

تأثير تقنية الإتصالات والمعلومات على الاتجاهات الحضرية الجديدة

رسالة علمية

مقدمة إلى الدراسات العليا بكلية الفنون الجميلة – جامعة الإسكندرية
إستيفاء للدراسات المقررة للحصول على درجة

الماجستير

فى الفنون الجميلة

قسم العمارة – تخصص التصميم الحضرى

مقدمة من

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٢٠٠٩

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The Impact of “ICT” on new Urban Trends

A Thesis

**Presented to the Graduate School
Faculty of Fine Arts, Alexandria University
In Partial Fulfillment of the Requirements
for the Degree**

Of

**Master In Fine Arts
Architecture Department**

By

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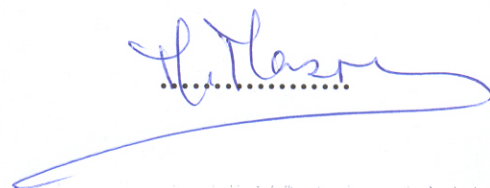
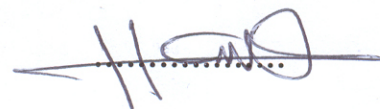
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ABSTRACT

"My interest is in the future because I am going to spend the rest of my life there." ---
Charles F. Kettering

At the turn of the new millennium several events of historical significance transformed the social landscape of human life. A technological revolution, centered around information and communication technologies (ICTs), began to reshape, at accelerated pace, the material basis of society; introducing new forms of interactions and relationships between the fundamental elements of the urban society. As a result of this huge revolution, the world today is passing through a critical juncture and a shift in the paradigm of human life and urban life's components. This shift requires radical changes in curriculum and urban development policies in line with this new paradigm. However, although the urban world is in the midst of such a technological revolution, surprisingly little is known about the potential effects of ICT on the spatial distribution of the city.

By creating a whole series of virtual worlds, communities and electronic spaces, revolutions in ICT are challenging the main historical function of the city as a socio-spatial system of communication. The creation of 'virtual' space on the Internet as a competitor to 'real' space in communities threatens to render cities and urban places obsolete. Some even suggest that traditional community life is obsolete, and that virtual space will replace physical space as the primary medium of personal, commercial and cultural dialogue. These developments have become a fundamental challenge for the discipline of urbanism; posing new challenges and dilemmas for our society, and for the professions of architecture, urban design and planning. The new challenges require new approaches, new methods and instruments, and new strategies for urban planning.

This research attempts to highlight the contemporary and future changes in the urban experience induced by the ICT revolution in the context of the current processes, trends and shifts which are intimately involved in the complex remaking of urban areas. Since the task of this study is to identify transformation processes and their spatial development to provide new ways of thinking about urban future, the research embraces a multidisciplinary approach that conceptually combines diverse impacts of technology.

Because the city is the intersection of its people, their processes and the physical place, our approach is to examine the effect of ICT on the existing trajectories and contexts of economic, social, political and spatial restructuring processes within which ICTs are utilized. This is done in the belief that a meticulous analysis of the effects of ICT on the contemporary urban trends may provide insights about the nature of the problem being investigated and the actions which may be necessary to shape these trends to achieve the desired goals for a sustainable future. Because the apparent trends are no more than an indication of what might happen in the future - and only if the conditions governing these trends remain the same - forming an understanding of the dynamics of change may stimulate ideas about the actions which may be necessary to bend or modify a trend leading to an undesirable outcome.

The research consists of four parts:

Part I: Approaching

This part aims to provide the fundamental knowledge about the main keywords of the research - 'ICT' and 'Urban trends' – and to understand the context of interaction within which the relations between the two take place – 'The new paradigm'. In order to hold a comprehensive approach and to simplify the complexity of interactions, each of the three subjects is discussed separately in a chapter in this part.

Part II: Theorizing cybercities

This part aims to build a conceptualization to the relation between ICT and urbanism in order to provide an analytical approach which will be used in the body of this research to investigate the current social transformation processes and their impact on city form and structure. It consists of two chapters. The first chapter (Chapter 4) traces the theoretical and historical origins of the relation between ICT and the city in order to explore the different perspectives to this relation. And the second chapter (Chapter 5) critically analyzes these perspectives to establish the theoretical approach of the study. The conclusive outcome of this part is the rejection of 'Substitution' approaches and the embracement of a 'Complementarity' approach. The notion of 'cybercity', used as the central theme of the research, is identified in the end of this part as a representation to the selected approach.

Part III: Analyzing cyber cities

This part is being directed to exploring how the economic, socio-cultural and environmental aspects and trends of cities interact with the proliferation of advanced ICT networks. It consists of three chapters; each begins with testing two opposing hypotheses about the expected effects of ICT. The outcome of analyzing these oppositions, which support the selected approach of the study - complementarity, guides the discussions in the rest of each chapter. This part represents a basic theme of this research which suggests that the spatial transformation of cities must be understood in the broader context of social transformation; and that technology-based changes in the city are to be seen through its influence on the nonphysical aspects influencing the development of cities and, eventually, will be reflected in the physical urban environment which is inseparable from the overall process of social organization and social change.

Part IV: Shaping cybercities

This part aims to shape an image of the basic characteristics of the future urban forms and to explore new ways of thinking about urban future to achieve our desired goals. It consists of two chapters. The first chapter (Chapter 9) is concerned with the spatial effects of ICT on the physical structures of cities as a result of social, economic, technology and numerous other forces; drawing on the conclusions derived from the analysis of the urban dynamics and processes in Part 2. The final chapter (Chapter 10) explores the new frontiers of urban theory and practice that might help deal with the current transformations and challenges of urban areas.

Introduction

Part I
Approaching

- **Chapter 1:** ICT, the broad meaning, evolution & applications
- **Chapter 2:** paradigm shifts, the rise of network society and the new urban context
- **Chapter 3:** NEW URBAN challenges ... Trends, driving forces and outcomes

Part II
Understanding
Cybercities

- **Chapter 4:** Technology and society... ICT and city
- **Chapter 5:** Conceptualizing cybercities

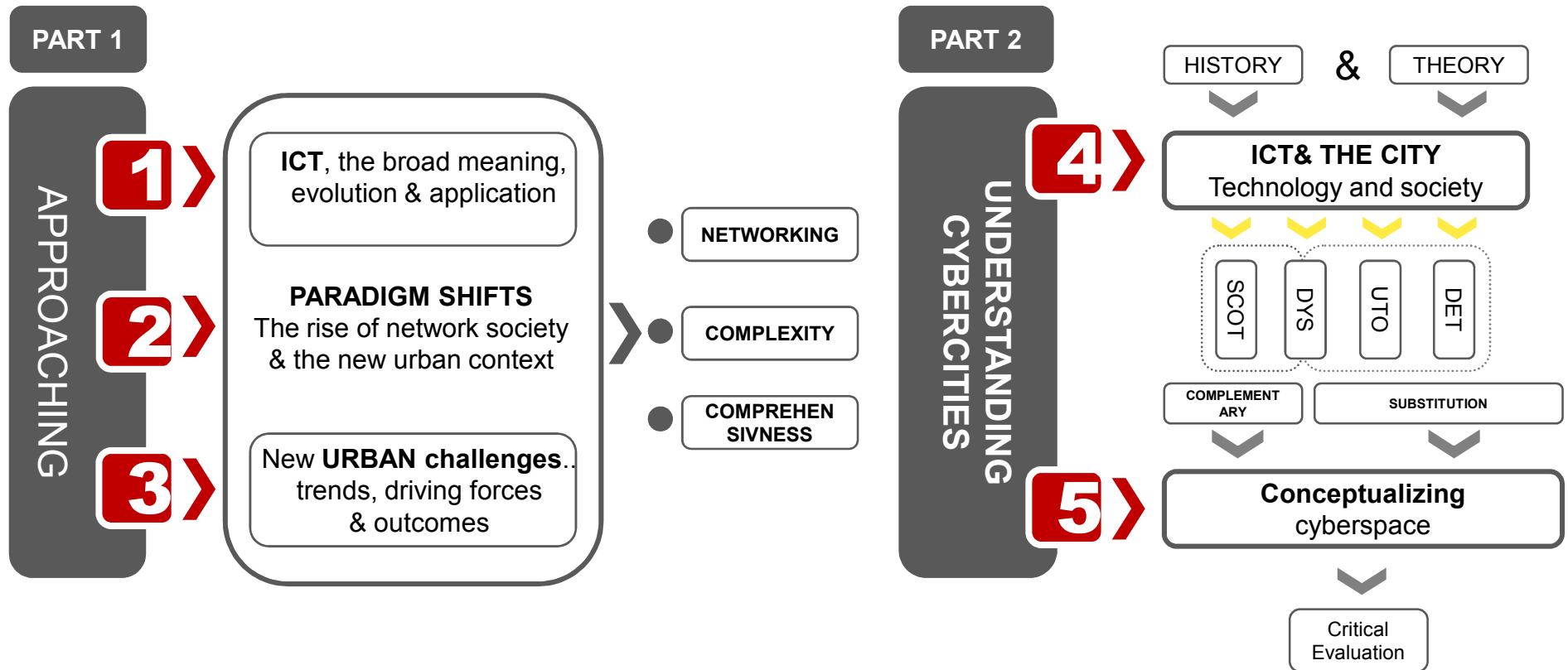
Part III
Analyzing
Cybercities

- **Chapter 6:** Cybercity's urban economies
- **Chapter 7:** Cybercity's social and cultural worlds
- **Chapter 8:** Cybercity's urban environments

Part IV
Shaping
Cybercities

- **Chapter 9:** Cybercity's physical structure
- **Chapter 10:** ICT, urban trends and the future of urbanism – towards a new urban theory

Conclusion &
Recommendations



PART 3

ANALYZING
CYBERCITIES

6 >

SUB
vs.
COMP

Cybercity's
urban **ECONOMIES**

7 >

SUB
vs.
COMP

Cybercity's
Social & Cultural worlds

8 >

SUB
vs.
COMP

Cybercity's
Urban **Environment**

PART 4

SHAPING CYBERNETICS

9 >

ECO

SOC

ENV

Cybercity's
Physical Structure

10 >

Towards a new urban theory

POLICY



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