

Principles for Conducting Critical Research Using Postcolonial Theory in ICT4D studies

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ABSTRACT

The purpose of this research is to derive principles for conducting critical research using postcolonial theory in information and communications technology for development (ICT4D) studies. While information systems research focusing on development in underserved, rural and remote communities has been growing, too little focus is placed on the pervasive and powerful postcolonial context that hampers progress in the impacted regions. This research contends that more critical research will help examine the assumptions and contexts that ICTs are deployed, adopted and used in developing countries, particularly those impacted by colonialism. Critical research in ICT4D studies positions information systems beyond merely being tools for immediate organizational efficiencies but as an emancipatory mechanism for the marginalized against structures of disempowerment. Postcolonial theory is a macro critical theory concerned with the historical asymmetric power relations due to colonialism, therefore, its application as a theoretical lens in ICT4D studies will enable the field to better explain the continuing multi-dimensional developmental implications of colonialism.

Keywords:

Critical research, Postcolonial Theory, ICT4D

INTRODUCTION

There is a significant increase in investment towards Information and Communication Technology for Development (ICT4D) initiatives in developing countries to empower people and communities in marginalized contexts (World Bank, 2012). Various studies have demonstrated the challenges of realizing value from ICT4D projects as most of these initiatives are unsuccessful (Avgerou & McGrath, 2007; Miscione, 2007; Letch & Carrol, 2008; Independent Evaluation Group, 2011). Researcher and development agencies in many developing countries continue to view ICT as a driver for socio-economic development. It has been shown that most ICT4D studies tend to be deterministically optimistic about the developmental role of ICTs (Heeks, 2002). The need for a theoretically grounded analysis of ICT4D research that seeks to provide a deeper understanding of innovation and socio-economic development has been called for: *“We should work towards developing a theoretical basis for the analysis of the political economy and the sociology of ICT-enabled development. We need studies of the political actors and institutions through which economic models and technological potential are translated into industries, information infrastructures, and ‘empowered’ societies. We need to engage with the ongoing scholarly debates on the articulation of local political economies with global political and economic trends.”* — Avgerou (2008, pg. 12)

This is a challenge for ICT4D researchers to move beyond traditional approaches towards a critical ontology where existing reality is understood to exist due to directed social bias aimed at disempowering the poor. Criticalism, according to Horkheimer of the Frankfurt School, is a rejection of two traditional positivist notions; that reality can be reduced to its component structural variables and that the researcher should be free of value judgement (Horkheimer, 1982). While critical theory acknowledges the interpretivist idea that knowledge about the world is created by social and contextual understandings, it goes beyond this notion by stating that the world as we know it (social phenomena) is a historical creation and re-creation of the powerful (Brooke, 2002). The social conditions that result from this imbalance ultimately limit the potential of the weak for the benefit of the powerful. While critical theory acknowledges the reality that these oppressive conditions are difficult to overcome due to their historical entrenchment, it however has the primary goal of emancipating the poor to realize their potential through changing power relations (Held, 1980).

This research paper argues for the importance of adopting a postcolonial critical perspective, for ICT4D research. The paper will be structured as follows; the next section will distinguish between the notable branches of critical theory used in ICT studies. Thereafter a critique of critical theory will follow. The paper will then discuss why postcolonial theory, a type of a critical theory that focuses on the macro-conditions of localities that were previously colonized but still remain in the clutches of coloniality, is appropriate for ICT4D analysis. The study then analyses five studies where postcolonial theory was used in the management and organizational domain in search of common research methods, approaches and postcolonial theory constructs to establish principles for postcolonial research. Thereafter, the paper undertakes a further analysis of three unique developmental ICT studies where postcolonial theory has been applied to show the usefulness of the principles derived in the previous section. This study aims to contribute to theory by highlighting ways to apply postcolonial theory particularly in ICT studies. The main question the study aims to answer is: *How can critical theories such as postcolonial theory be applied to gain additional insights from developmental ICT studies?*

AN OVERVIEW OF CRITICAL THEORIES IN ICT STUDIES

The history of critical theory spans many decades and a number of distinct approaches to research have been developed over time (Harvey, 1990). This research paper will primarily focus on the theory as it pertains to ICT studies. The critical perspective is positioned in ICT studies as an alternative to both positivist and interpretivist paradigms and the work to increase its legitimacy and potential benefits particularly within the ICT field has been increasing (Orlikowski & Baroudi, 1991; Myers & Klein, 2011). Several definitions of what critical theory is particularly by ICT researchers have been proposed. This research grounds itself in the definition by Orlikowski and Baroudi (1991), wherein critical research is defined as the critique of the ‘status-quo’ organizational and information system assumptions with the aim exposing the entrenched and constraining historical and structural conditions (economic, political and cultural) within social systems in order to transform these condition with the ultimate aim to emancipate the marginalized. The value-laden agenda of researchers and the objectives of critical ICT research are defined as follows: *“Critical IS researchers produce knowledge with the aim of revealing and explaining how information systems are (mis)used to enhance control, domination and oppression, and thereby to inform and inspire transformative social practices that realize*

the liberating and emancipatory potential of information systems.'' (Cecez-Kecmanovic, 2005. Pg.19).

A research study by (Myers & Klein, 2011) established three major critical theory streams by Habermas, Foucault and Bourdieu and the analysis identified key concepts and espoused values emanating from each critical theory stream.

Stream	Espoused Values	Important Concepts
Habermas	Explicit values are consistent with but not explicitly derived from the Kantian enlightenment ideal (that of thinking autonomously, free of the dictates of external authority) such as <i>participatory democracy, non-exploitative working conditions, and open education.</i>	<ul style="list-style-type: none"> • Cognitive interests • Communicative action • Strategic action • Lifeworld • Systems
Bourdieu	Explicit commitment to complete the unfinished project of enlightenment with endorsement of its linearity based on Kant.	<ul style="list-style-type: none"> • Habitus • Field • Social capital • Cultural capital • Symbolic capital
Foucault	Explicitly skeptical of the viability of the enlightenment ideal as revealed in the debate with Habermas, but believed that <i>local and individual emancipation may be possible.</i>	<ul style="list-style-type: none"> • Discourse • Archaeology and • Genealogy of knowledge • Panopticism.

Table 1. Major critical theory streams, associated values and constructs

Research by Cecez-Kecmanovic (2005) observed that critical theory in IS research generally draws on these key themes:

1. *Emancipation* - freeing individuals from power relations and causes of alienation and domination.
2. *Critique of tradition* - disrupting the status quo by providing alternative and radically different views of the world, emphasizing positive change.

3. *Non-performative intent* - rejecting provision of tools to support and assist managerial efficiency.
4. *Critique of technological determinism* - placing technological development, adoption, and use in context of broader social and economic changes.
5. *Reflexivity* - reflecting on the role of a researcher and in selection of research topics. The research process is not neutral.

The above observations together with the principles of critical research to be discussed later, will be applied later in the paper to develop additional insights and guiding principles regarding how postcolonial theory, a type of a critical theory, can be applied particularly in developmental ICT studies. Before that exercise is undertaken, it is important to discuss the application of critical social theory and how it is applied within ICT studies. Thereafter a discussion postcolonial theory and a general critique of critical theory is undertaken.

Critical Social Theory in ICT studies

Max Horkheimer coined the term “critical social theory” in the 1930s as an attempt to differentiate how work from the works of traditional social theory proponents such as Adorno, Fromm and Marcuse (Ngwenyama & Lee, 1997). While Horkheimer coined the discipline, it was his contemporary, Jürgen Habermas who has impacted the IS discipline and the critical social theory school more (Ngwenyama & Lee, 1997). While social theory is about the observation of social situations and providing an explanation thereof, critical social theory advances the notion that observing people is different to observing nature and therefore the very presence of observers influences the socio-technical phenomena being studied (Ngwenyama & Lee, 1997; Unger, 1987). Furthermore, critical social theory places focus beyond finding an explanation of the social situation but rather builds on the observations to critique unjust and inequitable conditions that people needs to be emancipated from. The fundamental assumptions of critical social theory have been summarized by Ngwenyama (1991) as follows:

1. People have the power to change their world.
2. Knowledge of the social world is value laden.
3. Reason and critique are inseparable.
4. Theory and practice must be interconnected.
5. Reason and critique must be reflexive in practice.

In addition to the fundamental assumptions above, Ngwenyama (1991) observes that just like the overarching critical theory, critical social theory does not come with a methodology suite. Research methods used for interpretive research can be applied with the following conditions in mind (Ngwenyama, 1991):

- Methods must be practice oriented focusing on change.
- They must support inquiry into the organization process and its social context.
- They must be sensitive to individual as well as organizational needs.
- They must be collaborative, supporting free and open participants.
- They must be critically self-reflective.

Myers and Klein (2011) proposed a set of principles for conducting critical research in the fields of information systems. The principles proposed are as follows:

- The principle of using core concepts from critical social theorists.
- The principle of taking a value position.
- The principle of revealing and challenging prevailing beliefs and social practices.
- The principle of individual emancipation.
- The principle of improvements in society.
- The principle of improvements in social theories.

The first principle proposes that critical researchers should ground their methodology on the works of key critical theorists on the field in a similar manner that Ngwenyama and Lee (1997) applied Habermas to undertake a systematic critique of information richness theory. The second principle proposes that critical researchers should always take a critical value position when approaching a topic in order to be transformative in the same way that Adam (2005) argued for the effective integration of ethics into critical IS research. The third principle urges critical researchers to identify and critically engage dominant disempowering values, beliefs and practices with the aim of emancipating those limited by such ideas. Doolin (2004) critiqued the belief that medical information systems are always beneficial to administrators when they turned out to have negative efficiency implications that led to user resistance. The last three principles place an emphasis on the core idea of the transformative intent and nature of critical theory. The transformation is aimed at the individual, societal and theoretical level.

An IS exemplar of the Klein and Myers (2011) principles discussed above is the study by Young et al (2012) which analyzed the development and use of Knowledge Management Systems (KMS) in Chinese Culture. The first principle, *using core concepts from social theorists*, led the researchers to use Foucault's relational conception of power and the concept of gaze which helped to an insight that while the KMS system was understood to be anonymous, the participants who were supposed to share information were inhibited through self-policing due to the feeling that a powerful all-seeing eye was watching them. The second principle, *that of taking a value position*, led the researchers to advocate for the empowerment of teachers in Taiwan who work under a hierarchical and rigid system that enforces a culture of fearing to commit mistakes. The third principle, *that of revealing and challenging prevailing beliefs and social practices*, helped the researchers to conclude that the panopticon or the perceived surveillance power of technologies such as the KMS increased the visibility of individual teachers' knowledge sharing behavior. This in itself inhibited participants to share freely due to the dominant Chinese culture of face which encourages people to keep quiet to save face (what others might think of you).

The fourth principle, *that of individual emancipation*, led the researchers to recommend a different epistemological paradigm of KMS that will serve to enable participants to emancipate themselves from unwarranted controls. To this end, the study recommended doing away with a centralized control KMS system to more of a social network design which will allow participants of the same interests to share more effectively. The fifth principle, *that of improvements in society*, which means that critical social theorists do not merely aim to reveal current forms of domination but to suggest ways of overcoming the identified forms of oppression without being elitist, while not explicitly considered in the study, hinted at the wider implications of the issues of face in Chinese culture and the impact on teachers' use of knowledge sharing technologies. The final principle, *that of improvements in social theories*, which means that critical social theorists hold every theory to be fallible and due for improvement, while also not explicitly considered in the study, led the researchers to suggest alternative epistemological paradigm for designing KMS.

By adopting a critical social research approach, the study provided a helpful account regarding the failed web-based KMS that was designed to enable knowledge sharing and production among teachers in Taiwan through a critique of Chinese culture.

This section has briefly discussed critical social theory as a critical theory concerned with emancipation from oppressive social structures. There are various other critical theories that offer critiques of specific issues such as feminist theory (gender inequality), race theory (legal and racial inequality), critical theory of technology (non-neutrality and disempowering nature of technology) and others (Kincheloe & McLaren, 2002; Treviño et al., 2008; Feenberg, 1999). The next section looks at another emancipatory critical theory, the postcolonial theory.

A General Critique of Critical Theory

A fundamental critique of critical theory is grounded on the notion that scientific research should be objective and free from value judgements (Blum, 1944). Critical theory is however value laden and actively critiques the values embedded in dominant historical and social structures for the ultimate emancipation of the marginalized, which makes it a transformative paradigm (Creswell, 2003). Critical theory originally came out of the Marxist theory of economy and society but it has been criticized of having departed from these roots firstly, by over-emphasizing individual agency and consciousness i.e. that the marginalized necessarily know and can articulate exactly what they need, and secondly by self-appointing itself as the voice of the marginalized which by implication positions critical theorists as the elite *knowers* of all truth (Calhoun, 1995). The practical process of emancipating humans from oppressive conditions does not necessarily depend on deeply considered critical cognitive reflections by the oppressed as not all of those oppressed are necessarily committed to changing their circumstances (Hirschheim & Klein, 1989).

Critical theory also has roots in structuralism. In its examination of social conditions to uncover hidden power structures it holds that knowledge about the mechanisms of oppression provides the power to alter those forces (Letch & Carrol, 2008). However, post-structuralist argue that knowledge in itself implies power (Foucault, 1980) and therefore the notion of emancipation becomes incoherent as it only reflects various narratives or could itself become oppressive (Bauman, 1993). Other scholars criticize critical theory for being inaccessible and difficult to understand due to its adoption of an intellectualizing theoretical stance (Alvesson & Sköldberg, 2009). This claim is based on the foundational texts of critical theory that are not easy to understand as well as the requirement of prior social sciences and philosophical knowledge to engage the theory. Feminist scholars also criticize critical theory for failing to point out

patriarchy as a key structure of domination (Marcuse, 1974). However, this criticism does not preclude feminist scholars from developing the theory beyond its limited borders.

Finally, critical theory in information systems (IS) has been criticized for being too difficult to apply practically to system development due to unresolved questions such as; whether all people necessarily want emancipation or whether ideal speech or genuine consensus can be really achieved (Lyytinen & Klein, 1985). This research paper argues that it is not the objective of critical theory to position itself as the only truth regarding emancipation. Critical theory rather encourages both the researcher and research subjects to be reflexive and to be conscious of all forms of structures of domination.

POSTCOLONIAL THEORY: ANALYSIS

Postcolonial theory is a critical theory in humanities and literary studies that aims to critique loss of power, identity and culture due to colonization and imperialism for the total emancipation (decolonization) of those who continue to be under its pervasive domination (coloniality) (Gandhi, 1998; Young, 2003). Edward Said's seminal work, *Orientalism*, first published in 1978 is considered to be the catalyst and reference point for postcolonial theory today (Gandhi, 1998). Postcolonial theory has been developed by many other theorists, most notably Homi K Bhabha (he developed constructs such as *hybridity*, *mimicry*, *difference and ambivalence*), Gayatri Spivak (she developed concepts such as *strategic essentialism*, *subaltern and Other*) and Frantz Fanon (he developed the concept of *decolonization* and *critical race discourse*) (Bhabha, 2007; Fanon, 2007; Fanon, 2008; Spivak, 1988).

Contributions by Thinkers Based in Africa

The notable contributions to postcolonial theory that come out of Africa from thinkers such as Kwame Nkrumah (Ghana), Julius Nyerere (Tanzania), Amilcar Cabral (Guinea-Bissau and Cape Verde), Steve Biko (South Africa) and others are tied to their lived realities of revolutionary politics and anti-colonial activism. Nkrumah's contribution to post-colonial theory, neo-colonialism, is a concept borne out of the realization that Ghana gained what outwardly seemed like sovereignty from British rule while in reality the country's economic and hence its political policy was still in the hands of the colonial masters (Nkrumah, 1965). Gopal et al (2003) critically observes that technological neo-colonialism occurs when ICT fails to fulfill its

developmental promise when it is promoted as a force of progress for the developing world while it actually promotes rigid standardization and psychosocial conditioning.

Julius Nyerere's Ujamaa philosophy is defined as an African philosophy of postcolonial development rooted in the traditional African values of familyhood and communalism underpinned by the essentials of freedom, equality and unity (Ibhawoh & Dibua, 2003). The Ujamaa philosophy is related to the ideas by Nyerere's contemporaries such as Kwame Nkrumah ("agenda for social revolution"), Leopold Senghor ("negritude") and Kenneth Kaunda ("Zambian humanism") which emphasize sub-Saharan socialism that seeks to reject the Marxist class divide in favor of embracing harmony and communitarianism (Ibhawoh and Dibua, 2003). While the Ujamaa philosophy has been criticized as lacking in detail, poor in theory, utopian and populist (Green, 1995; Shivji, 1973; Loxley, 1981; Rugumamu, 1997), it is an emancipatory philosophy that centers humanness, morality and ultimately elevates and affirms the religious/spiritual worldview generally espoused by many Africans (Mbiti, 1969).

Cabral's contribution to postcolonial theory is underpinned by Marxist materialism which argues that colonial economy and agricultural policy altered the mode of production through mechanization and technology in a way that disempowered the indigenous majorities in favor of the rich and powerful European elites (Magubane, 1971). In addition to the exploitative control of the key factors of production, colonialism also took control of the histories of the post-colony through the denial the indigenous ways of being, cultures and identities through the enforcement of Euro-American cultural norms and languages (McCulloch, 1981; Wa Thiong'o, 1994).

In the South of Africa activist thinkers such as Robert Sobukwe, Steve Biko and Thabo Mbeki have argued for pan-Africanist black consciousness, African renaissance as well as looking internally for homegrown African solutions as ways of reimagining a new post-colonial African future (Maaba, 2001; Biko, 1998; Mazrui, 2002)

Quinjano's Coloniality of Power

Anibal Quijano, the Latin American postcolonial theorist, contributed the concept of *coloniality of power* to postcolonial theory which conceptualizes and globalizes the legacy of colonialism as a persistent reality in current societies through social orders and hierarchies that prioritizes whiteness over others (Quijano, 2000). He identifies three forms of coloniality of powers that have outlived historical colonialism as *systems of hierarchies* (racial classifications), *systems of*

knowledge (the privileging of Western production and use of knowledge over traditional modes) and *cultural systems* (the ascription of modernity, rationality, science etc. to Western culture through the use of state and the economic system (Quijano, 2000). The intellectual history of postcolonialism is grounded in the postmodern and post-structuralist philosophical works of Foucault and Derrida who critiqued the rationale for Humanism (reason) and Enlightenment (scientific progress) as the basis for colonization (Gandhi, 1998).

Postcolonial Theory in Information Systems Research

Postcolonial research draws from various philosophical foundations. We chose three postcolonial theorists to offer a theoretical foundation for this paper. The three are Said, Spivak and Bhabha. These three were considered based on the fact that each has a unique approach, considered foundational in social science literature and the collective body of work for each of the theorist focuses primarily on emancipatory issues specifically relating to the colonial aftermath. We are cognizant of the fact that these three theorists are not the only foundational thinkers in the area of postcolonial research. A postcolonial thinker such as Frantz Fanon could well provide powerful theoretical perspectives, however, we could not find any significant work in IS research that has been conducted using Fanon's foundational postcolonial critique. This criterion is in line with the findings of Özkazanç-Pan (2008), where the three postcolonial analytical frameworks of Said, Spivak and Bhabha are specified as having distinct implications for international management (IM) theory and research (Özkazanç-Pan, 2008).

Said's Orientalism, described as the systematic examination of power relations between the colonizer and the colonized in the context of 'non-West' cultural representations, implies that IM theory and research needs to conceptualize the 'non-West' outside of the West's epistemological terms but rather re-articulate it as knowledgeable and able to represent itself (Özkazanç-Pan, 2008). The implications of Spivak's focus on gender and race as the counterhegemonic discourse related to reflexivity and agency is the need to conceptualize IM through the lens of the gendered postcolonial female subject as well as third world women as an analytic lens (Özkazanç-Pan, 2008). Bhabha's psychoanalysis of colonial domination implies that IM needs to articulate globalization through the lens of hybridization (as opposed to global vs. local lens) as well as through encounters as opposed to nation-based cultural differences (Özkazanç-Pan, 2008).

Postcolonial theory is a critique of epistemology and hegemonic value system that propels the western philosophy and practice of imperialism and its associated structures embedded in education, politics, economics and social thought that inflicts inferiority on others (Young, 2008). While postcolonialism is a direct result of the historical colonization primarily in geographies such as Africa, Asia and Latin America, it is now seen as a sub-set of critical theory that brings valuable insights to broader issues of global asymmetric power relations that are usually not deeply engaged by other kinds of research domains (Richardson & Robinson (2007); Myers & Klein (2011). Building on the work of Özkazanç-Pan (2008) as well as Ravishankar et al (2013), the three strands of postcolonial theory that have emerged over time are identified. The table below summarizes the strands:

Strand	Core Arguments	Key Concepts
Said (influenced by Foucault)	Analyses how representations of the Eastern world are underpinned by designs of creating and maintaining asymmetric power and control relations that favor the Western world.	<ul style="list-style-type: none"> • Orientalism • Occidentalism
Spivak (influenced by Gramsci)	Argues that the subaltern (those people or classes of people that are seen as inferior in status or rank) in the world have no voice and that everything we know about such groups is via the distorted representations produced by the elite and powerful groups. Points out that women in postcolonial settings are doubly marginalized by Western feminism and internal power symmetries in their countries.	<ul style="list-style-type: none"> • Subaltern • Strategic essentialism
Bhabha (influenced by Said, Derrida & Foucault)	Argues that cultural values, norms and practices, which emerged during the colonial encounter and its aftermath, are not homogeneous and pure due to hybridization (mixing of the colonizer and the colonized). Thus, hybridization results in mimicry of the West to demonstrate the agency of colonized managers.	<ul style="list-style-type: none"> • Hybridity • Mimicry • Ambivalence • Resilience • Resistance • Adaptability • Identity

Table 2. Strands of Postcolonial Theory (derived from Ravishankar et al., 2013; Özkazanç-Pan, 2008)

Deriving principles for postcolonial research in ICT4D studies

Postcolonial theory has been applied in various management and organizational studies to gain insights and interpret experiences across enterprises. It becomes clear looking at the selection of the studies across organizational and ICT4D fields in the last ten years that the theory is being used but not extensively enough within the ICT4D field. This has been confirmed by a doctoral research study by Khanal (2012) that investigated the usage of postcolonial theory as a theoretical lens in the Library and Information Sciences research. The study focused on the three discursive areas of postcolonial theory: *representation* (interplays of power, knowledge, vision, and identity), *identity* (ambivalence, mimicry, and hybridity) and *agency* (resistance as an act of exhibiting agency). The study makes a point that while “*while [postcolonial theory] does not prescribe methods, it provides for their conception and application a discursive framework rooted in a unique history of oppression, struggle, and knowledge gained from many perspectives, explorations and experiences*” (Khanal, 2012, pg. 44). Postcolonial theory is an ideal tool to offer a critique of imperial knowledge systems and languages and how they are circulated and legitimated to serve imperial interests but more work still needs to be done to establish principles to conduct research using it as a theoretical lens (Lunga, 2008).

The approach adopted in the derivation of the principles is based on the approach employed by Klein and Myers (1999) to derive principles for conducting and evaluating interpretive field studies in information systems (Myers & Klein, 2011) for conducting critical research in information systems as well as guidelines for grounded theory studies in information systems by Urquhart et al. (2010). Klein and Myers (1999) stipulate the three elements of critical research namely; insight, critique and transformation. We argue in this section that postcolonial research, as a sub-field of critical research exhibits the three elements in the context of postcolonial analytical critique.

Postcolonial theory provides insights of the conditions in which colonialism and coloniality thrive. This is critical for establishing a pretext to offer an informed critique of the situation. Once insight has been gained, postcolonial theory provides the researcher with tools to critically assess and evaluate the structures that enable socio-political and economic domination that ultimately lead to societal asymmetry. Finally, once insight has been gained and a systematic critique has been provided, postcolonial theory must empower the dominated to agentially work out ways that lead to a change in their conditions.

It is important to note that the usage of the word principle follows that of Klein and Myers (1999) that serves to indicate that the proposals are suggestions and not strict rules. The principles are important because they are grounded in philosophical works that have been persistent and foundational over time in scholarly literature. The principles are not strict guidelines but an attempt to structure postcolonial research specifically in IS research.

The first principle emanates from the element of *insight*:

1. **The principle of using core concepts from postcolonial theorists:** Postcolonial researchers need to organize their data collection and analysis around core concepts and ideas from one or more postcolonial theorists. Cohen and El-Sawad (2007) study entitled “Lived experiences of offshoring - An examination of UK and Indian financial service employees’ accounts of themselves and one another” is an in-depth case study that focused on the accounts of workers in the financial services company operating in the UK and India and how they constructed and positioned themselves in their narratives. The study concluded that ascriptions of cultural difference with respect to the language barrier, work ethic and organizational practices as well as notions of competence were used to explain and justify particular organizational arrangements and patterns of behavior such as scapegoating of Indian workers when things went wrong and assigning them more work because of the work ethic by their English counterparts (power asymmetry). Also important were the misperceptions on Indian worker incompetence that were used to legitimate their monitoring despite being more educated than their European counterparts. Finally, the study highlighted the deep sense of ambivalence that permeates the research dataset, proposing that within this ambivalence lies possibilities for resistance and change. The concepts of ambivalence and power asymmetry are derived from the works of Said and Bhabha. Mir and Mir (2009) conducted an ethnographic study entitled “From the colony to the corporation studying knowledge transfer across international boundaries” that employed Said’s critique by showing how the deeper and hegemonic aspects of power as well as signification helped an American multinational corporation assume undue credit for a low cost product development technique developed by an offshore Indian contractor. The study employed a postcolonial framework that showed the subtle defiant practices adopted by the offshore employees to counteract the power imbalances.

The next two principles emanate from the element of *critique*:

2. **The principle of taking a decolonialist value position:** Postcolonial theorists advocate for a decolonialist value position in alignment with the objectives of the theory. This involves a systematic critique of the loss of power, identity and culture due to colonization and imperialism. This critique is decolonialist because it advocates for the total emancipation (decolonization) of those who continue to be under the pervasive domination of coloniality (Ghandi, 1998; Young, 2003). Varman and Saha (2009) conducted a study entitled: “Disciplining the discipline: understanding postcolonial epistemic ideology in marketing” at two top ranked business schools in India. The researchers employed Bhabha’s and Spivak’s postcolonial critique that revealed how pedagogy and doctoral research in marketing is dominated by mimicry of Western concepts at the expense of local subaltern stakeholder ideas. The study adopted a decolonialist stance by proposing the idea that giving due respect and recognition to subaltern stakeholders was a step in addressing the problems that were central to the study.
3. **The principle of revealing and challenging prevailing beliefs and social practices influenced by colonialism and imperialism:** This principle suggests that the postcolonial researcher should identify key oppressive beliefs and social practices in order to challenge them with opposing arguments and evidence. Cohen and El-Sawad (2007) identified the oppressive Western tendency of scapegoating the subaltern as a key oppressive belief in the minds and attitudes of the dominant class.

The last three principles emanate from the element of *transformation*:

4. **The principle of individual emancipation:** All critical social theory is oriented toward facilitating the realization of human needs and potential, critical self-reflection, and associated self-transformation (Alvesson & Sköldberg, 2009). Krysa et al (2016) entitled their research study: “Capturing Postcoloniality in Action: RAND, Rationality, and Subaltern Encounters during the Vietnam War”. This study analyzed the role of colonizer-colonized in the production of postcolonial representations and the role of the Western corporation in the processes of postcoloniality. Using critical hermeneutics as well as Spivak’s and Bhabha’s postcolonial constructs, the study found support for the

contention that Western “othering” of Third World people is neither completely successful nor one-sided. It is argued that while the Western corporation is an important site for understanding hybridity and therefore postcoloniality, analysis needs to go beyond focusing on the symbolic and the textual to take account of the material conditions in which interactions between colonizer-colonized occur. Krysa et al (2016) used the Bhabha’s hybridity to address the loss of agency observed in the study.

5. **The principle of improvements in society:** This principle affirms that improvements in society are possible. The goal is not just to reveal the current forms of domination, but to suggest how unwarranted uses of power might be overcome (although the postcolonial theorist should not arrogate any special position of authority to themselves). Postcolonial theorists need to work from the assumption that social improvements are possible, albeit to very differing degrees. Varman and Saha (2009) used the concept of ‘othering’ to point out a social improvement needed between members of society despite of the social structure of class.
6. **The principle of improvements in social theory:** All postcolonial theorists, in true criticalist tradition, believe that all theories are fallible and that improvements in social theories are possible. Critical researchers entertain the possibility of competing truth claims arising from alternative theoretical categories, which can guide critical researchers in their analyses and interventions. Ravishankar et al (2013) conducted a study entitled “Information Technology Offshoring in India: A Postcolonial Perspective”. This ethnographic fieldwork study explored the experiences and responses of a large Indian offshore firm in relation to the power asymmetries to the Western client organization. The study concluded that power asymmetries are not always obvious due to hybridity, performances of mimicry at times are deliberate reflexive action of the subaltern to reclaim agency and that IS researchers need to always be aware of postcolonial sensibilities within organizations.

DISCUSSION AND CONCLUSION

The principles derived above to conduct postcolonial research in ICT4D studies help to articulate the differences between postcolonial research and other research from general critical theory studies with respect to the three strands identified. In order to illustrate the usefulness of the

above guidelines, we apply them to three developmental ICT studies that have adopted a postcolonial critique. The three studies have been conducted in the last five years. The first study is entitled “*Information communication technologies for gender and development in Africa: The case for radio and technological blending*” (**Study 1**) by Asiedu (2012). The second study is “*Extending ICT4D Studies: The Value of Critical Research*” (**Study 2**) by Lin et al (2015) and the third study is entitled: “*‘If God gives me the chance I will design my own phone’: Exploring Mobile Phone Repair and Postcolonial Approaches to Design in Rural Kenya*” (**Study 3**) by Wyche (2015).

The table below shows an overall assessment of the three studies evaluated against the six principles of postcolonial research.

Principle	Overall Assessment of the Three Postcolonial Research Articles
1. The principle of using core concepts from postcolonial theorists	Study 1: This study uses concepts from Said’s Orientalism
	Study 2: This study uses concepts developed by Spivak’s subalternity. Furthermore, Bhabha’s concept of ambivalence and de-voicing has been used. The study also invokes Frantz Fanon’s paternalism in the analysis.
	Study 3: This study invokes Foucault’s concept of relational power.
2. The principle of taking a decolonialist value position	Study 1: This study recommends that no passive empowerment will be achieved. It argues that only through active involvement will the oppressed be emancipated.
	Study 2: This study advocates for power symmetry as a remedy for the disenfranchisement experienced by the subaltern.
	Study 3: This study advocates for supporting local designers to realize their dreams as a way to address the disempowerment being experienced.
3. The principle of revealing and challenging prevailing beliefs and social	Study 1: The modernization approach assumes that by providing ICTs all societal ills will be solved. The study calls for participation as empowerment for the poor.

Principle	Overall Assessment of the Three Postcolonial Research Articles
practices influenced by colonialism and imperialism	Study 2: An all-powerful discourse that shapes social reality: the interventions of the mainstream are seen as morally and intellectually correct. These interventions reproduce and reinforce the existing social and political structure (Foucault and Gramsci).
	Study 3: Rural handset repairers are excluded and never considered in the design considerations of big mobile phone manufacturers
4. The principle of individual emancipation	Study 1: Emphasizes the empowerment of individuals particularly women
	Study 2: Calls for giving back the voice to the subaltern
	Study 3: Empowering individual business owners
5. The principle of improvements in society	Study 1: Emphasis of giving voice to disenfranchised and the use of radio for the creation of indigenous knowledge
	Study 2: Calls for an end of the hegemonic discourse that paternalizes the subaltern. Also suggests that the subalterns have to reinvent themselves as active participants rather than be ambivalent/dependent recipients in any ICT4D project
	Study 3: Empowerment of the poor to achieve their potential
6. The principle of improvements in social theories	Study 1: It is a critique of modernization theory.
	Study 2: Not explicitly considered
	Study 3: Not explicitly considered

Table 3. Overall assessment of the research studies

The Value of Postcolonial research

Firstly, postcolonial research advances IS research in general by raising the often neglected dominant assumptions at various levels from individual level to societal level. At societal level particularly, postcolonial research is most useful as it helps to highlight the various oppressive structures that might well be considered normal. Secondly, in order to identify possible improvements to society, postcolonial theory for IS research can help researchers and those affected to conduct value discussions as opposed to unstructured discourse which might potentially be unproductive in the long run. While pursuing this objective, it is important for the researcher not to neglect reflexivity. Thirdly, postcolonial research in IS studies unlocks the ability for the postcolonial world to regain agency and hold up a mirror to the first world to assess its own privilege and continuing legacies of the colonialism and imperialism.

Contribution of Study

This part of the paper makes a summary of the overall contribution of this study for strengthening postcolonial studies in IS research. Postcolonial research is not commonly used in IS research. The main purpose of this research was to derive principles of conducting postcolonial research in ICT4D studies in order to provide a structured set of principles for researchers wishing to analyze individuals, organizations and societies post colonization. This study has successfully defined what is unique about postcolonial research and provided structured lens for postcolonial analysis in the field of information systems. Secondly, postcolonial research has been elevated into a viable theoretical framework that novices and experienced researchers can use to discover new insights. It is also our hope that this work contributes to increasing the number of postcolonial research papers and stimulate further conversations about the value of postcolonial research in the context of critical research in information systems. Finally, the research contended that more postcolonial research will help examine the assumptions and contexts that ICTs are deployed, adopted and used in developing countries, particularly those impacted by colonialism. Postcolonial research in ICT4D studies positions information systems beyond merely being tools for immediate organizational efficiencies but as emancipatory mechanism for the marginalized against structures of disempowerment to address historical asymmetric power relations due to colonialism, therefore, its application as a theoretical lens in ICT4D studies will enable the field to better explain the continuing multi-dimensional developmental implications of colonialism.

Future Research

The six proposed principles for conducting critical research using postcolonial theory in ICT4D studies can be useful starting point for new and experienced researchers in search of additional and alternative ways to understand and explain the continuing multi-dimensional developmental implications of colonialism. It is our hope that these principles will encourage deeper and continual reflections regarding the value of postcolonial theory analysis.

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REFERENCES

- Adam, A. 2005. "Against Rules: The Ethical Turn in Information Systems," in Handbook of Critical Information Systems Research: Theory and Application, D. Howcroft and E. Trauth (eds.), Aldershot, UK: Edward Elgar.
- Alvesson, M., & Sköldbberg, K. (2009). Reflexive methodology: New vistas for qualitative research. Sage.
- Asiedu, C. (2012). Information communication technologies for gender and development in Africa The case for radio and technological blending. *International Communication Gazette*, 74(3), 240-257.
- Avgerou, C., & McGrath, K. (2007). Power, rationality, and the art of living through socio-technical change. *MIS quarterly*, 295-315.
- Avgerou, C. (2008). Information systems in developing countries: a critical research review. *Journal of information Technology*, 23(3), 133-146.
- Bauman, Z. (1993). Postmodern ethics. Blackwell Publishers, Oxford
- Bhabha, H. K. (2012). The location of culture. Routledge.
- Biko, S. (1998). The definition of black consciousness. *The African Philosophy Reader*, 360.
- Blum, F. (1944). Max Weber's Postulate of "Freedom" from Value Judgments. *American Journal of Sociology*, 50(1), 46-52. Retrieved from <http://www.jstor.org/stable/2770341>
- Brooke, C. (2002). What does it mean to be 'critical' in IS research? *Journal of Information Technology*, 17(2), 49-57.
- Calhoun, C. (1995). *Critical Social Theory: culture, history and the challenge of difference*. Blackwell.
- Cecez-Kecmanovic, D. (2005). Basic assumptions of the critical research perspectives in information systems. In D. Howcroft & E. M. Trauth (Eds.), *Handbook of critical information systems research: Theory and application* (pp. 19–46). Cheltenham: Edward Elgar.
- Cohen, L., & El-Sawad, A. (2007). Lived experiences of offshoring: An examination of UK and Indian financial service employees' accounts of themselves and one another. *Human Relations*, 60(8), 1235-1262.
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*, (2nd edition). Thousand Oaks: Sage.
- Dant, T. (2003). *Critical Social Theory*. Sage Publications Ltd.

- Doolin, B. 2004. "Power and Resistance in the Implementation of a Medical Management Information System," *Information Systems Journal* (14:4), pp. 343-362.
- Fanon, F. (2008). *Black skin, white masks*. Grove press.
- Fanon, F. (2007). *The wretched of the earth*. Grove/Atlantic, Inc.
- Feenberg, A. (1999). *Questioning technology* (1st edition). London: Routledge.
- Foucault, M. (1980). *Power/Knowledge: Selected interviews and other writings 1972-77*. Harvest Press, Brighton.
- Gandhi, L. (1998). *Postcolonial theory: A critical introduction*. Columbia University Press.
- Green, R., H., 1995, 'Vision of Human Centered Development: A Study in Moral Economy', in C. Legum and G. Mmari (eds), 1995, *Mwalimu: the Influence of Nyerere*, Dar-essalaam, Mkuki na Nyota, Trenton, African World Press, p. 80-107.
- Gopal, A., Wills, R., & Yasmin Gopal, Y. (2003). Chapter 10: From the Colonial Enterprise to Enterprise Systems: Parallels between Colonization and Globalization. In Prasad, A. (2003). *Postcolonial theory and organizational analysis: A critical engagement*. Springer.
- Harvey, L. (1990). *Critical social research*. London: Unwin Hyman.
- Heeks, R. (2002). Information systems and developing countries: Failure, success, and local improvisations. *The information society*, 18(2), 101-112.
- Held, D. (1980). *Introduction to critical theory: Horkheimer to Habermas* (Vol. 261). University of California Press.
- Horkheimer, M. (1982). *Critical Theory Selected Essays*. New York: Continuum Pub.
- Hirschheim, R., & Klein, H. K. (1989). Four paradigms of information systems development. *Communications of the ACM*, 32(10), 1199-1216.
- Howcroft, D., & Trauth, E. (2005). Choosing critical IS research. In D. Howcroft & E. Trauth (Eds.), *Handbook of critical information systems research theory and application* (pp. 1-15). Northampton, UK: Edward Elgar Cheltenham.
- Ibhawoh, B., & Dibua, J. I. (2003). Deconstructing Ujamaa: The legacy of Julius Nyerere in the quest for social and economic development in Africa. *African Journal of Political Science*, 8(1), 59-83.
- Independent Evaluation Group. (2011). *Capturing Technology for Development: An Evaluation of World Bank Group Activities in Information and Communication Technologies, Volume 1*. The

- Evaluation. Washington, DC: World Bank. © World Bank. Available Online: <https://openknowledge.worldbank.org/handle/10986/2370>
- Ngwenyama, O. K. (1991). The critical social theory approach to information systems: problems and challenges. *Information systems research: Contemporary approaches and emergent traditions*, 267-280.
- Ngwenyama, O. K., & Lee, A. S. (1997). Communication richness in electronic mail: Critical social theory and the contextuality of meaning. *MIS quarterly*, 145-167.
- Nkrumah, K. (1966). *Neo-Colonialism: The Last Stage of Imperialism*. 1965. New York: International.
- Khanal, N. (2012). *The lens of postcolonial theory in LIS research and practice* (Doctoral dissertation, University of Illinois at Urbana-Champaign).
- Krysa, I., Le, K. T., Helms Mills, J., & Mills, A. (2016). Capturing Postcoloniality in Action: RAND, Rationality, and Subaltern Encounters during the Vietnam War'. *critical perspectives on international business*, 12(3).
- Kincheloe, J. L., & McLaren, P. (2002). Rethinking critical theory and qualitative research. *Ethnography and schools: Qualitative approaches to the study of education*, 87-138.
- Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS quarterly*, 67-93.
- Letch, N., & Carroll, J. (2008). Towards Anticipating IS Consequences: An Anatomy of Sociotechnical Interaction Networks (STINs). *ACIS 2008 Proceedings*, 63.
- Lin, C. I., Kuo, F. Y., & Myers, M. D. (2015). Extending ICT4D studies: The value of critical research. *MIS Quarterly*, 39(3), 697-712.
- Littlejohn, Stephen W. (1992). "Critical Theories." In *Theories of Human Communication*. 4th ed. Belmont, CA: Wadsworth Publishing Co., pp. 238-59
- Loxley, J., (1973), 'Structural Change in the Monetary System of Tanzania' in Cliffe, L. and Saul, J., (eds), (1973), *Socialism in Tanzania, Vol. 2 Policies: An Interdisciplinary Reader*, East African Publishing House pp.102-111
- Lyytinen, K. (1992). "Information systems and critical theory," in *Critical Management Studies*, M. Alvesson, and H. Willmott (eds.), Sage Publications, London, 1992, pp. 159-180.
- Lyytinen, K., & Klein, H. K. (1985). The critical theory of Jurgen Habermas as a basis for a theory of information systems. *Research methods in information systems*, 219-236.

- Lunga, V. B. (2008). Postcolonial Theory: A Language for a Critique of Globalization?. *Perspectives on Global Development and Technology*, 7(3), 191-199.
- Maaba, B. B. (2001). The archives of the Pan Africanist Congress and the Black Consciousness-Orientated Movements. *History in Africa*, 28, 417-438.
- Magubane, B. (1971). Amilcar Cabral: Evolution of revolutionary thought. *Ufahamu: A Journal of African Studies*, 2(2).
- Marcuse, H. (1974). Marxism and feminism. *Women's Studies: An Interdisciplinary Journal*, 2(3), 279-288.
- Mazrui, A. A. (2002). The African renaissance: A triple legacy of skills, values, and gender. *Black Renaissance*, 4(1), 97.
- Mbiti, J. S. (1969). *African religions and philosophy*. New York: Praeger.
- McCulloch, J. (1981). Amilcar Cabral: A theory of imperialism. *The Journal of Modern African Studies*, 19(03), 503-511.
- Mir, R., & Mir, A. (2009). From the colony to the corporation studying knowledge transfer across international boundaries. *Group & Organization Management* 34(1), 90–113.
- Miscione, G. (2007). Telemedicine in the Upper Amazon: Interplay with local health care practices. *MIS quarterly*, 403-425.
- Morrow, R. A., & Brown, D. D. (1994). *Critical theory and methodology* (Vol. 3). Sage Publications.
- Myers, M. D., & Klein, H. K. (2011). A Set of Principles for Conducting Critical Research in Information Systems. *MIS quarterly*, 35(1), 17-36.
- Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research*, 2(1), 1–28.
- Özkazanç-Pan, B. (2008). International management research meets “the rest of the world”. *Academy of Management Review*, 33(4), 964-974.
- Quijano, A. (2000). Coloniality of power and Eurocentrism in Latin America. *International Sociology*, 15(2), 215-232.
- Rugumamu, S. M. (1997), *Lethal Aid: The Illusion of Socialism and Self-Reliance in Tanzania*, Asmara, Eritrea, Trenton, Africa World Press

- Ravishankar, M. N., Pan, S. L., & Myers, M. D. (2013). Information technology offshoring in India: a postcolonial perspective. *European Journal of Information Systems*, 22(4), 387-402.
- Richardson, H., & Robinson, B. (2007). The mysterious case of the missing paradigm: a review of critical information systems research 1991–2001. *Information Systems Journal*, 17(3), 251-270.
- Shivji, I.G., 2009, *Where is Uhuru? Reflections on the Struggle for Democracy in Africa*, Cape Town, Dakar, Nairobi and Oxford, Fahamu Books.
- Spivak, G. C. (1988). Can the subaltern speak? In *Marxism and the Interpretation of Culture* (pp. 271-313). Macmillan Education UK
- Treviño, A. J., Harris, M. A., & Wallace, D. (2008). What's so critical about critical race theory? *Contemporary Justice Review*, 11(1), 7-10.
- Unger, R. (1987). *Social Theory: Its Situation and its Task*. Cambridge: Cambridge University Press.
- Urquhart, C., Lehmann, H., & Myers, M. D. (2010). Putting the 'theory' back into grounded theory: guidelines for grounded theory studies in information systems. *Information systems journal*, 20(4), 357-381.
- Varman, R., & Saha, B. (2009). Disciplining the discipline: understanding postcolonial epistemic ideology in marketing. *Journal of Marketing Management*, 25(7-8), 811-824.
- Wa Thiong'o, N. (1994). *Decolonising the mind: The politics of language in African literature*. East African Publishers.
- World Bank. (2012). *ICT for greater development impact: World Bank Group Strategy for 2012-2015*. Washington, DC: World Bank. Available Online: <http://documents.worldbank.org/curated/en/2012/06/165571117/ict-greater-development-impact-world-bank-group-strategy-2012-2015>.
- Wyche, S. (2015). Exploring mobile phone and social media use in a Nairobi slum: a case for alternative approaches to design in ICTD. In *Proceedings of the Seventh International Conference on Information and Communication Technologies and Development* (p. 12). ACM.
- Young, Robert J. C. (2001). *Postcolonialism: An Historical Introduction*. Malden, MA: Blackwell Publishing.
- Young, Robert J. C. (2003). *Postcolonialism: A Very Short Introduction*. New York: Oxford University Press.

Young, M. L., Kuo, F. Y., & Myers, M. D. (2012). To share or not to share: a critical research perspective on knowledge management systems. *European Journal of Information Systems*, 21(5), 496-511.