

Communication's Roles in Human Environment Relations and Their Changes with Information and Communication Technologies

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Abstract: Communication is a key element that defines and actualizes the environment by enabling human environment relations (HERs). Communication patterns increase and diversify with more complex and dense organized living systems such as urban environments. These patterns, however, are not static, instead they are under the influence of technological and social changes. While they were under the constraint of physical limitations such as time and space, with the improvements in information and communication technologies (ICTs), these limitations have started to dissolve which led to changes in HER relations as well as changes in social aspects of urban public life. This research represents a theoretical approach to showcase the role of communication practices in HER, specifically in urban public spaces and how improvements in ICTs affect the HER. In this context, an intensive literature review and discourse analysis was conducted and two web of relations (WoR), one to examine the relation of communication and HER and one to examine the change in ICTs, were produced and they were compared and discussed.

Keywords: Human environment relation, communication, information and communication technologies, urban public space, communication modes

1 Introduction

The relationship between people and environment is as fundamental as existence, because "...there is no place without self and no self without place" (CASEY 2001, 684). People shape while also being shaped by the environment. Shaped environments in other words, built environments which in general can be described as a creation of people, includes the arrangement of four components; space, time, meaning and communication (RAPOPORT 2002). The first two components of the built environment: space and time are fundamental concepts that create the possibility for action as "...the world comprises three dimensions of space ... and one dimension of time..." (KNEZ 2014, 170). Communication and meaning define the action and consequence of the relationship with space. In a more empirical approach, space is "...the intervals, distances, and relationship between people and people, people and things, things and things" (RAPOPORT 1990 179), communication then is the action that actualizes the relationship between these elements and meaning is the outcome.

Communication is highly significant for any built environment, yet being highly complex in terms of relations and dense in terms of shareholders, urban areas are highly in relation with communication. Thus "...communication, community and city are inexorably connected with the thread of interaction, contact and talk." (GUMPART & DRUCKER 2008, 200). Communication is a key action that shapes communities and spaces by enabling interaction. Therefore, any change in one of these elements results with a shift in the other elements as history of urban public space suggests. Agora was a connective medium where commercial, social activities and political communication happened side by side (MADANIPOUR 2003, GUMPART

& DRUCKER 2008). With the end of the Roman Empire and the rise of the church, urban life was limited to the front of churches. With the renaissance, aesthetics became quintessential. In the modern era London marketplaces were hosting public life. Later on purposefully created public squares started to be used for gatherings and demonstrations (CARMONA et al. 2008, 25-31). By focusing on different activities, public space served as a medium of communication, with design and aesthetics, the environment took on the role of a communicator. Any change in public or in urban public spaces in terms of function or design caused changes in communication practices. Now public places enable informal interactions in everyday life that can connect people and add meaning and power to their existence (CARR et al. 1992).

In a broad sense, urban communication research deals with the methods that individuals use to connect or disconnect with each other and with their surrounding through symbolic, technological, and/or material manner in cities (AIELLO & TOSONI 2016). Especially with rapid improvements in ICTs, technological media has become a more significant part of urban spaces and based on the opportunities it created, their utilization has changed over time. Technological media has gone through three phases: first it was restricted by physical factors such as time and space and features like color; then it was unrestricted by time and space yet real features were given up; lastly it is trying to retrieve the features of face-to-face communication (LEVINSON et al. 2017). During these processes, communication's role in HER has changed. Therefore, the aim of this study is to show the role of communication in HER and examine the effects of improvements in ICTs on HER, especially with electronic and digital communication. For this purpose, the literature regarding the topics of HER, communication studies and ICTs were examined and a discourse analysis was conducted. Through discourse analysis the key elements and their relationships were defined. Furthermore, the WoR, of examined literature was visualized with two mappings in which one of them shows the role of communication in HER, while the second WoR shows the new HER patterns ICTs have created. To signify the different references, each reference was assigned with specific color and links are visualized by using them which enables to examine complexity of the links as well as diversity of references that mentions a specific term. By comparing these two WoRs, this research showcases the similarities and differences between past, current and possibly future state of HER. The examined literature mainly comprised publications between the last quarter of the 20th century and today. As the nature of the study requires, the examined literature does not only focus on landscape architecture, but various shareholder disciplines such as communication, media studies, urban design, social sciences.

2 Human Environment Relations and Communication

The first phase of the study focuses on the communication's role in HER. To examine this, discourse analysis of the literature regarding HER and communication and the WoR has been examined and visualized (Figure 1). Based on the literature, communication defines infinite manners that keep people connected to each other. The messages in common space can be verbal or visual, they can be sent through speaking, writing, as well as through built structures, clothes, gardens or gestures (NARULA 2006).

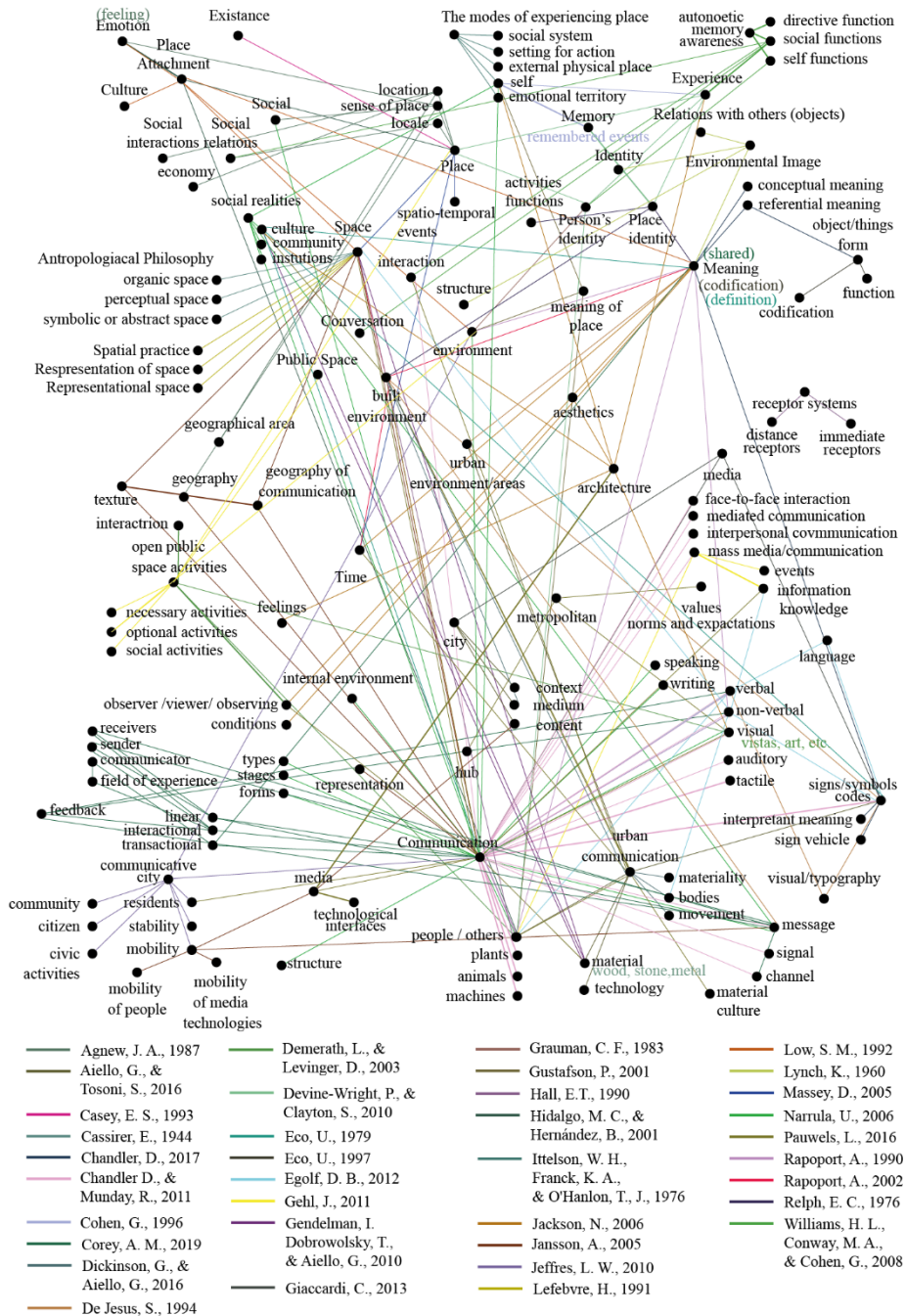


Fig. 1: Web of relations of HERs and communication

Even though the main purpose is to communicate with other people, the environment becomes part of it in a manner that it is defined more than a medium, rather it becomes a communicator. Therefore “Communication is interaction with ourselves, with others and with our external and internal environments.” (NARULA 2006 2). While ‘communication’ describes the communicative act between individuals, the communication from environment to person is ‘meaning’ (RAPOPORT 1990). By focusing not only on interpersonal communication but also communication practices of people with the environment as literature suggests, this research classifies communication modes in urban environments as person to person communication (PPC), space to person communication (SPC), person to space to person communication (PSPC) Furthermore by taken AIELLO and TOSONI’S (2016) classification of urban areas as context, medium and content into consideration, this research examines and differentiates the roles of the environment in these communication modes as medium, message and context.

In PPC the main concern is interpersonal communication. Therefore, space becomes a medium that hosts these communication practices rather than being part of it. In this form of communication, space is mainly a physical entity that holds the interaction between people. SPC defines the communication of primary messages of space and its elements. Such as the messages of the form of an object which, in addition to enable function, should indicate the function obvious enough to make it operable and tempting (ECO 1997). Urban public spaces, by being highly designed, include a high level of SPC in which space becomes a message. On the other hand, in PSPC, space becomes a mediator that transfers messages besides the function such as connotations, between people regardless of time and space. Architectural elements in addition to state its function, should connote an idea of the function. However surely it can imply different things. A seat connate sitting down at the beginning. However, if it is a throne, it connotes dignity. It can become even more significant than its primary function that it might change (ECO 1997). These primary meanings and secondary meanings of space transfer through urban elements and structures where these elements become symbols and signs and through interpretation meaning occurs (CHANDLER 2017). The subjectiveness of meaning indicates that generated meaning can be different than given meaning as meanings transform in the course of time, in different circumstances based on observers (JACKSON 2006). An element of urban space such as architectural structure is a sign that regains meaning through time. The communication modes represent the main communication patterns of people in urban areas. However, these patterns are under a big change based on the improvements in information and communication technologies.

3 Communication Technologies and New Communication Patterns

Communication, from basic action that requires a common physical space and a shared time transformed into a complex technologized system through four phases: the printing revolution, the visual revolution, the electronic revolution and the digital revolution (KOVARIK 2015). This section focuses on the changes these phases created in HER (Figure 2).

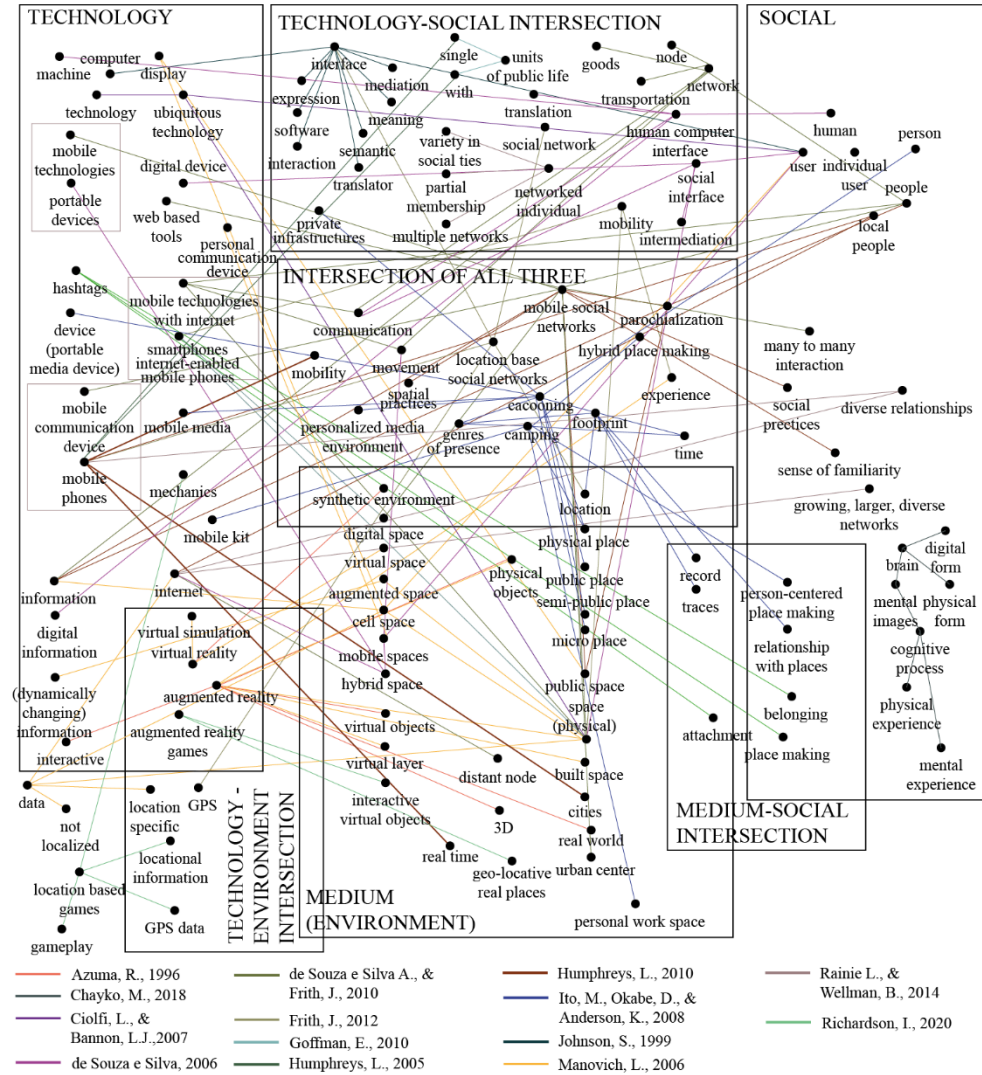


Fig. 2: Web of relations of change in communication as a result of ICTs

Even though all of these phases created a shift in communication practices and space, a major change happened with the electronic revolution. “Electronic media destroy the specialness of place and time. Television, radio, and telephone turn once private places into more public ones by making them more accessible to the outside world. And car stereos, wrist-watch television, and personal sound systems ... make public spaces private. Through such media, what is happening almost anywhere can be happening wherever we are. Yet when we are everywhere, we are also no place in particular.” (MEYROWITZ 1985, 125). With electronic media, followed by digital media, conceptualization of space changed.

First of all, its physical construct started to be melt. Space has moved beyond being a physical entity and new spaces such as augmented space which refers to “physical space overlaid with dynamically changing information.” (MANOVICH 2006, 220), or hybrid spaces which “merge the physical and the digital in a social environment created by the mobility of users connected via mobile technology devices” (DE SOUZA E SILVA 2006, 263). The merge of physical and digital elements created a new sense of space. The new communication layers add additional meanings on the known surfaces which densify space’s role as a context such as in the project WDCH dreams that incorporates the Los Angeles Philharmonic digital archive with machine learning which is then projected on Walter Disney Concert Hall (REFIK ANADOL STUDIO, n. d.). By doing so a structure that was once only a physical communication agent, takes on new meanings and communicates with people in a new manner.

Physical construct was also challenged by mobility. The efficient relocation of individuals, objects or information between nodes in the quickest manner has always been one of the purposes of any transportation or communication network. This network type can also be observed with the system of the internet that apparently connects far away nodes in an instant, free from the route the information travels on (DE SOUZA E SILVA & FRITH 2010). The connection between these nodes can be based on the movement and mobility in an urban context. Mobility is seen in two ways as mobility of individuals and the mobility of media technologies. Mobile medium is not new as the magazines and books suggest, yet with the rise in portability of technologies, technologies such as laptops or headphones got closer to the body in motion (JANSSON 2005). As a result of the improvements in communication technologies, individuals were enabled to communicate while they go through tangible spaces by carrying mobile devices with internet connection. This resulted with the first transformation in the traditional network system: nodes, in other words individuals who carry the connection interfaces, changed to be mobile which led mobile social networks to occur (DE SOUZA E SILVA & FRITH 2010), which “... can facilitate the flow of new kinds of information into public spaces and as such can rearrange social and spatial practices” (HUMPHREYS 2010, 764). Mobile devices such as mobile phones enable a release from place. Through their utilization, social links move from connecting people-in-places to connecting people anywhere (WELLMAN 2001) causing reconsideration of space as a medium.

Second of all, the change in the conceptualization of space resulted with the changes in social relations. One of the most common uses of ICTs are related to the social aspect where mobile devices and social media platforms become a new medium of social interaction and communication and by doing so alter the sense of physical place that mediate different relations, and take on this role that was once unique to physical place. These technologies are social interfaces: digital devices that serve as mediators for interpersonal relations. By doing so besides remodeling communication, they remodel the space where interaction occurs (DE SOUZA E SILVA 2006). These new social interfaces decrease the dependence of physical space for social relations and create new ways for place making processes such as use of hashtags can lead to place making through mentioning a certain place and describing it (BUDGE 2020). Furthermore, while doing so they enable almost simultaneous interactions with moments that do not share common time and space, and therefore do not share context, become available such as on Instagram. On Instagram one post shows two dressed up people, while the other shows nicely plated food and the other shows a selfie (BOY & UITERMARK 2017, 616). Besides this social effect on digital platforms, they can change the social situation in physical space. In public, people are either ‘single’ or in a ‘with’ (GOFFMAN 2010). Through use of ICTs such as a mobile phone, people can transform from a ‘single’ to a ‘with’ (HAMPTON et

al. 2015) or a phone call to a person from a 'with' can result with transformation of the other person into a 'single' (HUMPHREYS 2005). Interaction through mobile devices gives the opportunity to be a with instantly. These new communication technologies argued to end the public life by making actual connection inessential (SENNETT 1977), on contrary it has also argued that new communication technologies can enable varied and expanding networks (RAINIE & WELLMAN 2014). ICTs can alter the conceptualization of a given space by adding new digital layers to it or by use of mobile devices the medium can change with mobility. Yet they change the experience of any space by separating the experience from restrictions of physical factors. And as the mental process happens in the same region of the brain, both physical and digital experiences are recognized as real at the same level (CHAYKO 2018).

4 Results, Conclusion and Discussion

The first WoR is based on discourse analysis of HER and communication role in this relation suggests terms, environment (urban environment, built environment, environment); meaning; sign-symbols-codes; people-others; place; message are some of the mostly mentioned terms in examined literature. The second WoR based on the new HER patterns ICTs have created suggests that even though some terms such as space and people still exist, they have evolved into some merged concepts such as augmented space, hybrid space which connect technology and space. On the other hand, it is seen that there is not a constant term that has been mentioned by various scholars. Instead, terms derive from each other and even though they show some commonalities their extent is different such as mobile communication device and mobile technologies with internet or ubiquitous technology and mobile technologies. However, this is consistent with the nature of ICTs as they are constantly improving and evolving. The proximity of the extent of the terms suggest that they can be examined through categorization. Therefore, this second WoR is examined through categorization which are: environment, person, technology and their intersections.

Based on the literature review and WoR on HER, the communication modes in built environments are categorized in three modes: PPC, SPC, PSPC, while the role of the environment is examined in three roles: medium, message, context. The examination of ICTs and HER shows the changes in these modes. The digital communication layer increases the PPC by overcoming the restriction of space and time. While space was a medium that contained the communication, with the addition of digital communication layers, space became the medium that contains individuals while interfaces became the new mediums that contains the communication. In SPC, space takes the role of being a message. A guide directs people in the city. One change that needs to be examined here is the separation of spaces such as public and private. Even though physical separation still exists, they can't limit people to form social relations. In PSPC, space was defined as a context: the messages in relation to the environment including both primary and secondary meaning. This communication mode highly depends on the environment and results with conceptualization of space such as place making and meaning making. The mobile medium of mobile devices adds new digital layers onto the physical experience while immobile digital layers such as projection through, if not eliminating it all together. As a result, conceptualization of place becomes personalized based on the digital realities of individuals and HERs transformed into highly mental processes.

ICTs enable new forms of communication while shifting the role of space and environment in practice. Even though most of the time these new technologies are a choice instead of a must, the COVID-19 pandemic has proven that these technologies can become very significant and can change the HER. On the other hand, the improvements in ICTs enable new realities such as virtual reality, augmented reality, meta verse. While some of these new realities work together with physical reality, some of them are highly independent causing new HER and communication practices. The examination of WoRs shows that even though there is a shift in experience of space, concepts such as meaning and experience remain crucial. Virtual or physical communication practices remain an important part of HER.

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