

Chapter 7.6

The Unintended Consequence: The Symbiotic Relationship between ICT and a National Transition

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ABSTRACT

Information and Communication Technologies (ICT) are an important factor in the socio-economic development of transitioning and developing countries. Given the importance of ICT in global social and economic development, many researchers have examined its development and growth strategies from national and governmental policy perspectives. However, understanding the consequences of information and communication technologies in developing countries is complex and far from certain. Given the ambiguity, complexity, and diversity of what constitutes ICT, Heeks (2002) suggested the existence of incongruencies between what policy makers envision as ICT and the actuality of what is ultimately manifested, proposing the “design-actuality gap” framework to understand this inconsistency. Baqir et al. (2009) extended the design-actuality gap framework to show that the dimensions of design may be different than those of the actuality, but did not provide an explanation for this gap. In this paper, the authors posit that the gap can only be explained based on the law of “unintended consequence” (Merton, 1936). This phenomenon can best be seen in developing nations where ICT’s impact on socio-economic development is exaggerated. The authors present the case of the Islamic Republic of Iran and show how the law of unintended consequence can explain the major chasm that exists between ICT development and the actuality of use.

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INTRODUCTION

The rapid pace of development, adoption and spread of Information and Communication Technologies (ICT) in the developing and transitioning countries is unmistakable and is revolutionizing the way these societies are evolving. ICT have been recognized as important determinants of economic, social, cultural and political transformation in the adopting countries. The impact of ICT on all aspects of the daily lives of citizens of these countries is unambiguous, profound, far reaching, complex, and transformative. ICT is bringing profound, fundamental and unanticipated changes to the way people of the developing countries communicate, interact and ultimately view themselves. Whether it is promoting gender equality, increasing literacy, eradicating extreme poverty and hunger or reducing child mortality, consequences of certain practices of ICT in developing countries can be viewed benevolently and with certainty. While there are unprecedented economic, social, cultural, and political changes sweeping the developing countries embracing ICT adoption and use, their consequences are not completely understood or anticipated. Understanding the consequences of information and communication technologies in developing countries is extraordinarily complex and far from certain. Hearst argues that ICT have affected the ways people live and work causing societies to move away from a hierarchical society into a society in which boundaries are more permeable and people are members of many loosely knit groups (Hearst, 1999, p. 8). "Culture is not an entity, institutions or social processes; culture is a context within which all phenomena can be described in an intelligible way" (Geertz, 1989, p. 27) to which one can ascribe, in a causal way, social events, manners of conduct, complexity and diversity of what constitutes ICT. Much of social learning and the societal practices are a result of the influences of cultural norms, traditions, and customs. Thus, we need to understand that firstly ICTs bear the complexity of the social and cultural

context of the society where they are introduced, and secondly there may be a gap between the initial perception of ICTs and the affect they have as a result of the socio-cultural context in the society.

Wellman introduces the notion of "glocalization: simultaneously being intensely global and intensely local" (Wellman, 1999, p. 15). This glocalization is seen as a paradigm shift, not only in the way people "think about things but in the way that society is organized" (Wellman, 1999, p. 17) thus contributing to transition in social habits, infrastructures and milieus. This paradigm shift is a shift away from living in "little boxes" (Reynolds, 1963) to living in networked societies. The implications of living in such networked world are non-obvious and unanticipated causing social ambivalence. Griffith (1999, pp. 472-473) discusses "modern examples of instances in which user responses to technology are unanticipated and/or extreme are plentiful and vivid" and suggests the misalignment between the perceptions of users and designers as an explanation. This misalignment is akin to a "gap" between what the designer envisioned and the actuality of the users' respond. Griffith posits that this gap is the result of the unanticipated user response to the system. Doherty *et al.* (2003, p. 51), for instance, suggest that, "the vast majority of [unintended consequences] could be predicted at some point within the systems development, with careful and systematic analysis".

In the following sections of this paper, we explore and explain the impact of ICT in the developing and transitioning countries using the design actuality gap framework and explain how the law of *unintended consequences*, one of the most central laws in sociology and economics offered in the seminal work of the American Sociologist Robert Merton (Merton, 1936) can provide an explanation for this gap. We observe that implementation of ICT is not a deterministic process and neither is their use resulting in unintended consequences. We posit that the gap between governmental policies of transitioning

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