

## Chapter 2.13

# Analyzing the Factors Influencing the Successful Design and Uptake of Interactive Systems to Support Social Networks in Urban Neighborhoods

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### ABSTRACT

In urban residential environments in Australia and other developed countries, Internet access is on the verge of becoming a ubiquitous utility like gas or electricity. From an urban sociology and community informatics perspective, this article discusses new emerging social formations of urban residents that are based on networked individualism and the potential of Internet-based systems to support them. It proposes that one of the main reasons for the disappearance or nonexistence of urban residential communities is a lack of appropriate opportunities and instruments to encourage and support local interaction in urban neighborhoods. The article challenges the view

that a mere reappropriation of applications used to support dispersed virtual communities is adequate to meet the place and proximity-based design requirements that community networks in urban neighborhoods pose. It argues that the key factors influencing the successful design and uptake of interactive systems to support social networks in urban neighborhoods include the swarming social behavior of urban dwellers; the dynamics of their existing communicative ecology; and the serendipitous, voluntary, and place-based quality of interaction between residents on the basis of choice, like-mindedness, mutual interest and support needs. Drawing on an analysis of these factors, the conceptual design framework of a prototype system — the urban tribe incubator — is presented.

## INTRODUCTION

The area of technology and human interaction is cross-disciplinary and requires many different academic fields and design practices to work together effectively in order to generate a better understanding of the social context and human factors in technology design, development, and usage. This article focuses on the social communication aspects of this field and hopes to establish a greater awareness of the contribution that community media and communication studies can deliver to the field of human computer interaction. It seeks to build a theoretical foundation for an analysis of two interrelated issues, which are discussed in turn.

First, the importance of place and the continued purpose and relevance of urban neighborhoods are established. New media and networked information and communication technologies have not led to the diminishment of local place and proximity. However, they have given rise to new types of social interaction and to new emerging social formations. Understanding the nature and quality of interaction in these new social formations can inform the successful animation of neighborhood community and sociability.

Second, appropriate opportunities and instruments to encourage and support local interaction in urban neighborhood networks are not limited to technology, but technology can be a key facilitator. Thus, system designers and engineers are crucial allies to social scientists in the search for hybrid methodologies that integrate community development approaches with technology design. The article questions whether it is sufficient to appropriate tools originally designed for dispersed online (that is, virtual) communities in the context of community networks (Schuler, 1996) for urban neighborhoods. Purpose-built tools and instruments are required that afford

(a) interactive linkages between the resident's communicative ecologies of cyberspace and local place; and (b) personalized social networking between proximate neighbors of choice. Such an approach would allow the nonvirtual and place-based assets in a resident's portfolio of sociability to become more attractive. It would establish an opportunity to create and to maintain local social ties and, ultimately, to find out who is living next door and who is personally compatible.

From the discussion of these issues, some of the key factors influencing the successful design and uptake of interactive systems to support social networks in urban neighborhoods are derived. Drawing on an analysis of these factors, the conceptual framework of a prototype system — the urban tribe incubator — is presented.

This article seeks to set up the interdisciplinary conceptual foundation necessary to drive a thorough theoretical and empirical investigation into the interaction of people, place, and technology and the way they function together to facilitate access to the social and cultural life of cities. The purpose of this article is not only to introduce and illustrate the issues at stake and to present a design framework but also to stimulate transfer and exchange of knowledge across academic disciplines and especially to invite discussion and comment from a broader interdisciplinary audience. Supporting efforts to build bridges between the social and engineering sciences is paramount to the field of technology and human interaction, and this article contributes to the development of a dialogue between these disciplines. An interdisciplinary approach that brings together views and expertise from sociology, urban studies, interaction design, and related disciplines will assist with efforts to facilitate urban neighborhood community building, social inclusion, public consultation and debate, fair access to local information and services, urban sustainability, and healthier local economies.

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