right to freedom of expression and access to information.

In addition to government's restrictions, social and cultural norms also considerably restrain the public's access and usage of internet and thus are increasing digital divide. Particularly, the social milieu of Pakistan does affect the women's use of internet and social media because "out of 35 million social media users, 77 per cent are male users and only 23 per cent are female" (Farooq, 2018). The women's access to the internet and mobile phones is often restricted or monitored by male family members, resulting in their inability to effectively represent their issues online and participate in democratic process. And in majority of rural areas, both men and women neither have access to internet nor are they literate/or skilled enough to use it. Moreover, people with disabilities are also not capable to use internet due to a lack of provision of special needs equipments such as keyboards, screens and accessibility aids for sensory impairments.

Hence, there is no standardized access and usage of internet in Pakistan. Noticeably, there is a dearth of research by local academics within this area. Therefore, drawing on the theory of digital divide, this study identifies factors those are widening the digital divide in the country. The study also analyses how digital divide is reinforcing the existing social inequalities (i.e. income, gender and educational disparities) and impacts on Pakistan's democratic process. To achieve these aims, the study uses the quantitative method of survey and qualitative method of in-depth interviews. The study uses relative frequency statistics and thematic analysis to analyse the collected data.

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**Title:** Exploring the digital divide beyond access: A multivariate cross-country analysis of smartphone use and dependency in China, Singapore and Peru

**Session Type:** Individual submission

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**Abstract:** The term digital divide initially referred to gaps in access to a computer. In contemporary information society, with the Internet and various information and communication technologies (ICTs), such as wireless and mobile computing, diffusing rapidly into society, the term has shifted to encompass gaps in these media access. Most of the early literature on digital divide focused on a binary classification of physical access. As the concept is reified and refined, an increasing number of researchers have recognized this limitation and argued that attention should be paid to more dimensions that may influence people's media use and thus potentially lead to different divides. Previous studies have identified a variety of factors, including historical, geographic, socioeconomic, demographical, educational, behavioral, and generation factors, that may explain the existence of digital divide. This study examines the issue of digital divide from this more comprehensive perspective, with specific attention paid to use and impact of smartphone. With rapid adoption of smartphones globally, smartphone use and the impact of smartphone dependency, especially among the young, has garnered more and more public attention recently. By reviewing the literature on the global digital divide, considerable research interest has been in the cross-country comparative analysis. According to the ICT Development Index (IDI) 2017 published by the United Nations International Telecommunication Union, China, Singapore and Peru are of upper, high and medium level respectively. Adopting the Individual Media Dependency (IMD) perspective, this study proposed an extended IMD model to examine the associations between six IMD goals, three psychological traits (self-esteem, leisure boredom, and sensation seeking), smartphone use, and smartphone dependency among the young in China, Singapore and Peru, with special attention paid to the use and impact of smartphone, especially the negative consequences of excessive smartphone use and dependency.

Survey data were collected based on stratified random sampling from young smartphone users at one main public university in each of the three countries. Structural equation modeling was then

employed to examine the fit of the data to the model and compare the cross-country differences. Four smartphone dependency symptoms, i.e., inability to control cravings, escape, feeling anxious, and productivity loss were identified in the three countries, and revealed the mechanisms between IMD goals, psychological traits, and smartphone dependency. The results showed that across the three countries, different IMD goals had significant impacts on different aspects of smartphone use, and in turn have different effects on smartphone dependency.

Through cross-national research in China, Singapore and Peru, this study is among the first few to go beyond simple binary differences between the haves and have-nots and investigate a substantive issue of digital divide by examining different use patterns and impacts of smartphone across three countries of different IDI levels. This study contributes to a deeper understanding of more dimensions of digital divide including differences in use and impact, which is critical to social inclusion in today's era for governments, companies, not-for-profit organizations, and educational institutions to bridge the divide.

**Title:** New digital divides. Political and social participation of the elderly in the information

society

Session Type: Individual submission

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**Abstract:** This project continues the line of research initiated in two previous projects developed by this research team on various aspects of the relationship of the elderly with new information technologies and the Internet. The first of them, "Digital divide and third age: media literacy and einclusion (CSO 2012-36872)" addressed the training of older people in the field of ICTs as a means to limit this digital divide by promoting the e-inclusion of old people. The second "Elderly people, e-commerce and electronic administration: towards breaking the third digital divide (CSO2015-66746-R)" deepened some of the aspects of this generational digital gap, specifically in employment for this population group of e-commerce as of the electronic Government. In the development of these projects, a new element of the generational digital divide arose, the scarce political and social participation of the elderly in the information society through the different possibilities offered by digital tools, as corroborated by several published surveys by the CIS as by the INE. This limited participation through digital media contrasts, however, with the majority participation of this social group in the elections. Given the generalization of the political debate on the Internet, the present paper seeks to know the typologies of use of digital tools by the elderly for political participation as well as the motivations and problems that cause their limited use by this group. Through a bibliographic review of the main contributions of the theorists who have dealt with the subject,, we intend to offer a proposal on criteria, conditions and environments that allow older people to access websites, social networks and other types of computer tools linked to political participation. To this end, a series of recommendations and proposals would be established that both public administrations, and especially the various private entities where older people develop their social activity, could set in motion to encourage participation in the digital environment of this social group in all those discussions on issues that affect them. The proper channeling of these forms of participation will make it possible to know the opinions, shortcomings and demands of a social group that will be the majority in the next Western societies demographic scenario. This involvement would also allow their collaboration in the design of public policies that affect this group, improving them and adapting them to their real needs.

**Title:** Comprehending the Digital Disparities in Africa

**Session Type:** Individual submission

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**Abstract:** The digital divide is having significant impact on the ways in which information across Africa is developed, shared and perceived. The importance of Internet literacy has been often underestimated when assessing the real impact technology, and particularly citizen journalism and social media. (Wall 2012). Moreover, not everyone with access to the Internet understands what it is and how to use it for. Salgado (2016) outlines problems associated with the African digital divide in her analysis of the Internet's role in advancing democracy in the continent's former Portuguese colonies. Worse still, even when they actually have access to citizen journalism platforms, it is still unclear how many are participating and to what effect. This paper seeks to analyze the problems and opportunities associated with the ubiquitous digital revolution, providing a cross-disciplinary examination of digital disparities inhibiting social, political and economic progress across Africa. The paper seeks to provide empirical and theoretical accounts proving why social media will not easily change Africa's political systems. It also attempts to conceptualize the digital divide in an African setting critically examining how digital disparities could impact potential participation of citizens online. It will introduce some of the main concepts associated with the digital divide and analyze them from an African perspective. The paper also provides specific examples on how various countries in Africa are dealing with problems associated with the digital exclusion of their citizens.

**Title:** "It's convenient, but" Imagined digital (dis)connections in a rural Japanese community

**Session Type:** Individual submission

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**Abstract:** Scholars speak of the unprecedented opportunities for connection across time and space afforded by digital technologies as a set of affordances. In the context of media studies, this concept refers to both the design and material aspects of how the technology works and what it allows users to do (e.g. upload a video) and its social aspects (e.g. connect with friends through sharing the video). How people use technology, however, is always embedded in broader structures of power and shaped by individuals' expectations, perceptions and experiences — or by what scholars describe as the technology's "imagined affordances." Thus, in order to fully understand digital communication, scholars must engage with the ways in which individuals develop their own "vernacular affordances" in their use of technology in a variety of different and specific social contexts.

Research on the situated negotiation of digital media has, however, most frequently focused on Anglo-American and European environments. It has also tended to problematically skew toward urban middle-class (and, often, younger) communities. This latter tendency has been particularly true in the case of Japan, which is often associated with its large metropolises and a relative lack of class consciousness. Keeping this limitation in mind, this project explores how lower-class individuals living in a small rural Japanese community employ digital media in their everyday lives, and how this use of digital technology shapes their sense of place in the world.

Drawing from extensive ethnographic research in the community, it considers the multiple locally-specific ways in which individuals have embraced digital technology in their daily lives and how the technology's "imagined affordances" intersect with their cultural, regional, and class identities both locally and in relationship to national and global contexts. It argues that despite community members' active and frequent use of digital technology, and despite their status as citizens of a globally privileged nation, numerous barriers — both imagined and actual — continue to limit their ability to fully engage in digital culture. It further discusses how a sense of simultaneous connection and disconnection from both urban contexts and an imagined global digital community frequently led to complex feelings of fear and alienation when using digital media and to a nostalgic longing for pre-digital social relations.

**Title:** Digital Reentry: Uses of and Barriers to ICTs in the Prisoner Reentry Process

**Session Type:** Individual submission

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**Abstract:** In the United States, prison reform remains the focus of policies and foundation efforts. High incarceration rates and a focus on incapacitation during incarceration lead to a "revolving door effect", with more than two thirds of parolees rearrested within three years after release (Durose, Cooper, & Snyder, 2014). One aspect that is missing from this debate is how access to and use of information and communication technologies (ICTs) might improve the prisoner reentry process.

Although there are localized efforts, such as New York City's Prisoner Reentry Institute's "Tech 101" course, instruction of ICTs is not a core component of prisoner reentry practices. Some reentry training is computer-assisted (California Department of Corrections & Rehabilitation, 2017), and some prisons offer basic computer classes. Yet, most courses do not cover how to operate current technologies or the Internet, and there is little research on access to ICTs and the digital skills of returning citizens.

Therefore, we ask:

RQ1. What kinds of barriers toward ICTs do returning citizens encounter?

RQ2. How do they perceive the effects of these barriers? RQ3. What kinds of strategies do they employ to cope with (barriers to) ICTs?

We conducted focus groups with 78 male and female returning citizens in a large Midwestern city between April and June 2018. The mean age was 52 years (M=52.07, SD=19.4). Participants had been released from prison within 4 months of the focus groups and they had served a prison sentence of at least 2-3 years, some as many as 20 or more, so unfamiliarity with new ICTs was fairly high. We used a semi-structured approach to ask questions about ICT use, use barriers, and the kinds of ICTs parolees need during reentry and collected basic demographic data from the participants. We conducted various rounds of thematic coding of the transcribed data using NVivo.

All participants had cellphones, mostly smartphones (62%), but only few owned laptops or tablets (8.2% and 9.6%, respectively). As most participants lived in temporary housing, access to computers and the Internet was limited. In addition, lack of skills was a main barrier, although this varied depending on age, length of sentence, and how much participants had engaged with ICTs before. The perceived effects of lack of access and skills were largely negative. Participants reported issues in using ICTs to search and apply for jobs, write emails or text messages, and use apps on their phones. Whereas some were able to learn from friends, family, shelter staff, community centers, or teach themselves, many were unsure where to ask for help or what kinds of help to ask for. The majority mentioned that technology classes before or immediately after release would be helpful in alleviating these issues—showing the importance of including ICT training into reentry practices across the country.

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Title: Digital Bangladesh: A neoliberal project'

Session Type: Individual submission

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**Abstract:** Digital Bangladesh recently came to the forefront of political as well as development discourses. This paper critically explores the concept of so called "digital Bangladesh" in the context of the current global discourse of ICT for development. The analyses and arguments of this paper is situated in the broader context of how neoliberal macroeconomic orthodoxies have shaped approaches to development in the Global South, namely ICT4D which is rife with technocratic and instrumental assumptions that speculate on a unidirectional relationship between the use of new digital technologies and development. I argue that ICT4D reflects a variant of neoliberalism which is still very much in existence. "Digital Bangladesh" is a manifestation of ICT for Development in Bangladesh. Following on from Jan Nederveen Pieterse (2004), I argue that an important factor for the spread of ICT4D in the Global South has been the process of "neoliberal globalization". Another argument of the paper is that ICT4D is not a novel approach to development in which communication technologies (in this case information and communication technologies or "new media") are said to play a pivotal role in social change. Instead, ICT4D has its origin in the discussion regarding mass media's role in national development, which became popular during 1950s and '60s. As a case in point, I have mentioned telecentres founded across South Asia including Bangladesh to provide benefits of ICTs to citizens. However, critical analyses and empirical research shows the discrepancy existing between the alleged success of many of these projects and the reality. Following on Pieterse (2005), I criticize different assumptions of ICT4D for promoting what he terms "digital capitalism" in the era of neoliberal globalisation. For example, in ICT4D "digital divide" is seen as a major obstacle to overall development of a country. I contend that digital divide should not be a concern for the rural masses of Bangladesh when deep-rooted structural inequalities (i.e. unequal socioeconomic, power and gender relations) remain unresolved within and beyond rural communities. As a whole, the paper posits the entire project of digital Bangladesh in the broader context of global digital economy, and connects it with neoliberal globalization which is the dominant trend in the political-economic scenario of the present world.

Title: Digital public services: A threat to citizens' rights' An insight into Belgian digital inclusion

policies

Session Type: Individual submission

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Abstract: Keywords: digital inclusion, policy, public services, digital-by-default

Over the past ten years, public services are being digitized radically. Digital media have become an intrinsic part of the everyday lives of citizens. However, due to barriers such as a lack of access, a negative attitude, a lack of motivation or a lack of digital skills, not all citizens reap the benefits of these digital services, leading to an increase in digital and social inequalities among a vast part of the population.

Luckily, the interest in digital inclusion strategies has accordingly grown in academia. Different digital inclusion definitions and implementation strategies have been developed, moving from too much emphasis on the importance of physical access to computers and the internet to the development of practical digital skills, or the so-called button knowledge, to more advanced digital skills such as critical thinking, problem-solving capabilities, and more recently, data literacy (Asmar, Mariën & Van Audenhove, 2019). However, the question remains to what extent policy makers follow these conceptual and practical advancements made in digital inclusion research. Is there still a main focus on access and practical skills, or has focus shifted to other identified characteristics of digital inequalities such as social support structures, soft skills, learning ability or the media richness of the individual's environment (Helsper & Reisdorf, 2017)?

The theoretical part of this paper focuses on (a) how the concept of digital inclusion has evolved over time; and (b) how the existing conceptual digital inclusion frameworks differ. Empirically, the paper reflects a critical analysis of digital inclusion policies in Belgium at a federal, regional and community level. A close reading of 190 policy documents was realized, aimed at identifying the extent to which digital inclusion is mentioned, what the focal points are and what strategies of inclusion are developed. Two types of policy documents were analyzed: (1) policy documents that entirely focus on digitization (cf. Digital Agenda); (2) policy documents that relate to the life domains in which digitization has increased (cf. healthcare, work, mobility and public service).

The results show a conceptual chaos in which inequalities, inclusion and exclusion are used without distinction. Also, the mentioning of digitalization, innovation, ICTs in policy documents has imploded, whereas referral to digital inclusion related concepts remains scarce. Put differently, the policy agenda shows an extensive focus to digitalization without making the clear cut and necessary connection to mechanisms of exclusion caused by that digitalization. Though focus has shifted from access to skills, the policies remains driven by a strong liberal agenda aimed at increasing employment (cf. the current increase of attention to coding) and aspects such as efficiency of services, characterized by a lack of attention to the daily needs of citizens.

**Title:** Emerging Technologies, Changing Literacies: Becoming Literate in the Data Age

**Session Type:** Individual submission

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**Abstract:** With technological advances, everyday objects – from smartphones to home appliances such as vacuum cleaners – become increasingly equipped with various sensing systems which not only allow such objects to understand their environments, but endow them with the capacity to identify and precisely recognize the individual characteristics of users. As individuals incorporate these technologies in their daily routines, more and more data about them are being stored, used and sold, often whitout their accord. Moreover, when permission is asked for the collection and reuse of data, it is often done in such an impenetrable language that users, most of the time, neither read nor understand what they are expected to agree upon. (Van Deursen and Mossberg, 2018). As data increasingly mediate the everyday life, data and the processes associated to datafication mechanisms are, on the on the one hand perceived as opportunities (Data Revolution Group, 2014) and on the other hand apprehended as dangers to civil liberties (Boyd and Crawford, 2012). Yet, both sides agree upon the need to move beyond media literacy and focus on building an empowered citizenry through data literacy (Calzada and Marzal, 2013; Wolff, 2016).

This paper articulates itself in two main parts. Firstly, this paper critically looks at the current definitions of data literacy and argues that data literacy should not be viewed solely as a skill, which would legitimize the fact that some individuals might be more apt than other; rather, we advocate for a definition of data literacy that puts an emphasis on the concept of literacy as a right. Put differently, it is not so much about being data literate as it is about becoming literate in the data age. Secondly, it empirically considers the experiences and perceptions of users regarding issues of privacy and data collection. Concretely, this paper is based on 85 in-depth interviews with respondents equally distributed across three life stages: Life stage 1 (18-30 years); life stage 2 (31-50 years); life stage 3 (51-70) and distributed equally across gender and educational levels (no high school degree, obtained a high school degree, obtained a degree of higher education). Our results show the growing concerns of users across age and education regarding the new data age, and the new divides brought about by the increasing digitization of services – both private and public. As data continues to expand in volumes and styles, the risk of exclusion is no longer limited to people living on the margins, but gradual disempowerment risks affecting larger segments of the population.

**Title:** Digital Inequalities in the Age of Artificial Intelligence and Big Data

**Session Type:** Individual submission

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**Abstract:** In this theoretical contribution, I summarize key concepts and findings from the digital inequalities literature. I propose that digital inequalities research should look more into mobile communication, labor-related questions, and emerging technologies. Particularly, I point to fruitful avenues how digital inequalities scholarship can engage with the nascent literature on big data and artificial intelligence. For instance, unequal access to online labor markets and the negative effects of algorithmic decision-making for vulnerable population groups could become more prominent topics in digital inequalities research. The article explains the general approach to digital inequalities based on the distinction of first-level, second-level, and third-level digital divides. First, I will synthesize the key tenets of research on access to the Internet or the first-level digital divide. I will show how the theory of the mobile underclass (Napoli & Obar, 2014) offers useful guidance on exploring AI-based technology. Particularly, I argue that voice-controlled and AI-based technology such as virtual assistants (Siri, Alexa, Cortana) and their physical embodiments (Amazon Echo, Google Home) come with even stronger restrictions in terms of functionality, content availability, and openness of protocols than mobile Internet access. Second, I give an overview of the literature on the second-level digital divide, focusing on digital skills and Internet uses. I use recent literature on algorithmic literacy and everyday encounters with algorithms to show how digital inequalities could engage more with emerging technologies (Bucher, 2017; Eslami et al., 2017; Klawitter & Hargittai, 2018). Finally, I discuss the nascent literature on the third-level digital divide, where outcomes of Internet use – in the form of benefits and harms – are at the center of attention. Again, I argue that digital inequalities scholarship could be a stronger voice in shaping the discourse. Studying digital footprints and how they privilege certain population groups over others could connect digital inequalities scholarship to research in data protection, privacy and big data (Micheli et al., 2018; Marwick & boyd, 2018).

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Title: Young People's Media Use and Social Participation in Hong Kong: A Perspective of Digital

Use Divide

Session Type: Individual submission

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**Abstract:** In Hong Kong, the digital divide scenario has changed with the introduction of digital and mobile technologies. With most young people have gained access to the Internet, this paper looks into how they incorporate the Internet into their everyday civic lives. It explores the shift from a 'digital divide' towards a 'digital use divide' that responds to high levels of basic access to Internet services. It engages with the theoretical discussion of the move from a 'first-level divide' to a "second-level divide' (Lee, Park & Hwang, 2014; Radovanovic, 2011; Van Dijk, 2002).

The paper introduces the findings of 12 focus group studies of students from eight universities, exploring their media use and social participation. The research results provide evidence to show that in a technologically advanced city, while the gap of the digital divide has been narrowed, the social challenge of the 'digital use divide' has emerged.

In Hong Kong, a digital use divide exists between the older and younger generation. Moreover, university students in Hong Kong also show a digital use divide among themselves in the context of political and social participation. Taking part in public affairs ranges from low-cost online expression to physically joining street activism, and from non-traditional digital-aided formats to traditional political action. This study found different levels of using digital media and different levels of social participation – the extent to which citizens use communication tools to facilitate their political participation better. Apparently, media and information literacy (MIL) skills have an essential role to play with the digital use divide. Young people with higher MIL skills could make use of the digital media better than the older generation, and active participants with enhanced MIL would engage more with current affairs than the less active ones.

The findings also found that the digital use divide manifests not only as a gap in media and information literacy skills but also as variation in purposes of social participation. Also, users' goals are very much shaped by their socio-technological and political environments. It is noteworthy that previous digital divide studies seldom pay attention to either the subject matter or the contextual background. In this study, the subject matter under scrutiny is social participation. Therefore, it is impossible to ignore the 'one country, two systems' political structure in Hong Kong. As shown by the findings, Hong Kong young people's media use and social participation are deeply shaped by the post-handover political situation in the city. Their attitude towards the government and their

aspiration for the community are also affected by the Umbrella Movement, which signifies the struggle for political autonomy after 1997.

Practically, findings of this study remind educators to strengthen young people's media and information literacy (MIL) skills. Theoretically, this study contributes to the digital use divide study by revealing that there is an interweaving relationship among the subject matter under examination, user's goal-seeking, and contextual background.

**Title:** Rewriting history: digital media, collective memory and mechanisms of power

**Session Type:** Individual submission

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**Abstract:** Historian Jacques Le Goff describes the collective memory as field of power. Rather than considering memory in its most common sense, ie, an ability to preserve certain information, which can reconnect past events when accessed later, Le Goff points that memory – and forgetting – is a concern of classes, of groups, and of individuals who control society. "History omissions and silences are revealing of these mechanisms to manipulate the collective memory." (LE GOFF, 1990, p. 426) Social memory is a place of struggles for power.

Digital media have played a key role not only in creating new "facts" to be incorporated into the collective memory of certain social groups, but also in erasing or altering historical events. The effects of such phenomena have been especially related to the political context of many countries. The influence of different social media platforms or instant messaging applications like Whatsapp have been perceived and ingeniously targeted to meet multiple interests. Small groups of activists, political movements of different tendencies, representatives of political parties, and personalities with some kind of social evidence are some of the main creators/disseminators of those narratives. In Brazil, those forms of digital communication have acquired such a force that traditional media, represented by large journalism corporations, have tried to create mechanisms for controlling and differentiating "real facts" from "fake news".

Besides the demoralization of possible political opponents, the most worrying aspect of this phenomenon is the increasingly intense attempt to rewrite official history. Facts already known and regarded as true by a large part of the population (such as Brazilian military dictatorship between the years of 1964 and 1985) may be transformed into newer and less "accurate" versions or may be simply denied.

The reinvention of history permeates several aspects of everyday life and does not concern just Brazilian reality. One of such new versions of public facts, for example, is about Pink Floyd's former leader, Roger Waters, not being able to understand his own songs. Many of his fans argued via Tweeter of Facebook that his classic album The Wall was a critique to leftist indoctrination and not about totalitarian regimes in general. In another episode, the German embassy in Brasilia, in response to different posts from conservative Internet users denying the Holocaust and asserting that Nazism was a leftist regime, published a video online with more information about those historical facts. Even so, there were many replies asserting that German embassy was providing an incorrect analysis of the events.

This work proposes an initial attempt to describe different ways of rewriting collective memory through digital media as a form of political and social control. It presents some questions about the role of journalism in recent years in Brazil and other countries. This paper understands the overlapping of different narratives, often contradictory, as a symptom of deeper changes in the

notions of freedom, democracy and individuality, so that they may better suit a specific political and economic model that has been strengthened in recent times.

**Title:** Digital Inclusion Fighting Disability Stigma' Opportunities, Barriers and Recommendations

**Session Type:** Individual submission

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**Abstract:** Digital inclusion research has broadly attempted to examine whether people with disabilities (PwD) are digitally included (Goggin and Newell 2003; Macdonald and Clayton 2013), related barriers (Caton and Chapman 2016; Chadwick, Wesson, and Fullwood 2013; Dobransky and Hargittai 2016; Ellcessor 2016) and the extent to which digital inclusion can ameliorate disability stigma (Chadwick, Wesson, and Fullwood 2013; Chib and Jiang 2014; Dobransky and Hargittai 2016; Goggin and Newell 2003). However, as this paper demonstrates, there is a lack of conclusive evidence on the role of digital inclusion in experiences of disability stigma.

This paper presents a focus group study that explores the stigma experiences of PwD and the role of digital inclusion in overcoming disability stigma. The study finds that PwD acknowledge the positive role of digital inclusion in stigma alleviation through helping them: a) manage everyday tasks that are not managed easily due to disability (i.e., bio-medical stigma); b) become more integrated into the society (i.e., social stigma) and; c) express more freely/be more confident (i.e., psychological stigma). At the same time, PwD suggest that disability stigma does not disappear in the digital realm, pointing to the risk of bio-medical aspects of disability driving technology design which worsens the social stigma assigned to their disability and generates new experiences of psychological stigma. The paper concludes that benefits from digital inclusion lie simultaneously at the bio-medical, social and personal/psychological levels and that prominent barriers to digital inclusion, such as low accessibility and usability and ineffective technology design, are determined by complex biopsychosocial factors.

Hence, the paper argues for the value of the biopsychosocial model of disability founded by George Engel and suggests the development of the biopsychosocial approach in the study of the role of digital inclusion in disability stigma so that more emphasis is placed on the psychological complexities of individual agency alongside bio-medical and social factors of disability stigma. It invites the appropriation of such a multi-level approach in order digital inclusion research to generate longitudinal insights into the actual and potential role of digital inclusion in PwD's social inclusion and welfare.

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Title: Effect of smartphone on North Korean defector's cross-cultural adaptation: a digital divide

perspective

Session Type: Individual submission

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**Abstract:** This study examines how the use of digital technology affects refugee migrants' crosscultural adaptation to a new culture. Today, issues related to refugees face the challenge of the international community, not limited to specific individuals. Also, the successful settlement of refugee immigrants is very important not only for the individual but also for the entire range of politics, economics, society, and culture of the state. Especially, the success of cultural adaptation of the refugee migrants relies more on acquiring knowledge and information, forming social relations, and embodying social norms and cultures rather than on institutional support. While social support has a critical impact on the re-socialization of refugees, they lose existing social assistance when they exile the country. In this respect, the importance of information and communication technology and the Internet space is growing in that it plays an important role as a socialization agency.

In particular, the use of digital technology is more important than most migrants acquire relevant information such as residence and settlement, employment opportunities, health, and education through the Internet and adapt to new societies (Lloyd et al., 2013; Khoir et al., 2014). In addition, the use of this communication technology contributes greatly to the reformation of the individual social support system and serves as a key driver of cross-cultural adaptation.

Therefore, we explored how smartphones, which are the most prominent communication tools in digital society, have an impact on those adapting to the new society. More specifically, the study examined how North Korean defectors' smartphone adoption, skill and use influence on their social support and subjective well-being in South Korea. A path-analysis model is applied, based on concepts of the levels of the digital divide (access, skill & use, outcome). A total of 599 cases were analyzed from the 2017 data set of annual digital information divide survey conducted by the National Information Society Agency (NIA). Results suggest that the level of education, income and the entry time significantly affected the smartphone adoption. In addition, smartphone adoption

has a positive effect on smartphone skill, then it influences smartphone use. Finally, although the smartphone usage for economic and social purposes did not show a direct effect on the subject well-being, they have a mediating effect through social support.

Findings of the study suggest that social support gained from various information and communication technologies (ICT) would be one of the crucial factors predicting how successfully refugee migrants are able to assimilate to new cultural systems. As the refugees' perceived social supports becomes a key indicator to predict the success of assimilation to a new culture, multilateral approaches from the government are suggested in this global society. Therefore, technology-based policy needs to be improved in the process of adaptation of refugee and that digital technology has become a key driver of social integration.

**Title:** Digital Rites of Passage to Access Rights

**Session Type:** Individual submission

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**Abstract:** Information and Communication Technologies form the backbone for administrative excellence that Prime Minister Modi's Government has aspired for with his vision for Digital India. With a persistent move towards Digitisation of all data pertaining to its citizens, and disbursement of services through digitised processes, issues pertaining to the top down nature of Information and Communication Technoligies need to be engaged with more persistently especially in the context of what are called 'developing nations'. Constant upgradation of technology, followed by consistent training and capacity building of permanent, contractual and hired by the day staff are essential for the efficient and consistent functioning and proper disbursement of services by the government. A sufficient amount of budget is consistently set aside for these processes within various projects. The key question here is whether all these provisions and visions translate to achieve the purpose of easy and accessible services to the citizens, especially those from the most marginalised sections of the community.

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) of the Government of India and The Public Distribution Scheme (PDS) under the National Food Security Act are two programmes implemented by the Government of India which have their origins in peoples demand for their Right to Employment and Right to Food. Both the schemes have heavily employed technology in their implementaion. The NREGS uses MIS for consolidationg and maintaing its data, Electronic Fund Trasfer to disburse wages to the daily wage earners, uses bio - login for authentification at various stages in the administrative process and disbursement of wages, a separate MIS for its Social Audit component and Aadhar authentification for identification of Job Card Holders. The PDS uses Aadhar based bio metric authentification that is internet dependent for the disbursement of the food grains.

This paper proposes a secondary analysis through studies published on NREGS and PDS to engage with the accessibility of these technologies to the people. The schemes emerge from Rights based movements and have predominantly used technology claiming better transparency, accessibility and efficiency through the use of technology. Digital Divide in its primal form is evident in the implementation of these schemes where issues like lack of access to electricity, internet and proper functioning technological equipment at the sites of disbursement are rampant and profusely recorded. Larger arguments related to data management and misuse of the technologies to sidestep processes leading to larger scale of corruption and extensive exploitation of marginalised communities are also recorded separately. The institution and implementation of the ICTs themselves strongly colour the government reports in tones of achievements and accomplishments. This paper will be an attempt to record the range of issues that fall under the

spectrum of Digital Divide. For a nation that has consistently increased its technological dependency and vouches for digitisation, the actual accessibility that these technologies afford to its citizens needs to be consistently assessed, and a re-envisioning of technology and its relation to the people needs to be the focus.

Title: Homeless and on Facebook: Balancing Opportunity and Risk on Social Media

**Session Type:** Individual submission

**Authors:** 

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Abstract: The purpose of this study is to understand how members of marginalized communities seek out social support on Facebook while experiencing homelessness. The study unites literatures split over separate emphases on the opportunities and risks of social media use for members of disadvantaged communities. Social network sites (SNSs) are presented in different lines of research as an opportunity for building social capital (Burke, Kraut, & Marlow, 2011; Ellison, Gray, Lampe, & Fiore, 2014; Li, Chen, & Popiel, 2015) and a liability in terms of the skills that low-income communities and older adults in particular lack in navigating the Internet without exposing themselves to privacy and financial risks (Gangadharan, 2015; Li, Chen, & Straubhaar, 2018). The literature suggests that members of marginalized communities may gain social support networking on SNSs insofar as they build large and diverse networks to whom they make direct requests for support while at once being skilled enough to avoid exposing private information and opening themselves to scammers. Two questions follow from divergent lines of research. First, how do the marginalized users themselves perceive SNSs in terms of opportunities for social support and risks to personal privacy and security? Second, what online practices follow as marginalized users seek a balance between expanding their social reach online and protecting themselves from online risks?

I spent time at a social service agency and in public libraries in north side Chicago observing and interviewing unstably housed adults about their Facebook use. I focus on six participants with whom I conducted interviews as I sat beside them at a computer or smartphone while they browsed Facebook. Connective ambition describes the sense that non-users and user alike had that their social reach on Facebook had a bearing on their paths out of homelessness. Unlike the literature would anticipate, levels of digital skill had an influence but did not determine whether connective ambitions translated into tangible support in the form of raising funds or finding new confidants for emotional support. Those participants who evidenced greater skill were the same that chose to not share their homeless status through Facebook, in the interest of avoiding stigma. Participants with experiences of offline violence or previous online harassment pursued minimal participation on the site in a way that precluded building broad networks from which to appeal for support. Other participants identified as homeless and sought to promote their struggle and that of other homeless through adding accepting thousands of friend requests, including from online strangers. The occasional advantages of exposure, such as donations to the local homeless community or a conversation with an empathetic stranger, were largely overwhelmed by the deluge of scam attempts and suspect communications from strangers requesting friendship on the site. Creative caution describes how, without an understanding of advanced features of Facebook, these unrestrained users developed atypical strategies to protect themselves from online risks, such as

establishing multiple accounts under different names. The study contributes to an integrated view of how marginalized users navigate opportunity and risk on social media.

**Title:** [Panel] Changing divides, changing policy: Two decades of change in telecommunications policy and the impact on mobile and urban/rural divides in India, US and Peru, Panel description

**Session Type:** Panel Submission

#### **Authors:**

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Affiliation: University of Oregon, Eugene

**Abstract:** In the last two decades, mobile telephony, broadband Internet, and other telecom services have rapidly proliferated with varied impact across the globe. Despite advances in supercomputing, the cheaper costs of mobile devices, and rural access to the Internet, disparities remain in how people get online. The term "digital divide" was coined in the early years of the Internet to denote "inequitable access to computers and the Internet in America" (NTIA Report, 1995). As technology and research has advanced, the digital divide has come to refer to differences in people's digital skills (Schradie 2011; Subramony 2007, 2014) as well as the impact of differential access and skills across mobile phones and computers and urban/rural geography (Katz and Rice 2003, Van Deursen and Van Dijk 2014).

Policy has an important role in expanding Internet access as technology and markets change. This panel offers a comparative approach across developed and developing countries to examine how governments are adapting policy to the changing nature of digital divides. The presentations suggest that mobile and rural initiatives continue to lag behind efforts to connect urban dwellers to computers.

The comparative approach of the panel benefits a literature in which developed and developing countries are not often considered in tandem. In attempting to adapt telecom policy as technology changes, where do policy regimes diverge and what approaches do they share across India, Peru, and the U.S.? Moreover, the lessons from disadvantaged communities in one country are likely to resonate with those in another. What do mobile users in Pondicherry and Chicago share in their struggles to take advantage of the Internet on their phones?

In addition to the comparative approach, the panel offers views of policy from above and from on the ground. We discuss both how Indian policy has evolved over two decades and what the results have been for rural women connecting to the Internet. We present Peru's mobile-focused approach to telecom policy as well as the complications for U.S. mobile policy through the eyes of low-income people benefitting from phone subsidies. Across the presentations, there is a focus on the stakes of good governance for ensuring the rights of citizens to participate in society through equal access to the Internet.

MODERATOR: Professor Gabriela Martinez, University of Oregon, Eugene PANELISTS:

- 1. India's national telecom polices from 1996-2016: Key government initiatives and implications for the 'digital divide' Cecilia Sumi Louis, graduate student, University of Oregon.
- 2. Fitting Policy to Practice: Mobile Phone Subsidies and the Insecurity of Phone Access for Low-Income and Urban Americans Will Marler, Northwestern University, Department of Communication Studies
- 3. Leapfrog telephony in Peru: Telecom policy in the 21st Century. Professor G. Martinez, University of Oregon.
- 4. Citizens and the State: Examining rural internet initiatives in Southern, India. Revati Prasad, doctoral candidate, Annenberg School for Communication, University of Pennsylvania
- 5. Status of Smart phone Usage and Internet Access by Rural Women in Tamil Nadu and Pondicherry: A case study. Assistant Professor Krithika Ilamparithi, Pondicherry University, India

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**Title:** Fitting Policy to Practice: Mobile Phone Subsidies and the Insecurity of Phone Access for

Low-Income and Urban Americans

**Session Type:** Panel Submission

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**Abstract:** Is access to a mobile phone a rightful target for universal service policy? What kind of policies would advance the goal of equal phone access for disadvantaged communities? Qualitative research has shown that, despite its apparent ubiquity, access to a mobile phone remains unstable for economically marginalized communities in the U.S. and across the globe. Members of poor communities regularly experience breaks in their phone access and rely on sharing and limiting their use to maintain access to voice, text, and mobile data. Against this backdrop, I conduct ethnographic research with low-income, older adults in Chicago to explore the impact of a federal program to subsidize mobile phone access for low-income Americans, called Lifeline. The Lifeline Program has come under criticism in recent years for failing to prevent potentially millions of Americans from obtaining subsidies despite being ineligible, or from obtaining multiple subsidies per individual. Conservative media outlets put forward images of low-income and particularly Black Americans as entitled and criminal in their attempts to benefit from one or more subsidies. In interviews and observations with low-income adults at a social service agency, I find that reliable access to a single mobile phone with voice, talk, and data is lacking for many low-income Chicagoans. Phones obtained through subsidies fill in this gap for many low-income Americans, but often in ways not anticipated by policy. I find that it is practice among Chicago's poorest residents to keep multiple phones in order to manage breaks in their access and build up voice, text, and data capacities across devices. Subsidized phones fit into these routines of multiple phone ownership. Subsidized phones are backups when other phones lose service and they are more frequently shared with others in need. The study concludes that subsidized phones help low-income Americans stay connected to phone service, in line with the goals of the Lifeline Program. However, the ways that phone subsidies are put to use are at odds with policy expectations, which are not informed by the experience of maintaining personal technologies in the context of urban poverty. The study contributes to literature on digital divides and telecommunications policy by showing that phone access is precarious in the U.S. as in developing countries and that policy must take into consideration the atypical ways that members of poor communities adapt to maintain their access to personal technology. The study concludes with recommendations for adapting policy to the needs of low-income phone users.

**Title:** India's National Telecom Policies (NTPs): A historical analysis of Indian telecommunication policy initiatives and implications for the "digital divide"

**Session Type:** Panel Submission

### **Authors:**

Name: Cecilia Sumita Louis Email: slouis(at) uoregon.edu Country: US (United States)

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**Abstract:** Today, India has the world's second-largest mobile phone user base with over 1 billion subscribers and 512 million broadband internet subscribers in the country (TRAI report, 2018). This paper re-examines the ongoing debate over the role of India's telecommunications industry which some scholars argue "has also supported the socioeconomic development of India and played a significant role to narrow down the rural-urban digital divide to some extent" (Gosh, 2018).

However, the story of Indian telecom's "success" reveals mixed results: while on one hand cheap mobile phone costs and subscription plans, the industry's value added services (VAS) and the network infrastructure for internet and broadband have been instrumental in the introduction of egovernance in India and helped deliver mass education programs for the rural citizens of India, slow Internet speeds and hurdles to last mile connectivity remain key obstacles in the country's thrust to level the technology divide between urban and rural India.

This paper adds to the current perspectives of scholars re-examining the discourse of "digital divide' and utilizes a historical and political lens to provide a closer examination of India's National Telecom Policy (NTP) from 1996-2016 and key challenges in implementation of targeted goals, the role of private carriers and the current national governmental focus on "ensuring last mile connectivity."

Telecom Regulatory Authority of India (Quarterly Report, 2018 July) Chakravartty, P. (2004). Telecom, national development and the Indian state: A postcolonial critique. Media, Culture and Society. DOI: 10.1177/016344370/4041174 Rogers, S. E. (2016). Bridging the 21st Century Digital Divide. TechTrends. 60 (3), 197-199. DOI:10.1007/s11528-016-0057-0

**Title:** Leapfrog telephony in Peru: Telecom policy in the 21st Century

**Session Type:** Panel Submission

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**Abstract:** Most people in Peru, including many in rural areas, cannot imagine life without a mobile phone. How have telecom policies impacted market share and service penetration over the past 20 years? What companies are the main players? and What's their impact in helping to close the urban-rural digital divide? This paper will answer the questions posed, analyzing the history and evolution of mobile telephony in Peru by probing its Telecom policies and market forces.

Telecom policies and services have shifted since the 1990s when the telecom sector was privatized. Privatization meant to leapfrog from having no fixed line (or no phone at all ever) to owning a mobile phone/line. However, despite the leapfrogging, Peru remains one of the least developed mobile markets in the region with a substantial urban-rural divide even when the number of connections is larger than the population. In 2017 Peru's population was close to 32 million people, and as of 2018 there were more than 35 million active mobile lines. But, this doesn't mean less of a digital divide as the urban-rural gap remains. The larger concentration of mobile usage continues to be in the capital of the country, Lima, where 40% of the country's mobile connections are.

In an effort to improve services and to close the digital gap the telecom sector updated their policies, allowing since 2014 for more competition. More competition has meant market growth among urban lower income groups and in rural areas. The entrance of Entel and Bitel two mobile telephone operators broke the duopoly of the main two carriers--Telefónica and Claro. Breaking the duopoly of Telefónica and Claro, two transnational companies that have a stronghold on Peru's market since the 1990s, has forced them to comply with their contractual agreements and expand services to more semi-urban and rural areas. Having more competition has aided lowering equipment and service prices, and it is providing newer alternatives for mobile internet access at lower costs.

The lowering prices of equipment is also allowing more people to acquire smartphones, with a growing number of people being able to access the internet through their mobile devices. However, accessing the internet through phones remains mostly an activity of those who are literate and already have the skills and know-how to navigate the internet. Closing the divide still is a work in progress, and Peru's telecom sector has more work to do in order to provide better and more accessible services while also improve the level of education and skill set of its citizenry. It is clear that having access to digital technologies is not all there is if Peru ought to continue developing and improving the lives of citizens.

**Title:** What the digital capital is and how to measure it

**Session Type:** Individual submission

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**Abstract:** This paper contributes both theoretically and empirically to the literature by (a) consolidating the concept of Digital Capital as a specific capital, and (b) empirically measuring it. It adopts the theoretical definition provided by Ragnedda (2018) who defines Digital Capital as the accumulation of digital competencies and digital technologies. Using this definition, a Digital Capital Index is developed and assessed through a representative sample survey of 868 UK citizens. This paper reports the results from an Exploratory Factor Analysis (EFA) showing the reliability of the model developed by Ragnedda and Ruiu (2019) in measuring Digital Capital. The level of Digital Capital has relationships with socio-economic and socio-demographic patterns, suggesting that it plays a role in interacting with both digital and social inequalities.