TeMA

Journal of
Land Use, Mobility and Environment

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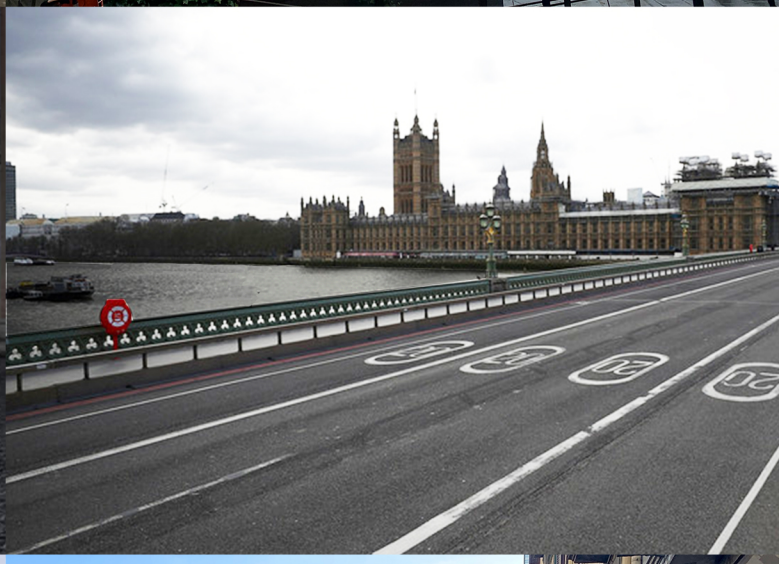
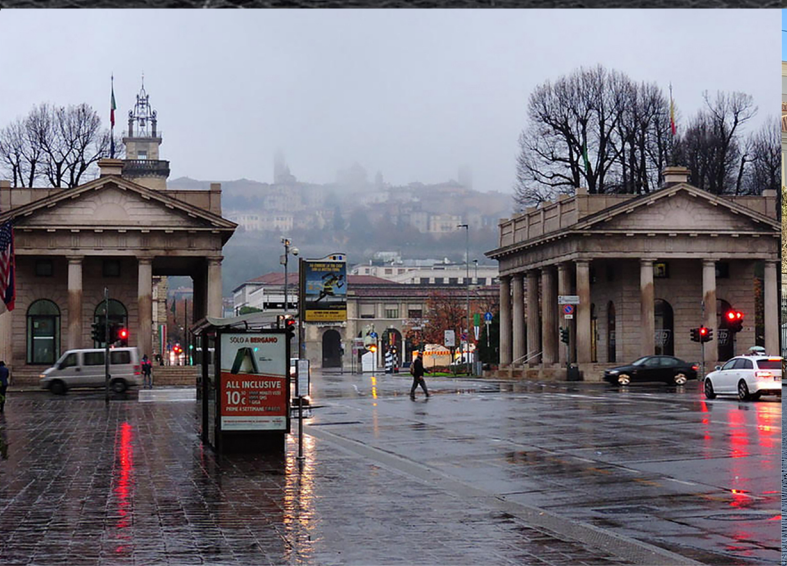
Special Issue

Covid -19 vs City -20

scenarios, insights, reasoning and research





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COVID-19 vs CITY-20
SCENARIOS, INSIGHTS, REASONING AND RESEARCH

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Given the short time to produce the volume, the Editorial Board of TeMA Journal carried out the scientific quality audit of the contributions published in this Special Issue.

The cover image is a photo collage of some cities during the Covid-19 pandemic quarantine (March 2020)

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From social distancing to virtual connections

How the surge of remote working could remold shared spaces

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Abstract

Covid-19 will have significant impacts on the world, changing many aspects of our lives, including urban life and work routines. Challenges arising from the spread of the coronavirus are likely to push the digital infrastructure of cities, accelerating the transition towards the smart city. Additionally, we may see a permanent shift towards remote work arrangements, notably telecommuting and smart working. In the aftermath of the pandemic, the affirmation of such a scenario requires us to reflect on the challenges of an interconnected society produced by Information and Communication Technologies (ICTs). Taking remote working as an illustrative example, the paper offers a critical reflection on how ICTs can influence our perceptions of places and argues that places play a key role in influencing the patterns of remote workers' identity construction. The authors caution about the dark side of digital connectivity, pointing at the risks that a prolonged detachment from reality and the loss of places can put on remote workers' identity. In order to overcome potential tensions, remote workers should avoid too much connectivity continuously balancing identity performance in both physical and virtual workplaces. Implications for both organizational and urban design are provided.

Keywords

Coronavirus; Remote working; Smart city; Workplaces; Identity

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1. Introduction

The diffusion of SARS-CoV-2, better known as coronavirus, is bringing forth a global emergency whose implications escape general understanding. What can be assumed based on reasonable evidence is that it will disrupt social conventions by the increasing distance between individuals and by revolutionizing our approach to the city. On March 11th, 2020, due to the growing spread of the infection, the World Health Organization (WHO) declared the outbreak a global pandemic.

In order to protect the safety of their population, the governments of the countries affected by the coronavirus put into place several restrictive rules that enforced, first and foremost, "social distancing." On an urban level, such restrictions had the effect of a "neutron bomb," whose explosion left the buildings intact and damaged only life forms. The city squares became "desert," human mobility was forbidden and opportunities for relationships between individuals dramatically dropped down.

During this quasi-suspension of time, technology has come to aid by enabling us to take advantage of "tele-proximity" (Virilio, 1998) and apply it to all traditional relational routines such as attending classes or working in offices. Therefore, the emergency has put on the foreground the need to supply our metropolises with increasingly efficient telematic networks for them to be equipped to face the challenges of an era marked by unpredictable risks[1]. There is no denying that, currently, some of the major sources of planetary apprehension are population growth and the increase of migration to the cities.

In a global context of overcrowding – as the population is nearly seven billion people (McNeill & Engelke, 2017) - more than half the world's population lives in urban environments, where a more intense existence is ensured and yet the price to pay is that of high energy consumption. Considering that the urban population increases by the size of "London per month," one can understand how our metropolises are becoming the real catalysts of the globe (Ratti & Claudel, 2017). Nevertheless, these cities are affected by an "eco-catastrophe," generated by the laws of an economic growth that is incapable to set self-imposed rules. According to Alberto Magnaghi (2010), this growth disrupts the specific structure of the "territory;" territory intended as the imperturbable work of intertwining between nature and human culture. Perhaps, it is no coincidence that the coronavirus (a perfect catastrophe for global civilization) originated in China, a country where, in the last thirty years, the phenomenon of urbanization has brought to the cities five hundred million new citizens (Ratti & Claudel, 2017). Urbanization and related consequences (including a substantial dissipation of resources and the growing emissions of carbon dioxide) are likely to produce on the planetary ecosystem effects comparable to those of a meteor collision. This is the prediction of two Anglo-Saxon scholars, Simon Lewis and Mark Maslin (2019), and, according to them, this scenario is not entirely unavoidable.

Following the theory of adaptive systems, within a broader analysis of the *Anthropocene*, the two academics came to this conclusion: the surge of digital connectivity, technological progress, and the availability of renewable energy could lead our species to establish new forms of coexistence. In a hypothetical society of the future, artificial intelligence could save the planet. Suffice it to say that the computing power and the statistical know-how of some computer giants could help us in preventing the surge and the spread of new pandemics. This already happened back in 2009, when the services provided by Google's algorithm proved essential in supporting the American government in the fight against the H1N1 virus (Mayer-Schonberger & Cukier, 2013).

However, the idea that digitization is only in its infancy is widespread among many scholars. In this respect, the Covid-19 diffusion has worked as an accelerator of pre-existing dynamics, by pushing an IT development

[1] "Cities after coronavirus: how Covid-19 could radically alter urban life". Retrieved on 15th April 2020 from https://www.theguardian.com/world/2020/mar/26/life-after-coronavirus-pandemic-change-world

process and the interconnection of the global society. When the emergency will be over, this push is likely to affect our choices for many decades to come[2].

In regard to urban dimension, one could see, as it is already happening in different parts of the world, the exponential development of the so-called "smart city"[3] (e.g. Hollands, 2008).

A city where, thanks to the intensive development and application of advanced technologies, it is possible to optimize the services and the infrastructures available to the citizens by making them more customized, more efficient, and ramified. A smart city, thanks to the support of computer networks as well as artificial intelligence solutions*, big data* and the *internet of things*, will be able to guarantee citizen's security and healthcare more and more efficiently, thus becoming increasingly resilient and ready to face a new crisis[4].

It is also likely that urban innovations favored by future investments in technologies will encourage the surge of remote working worldwide, notably telecommuting and smart working (e.g. Bailey & Kurland, 2002; McEwan, 2016). These two types of remote work arrangements have been on the scene during the pandemic and their adoption proved to be crucial in preventing the interruption of many professional activities and in limiting economic damages.

In the aftermath of the pandemic, the affirmation of the above scenario requires us to reflect on digital innovation and the challenges of an interconnected society produced by Information and Communication Technologies (ICTs). Taking remote working as an illustrative example, the paper offers a critical reflection on how ICTs can influence our experience of space and contribute to creating new urban identities. Our experience (and perception) of space is affected by the symbolic-evocative value of places (Demarco, 2019), not least those workplaces in which individuals spend most of their time. A system of collective relationships can be defined in relation to these routine places. And personal and social identities can be built in relation to a similar system as well.

The authors caution about the "dark side" of a state of hyper-connectivity in the cyberspace, shedding light on the serious risks that a prolonged detachment from reality and the loss of "places" can put on identity construction. They stress that, in order to overcome potential tensions and preserve individual (and place) identity, remote workers should constantly search for "requisite connectivity" (Kolb et al., 2012) aimed at balancing identity performance in both physical and virtual workplaces. The comprehension of the relationship between the perception of spaces and identity construction can provide an important cognitive element to steer the choices of the companies in the direction of remote working design and management. It can also affect the choices made by the policymakers, engineers, architects, and city planners engaged in urban transformation projects and the smart redesign of cities.

The paper is structured as follows. Section 2 analyzes how the use of ICTs altered our perceptions of physical proximity and increasingly contributed to creating connected and interconnected individuals, organizations, cities, and societies, as exemplified by the intertwined paradigms of smart city and smart working and the increasing diffusion of new workspaces for remote workers (i.e. Smart Work Centers) in urban and metropolitan areas. These spaces, however, risk becoming "non-places" (Augé, 1992) with negative effects on remote workers' identity and identity construction.

Mainly drawing on organizational research, section 3 examines how remote workers' use of connective technologies is strictly influenced by their needs for identity construction.

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2 "Five ways coronavirus could shape our digital future". Retrieved on 15th April 2020 from https://www.odi.org/blogs/16747-five-ways-coronavirus-could-shape-our-digital-future

3 "Coronavirus will permanently change how city work". Retrieved on 20th April 2020 from https://www.forbes.com/sites/miriamtuerk/2020/04/08/coronavirus-will-permanently-affect-how-cities-work/#4f8193961da9

4 "How Life in Our Cities Will Look After the Coronavirus Pandemic". Retrieved on 20th April 2020 from https://foreignpolicy.com/2020/05/01/future-of-cities-urban-life-after-coronavirus-pandemic/

Starting from the contested concept of "non-places" as framed by Marc Augé and drawing on "practice theory" (Orlikowski, 1992; 2000) and the theoretical "duality" of connectivity (Kolb, 2008), Section 4 critically discusses how physical and virtual workspaces can be constituted as places in relation to remote workers' connectivity behaviors. Section 5 reports some implications of our analysis for the design of new urban workplaces (i.e. Smart Work Centers) and the broader smart city.

2. The impact of ICTs on urban planning and work design

The massive use of media technologies since the introduction of the *world wide web* has shaped a new type of social environment. An environment in which space we share no longer coincides with its location (Beck, 1996; Marramao, 2009). In this environment, proximity relationships are no longer linked to coexistence in places because it is possible to connect to each other in ubiquitous and synchronic modes.

Referring to this new kind of dimension, when the *world wide web* first appeared, Manuel Castells (1996) posed the famous distinction between "space of places" and "space of flows," respectively hegemonized by physical relationships and virtual connections.

The potential inherent in virtual connections allowed using the *web* goes far beyond the opportunities of information and communication exchange enabled by traditional media. While the latter are "one-way" and move from a broadcaster to a passive receiver, the *web* is, in fact, a bidirectional platform that acts both *top-down* and *bottom-up* (Ratti & Claudel, 2017).

The *web* involves an audience of users by urging them to share all sorts of data and thus activating a multitude of flows from every place and towards all directions. In recent years, the invention of flexible and portable devices (e.g. smartphones, tablets) has contributed to multiplying information and communication flows on a global scale. Free from the static personal computer interface, people started to access the network in a more agile and versatile manner.

This has encouraged mobility patterns and outsourcing processes (Elliott & Urry, 2010); however, in some cases, it has also discouraged sociality within material spaces (Twenge, 2017). The configuration of physical spaces has not substantially changed. Actually, it is their geography that has been significantly altered, turning into a "connectography" (Khanna, 2016).

During recent years the massive advancements in ICTs have fostered the development of the *smart city* as a holistic approach to urban planning and governance (e.g. Komnikos et al., 2013; Nam & Pardo, 2011).

The concept has increasingly attracted the attention of a variety of stakeholders, including scholars and public institutions. Indeed, many cities worldwide have started to rely on this approach to develop strategies and initiatives aimed at providing solutions to rapid urbanization and pursuing social, economic, and environmental sustainability (European Parliament, 2014).

Although the term smart city is controversial and actually a shared definition is still lacking (see Mosannenzadeh & Vettorato, 2014, for a review), there is quite a consensus among scholars and practitioners that smart city is based on the utilization of ICTs, investments in human and social capital and collaborative innovation among people, businesses and institutions aimed at developing more inclusive and higher quality services for citizens (Errichiello & Marasco, 2014; Komninos et al., 2013; Paskaleva, 2011).

It is worth highlighting that rather than a description of current reality, the smart city mostly reflects a strategic vision that is advocated to achieve sustainability goals (e.g. Angelidou, 2015; Komninos et al., 2013). Despite the growing interest in the smart city approach, there are conflicting views and no consensus even about the benefits of the real smart city. Supporters of the smart city frame it in a positive manner and agree that it would improve citizens' life and contribute to ecological integrity, social equity, and economic growth. In this respect, two different approaches are used in evaluating smart cities, i.e. the "technology-driven" and the "human-driven" (Kummitha & Crutzen, 2017).

The former emphasizes the values of ICTs in making smart cities interconnected places where citizens can access better and new services and are engaged in the decision-making processes.
The latter sustains that the expected benefits can also be achieved through leveraging human capital and sustaining the development of people's capabilities. However, opponents (e.g. Grossi & Pianezzi, 2017) are seriously critical of the actual contribution that the smart city can provide in creating a more democratic and sustainable society, as well as more inclusive and creative urban spaces (Kummitha & Crutzen, 2017). Beyond shaping urban planning, the diffusion of ICTs has affected every aspect of life, including work practices and routines.
Available communication and collaboration technologies pushed companies and public organizations to increasingly adopt different typologies of remote work arrangements (RWAs). These can be distinguished according to an individual (e.g., home-based telework, mobile work, smart working) or group perspective (e.g. virtual teams). Notwithstanding their specific features, all RWAs involve employees temporarily or permanently spending some working hours at a distance from traditional offices, colleagues and/or managers (Cascio, 2000); workers are geographically dispersed and rely on electronically mediated communication (e.g., emails and videoconferencing) to interact with others (Raguram et al., 2019).
Smart working emerged in recent years as a highly flexible type of RWA (e.g. Clapperton & Vanhoutte, 2014; McEwan, 2016). Indeed, the adoption of smart working implies that employees can choose when and where to work, selecting among various workspaces, both outdoors (e.g. home, coffee shop, co-working spaces) and indoors (e.g. open spaces, concentration areas).
Coherently, it reflects a holistic approach in managing flexibility that includes three levers, i.e. the re-design of physical workspaces ("bricks"), investments in information and communication technologies (ICTs) ("bytes"), and a substantial change in employees' and managerial attitudes and practices ("behaviors"), (Clapperton & Vanhoutte, 2014; De Kok, 2016), notably those related to autonomy and control (e.g. Cunha et al., 2020; Errichiello & Pianese, 2016; Errichiello & Pianese, 2018).
In Italy, at the end of 2019, there were no more than 570,000 smart workers (Smart Working Observatory, The Polytechnic University of Milan), but the need to ensure "social distancing", after the spread of the coronavirus, led to an exponential increase in these flexible forms of employment. Just a few weeks after the beginning of the pandemic, the total number of smart workers has increased by 555.000 (The Ministry of Labour and Social Policies, Italy) and long-term forecasts predict a rise to 8 million (Smart Working Observatory, The Polytechnic University of Milan). In some ways, the uncertainty about the possibilities to return to "normality" makes it likely that the ecosystem of the companies will react to the pandemic by permanently shifting to more flexible and flat organizational models. Therefore, we can picture a future scenario where the extension of remote work will accelerate a global trend that is already underway.
Workspaces, rather than disappearing, will have to be rethought according to a "smart" logic and be equipped with technologies suitable to the needs of the workers of the future. In this regard, we can hypothesize the diffusion of collaborative spaces, designed primarily for remote workers, including employees of private companies and public institutions.
Spaces whose design and features reflect the model of "Smart Work Centers" (SWCs), innovative workspaces already spread in some countries such as the United States, Australia, the Netherlands, Japan, Korea, and more recently, also realized in France and Italy (Adamsone et al., 2013; Errichiello & Pianese, 2019; Micropol, 2014). SWCs are co-working spaces where employees can flexibly work individually or in teams, accessing a variety of office equipment as well as communication and collaboration technologies (e.g. printers, internet, teleconference systems, etc.). Moreover, within these spaces, workers can access corporate resources, data, and applications through cloud systems and rely on social computing tools to interact and collaborate with distant colleagues.

Beyond the "byte" lever, SWCs are also aligned with the "bricks" lever of smart working, as offices are organized with open spaces and shared desks as well as different areas designed for different purposes, i.e. collaboration (e.g. meeting rooms), concentration (e.g. small offices), communication (e.g. skype/call booths), contemplation or relaxation (e.g. coffee shops). Moreover, SWCs also offer additional services, including educational courses, technical support, nurseries, and recreational facilities. These workspaces are already attracting interest among private companies, such as Samsung Electronics[5] that built them for their employees (corporate SWCs). SWCs have also been created by public institutions, like those funded by the Korean Government (Eom, 2016).

In this case, they give access not only to employees but to a variety of users, including professionals and entrepreneurs (multi-user SWCs). It is important to report that SWCs are sometimes part of a broader smart city development plan. In this case, they can be funded through public-private partnerships like in the project developed by the municipalities of Amsterdam and the IT service provider Cisco[6].

Beyond offering advantages to both employees (e.g. increased productivity) and organizations (e.g. cost savings), these innovative workspaces also contribute, at a societal level, to reaching some key goals of smart city programs, i.e. increased citizens' engagement, reduced air pollution and unemployment (e.g. Adamsone et al., 2013; Eom, 2016).

In view of the spread of SWCs, it is important, however, that these new flexible work environments are not only designed as "access gates" to the *worldwide web*. They should also set the conditions for more human forms of connection primarily made of social relations. In this regard, it is worth highlighting, as it will be shown in the next sections, that the identity of an individual is shaped, in fact, by sociality. This sociality stratifies over time through the practices of living together in "places," areas circumscribed by boundary lines, but also exposed to external contamination.

However, as the anthropologist Marc Augé claims, the typical dynamics of the contemporary world have de-legitimized the function of "places" producing a series of "anthropological non-places," spaces designed not to be inhabited but to enable the mere circulation of flows. Non-places are anonymous environments made of stealthy relationships, as well as mere supports of technological functions, economic and financial transactions. Here people make contact without ever really contaminating themselves and nobody can read anything about themselves or others.

The main consequence of the proliferation of non-places is a widespread sense of disorientation followed by a search for points of reference and a so-called "identity obsession" (Marramao, 2009). Such phenomenon creeps into every aspect and every dimension of our lives.

The loss of places and the establishment of remote working have exasperated the spasmodic search for a defined professional identity even in the workplace.

In this respect, organizational research on virtual work has hitherto shown that individuals' and groups' choices about "if", "when" and "how" to use connective technologies are influenced by personal and context-specific factors, such as communication practices, interpersonal trust and organizational culture (Collins & Kolb, 2012; Wajcman & Rose, 2011). Indeed, these factors affect connectivity behavior through "human agency" (Cousins & Robey, 2005; Emirbayer & Mische, 1998) that refers to "the level of choice, control or free will that contemporary workers have over their connectivity states" (Kolb et al., 2012: 269). However, remote workers'

5 Samsung Electronics (2012), "How to work smart: Samsung smart work center". Retrieved on 15th April 2020 from: https://kslee7.tistory.com/entry/How-to-Work-Smart-Samsung-Smart-Work-Center.

6 Cisco (2011), "Cisco Smart Work Centers: Foster Urban Regeneration, Social Inclusion, and Reduced Carbon Footprint", Retrieved on 10 th April 2020 from https://www.cisco.com/c/dam/en_us/solutions/industries/docs/scc/smart_work_center_solution_overview_us_0725.pdf

decisions on how to realize the connective potential of modern devices and applications are also strictly related to their needs of identity (re-)construction.

3. Understanding identity in the context of remote working

In any social domain identity is a self-referential description that explains who an individual is and how he fits into his surroundings (Ashforth & Schinoff, 2016). In the domain of organizations, identity also explicates "why a person joins certain organizations and why he voluntarily leaves, why he approaches his work the way he does and why he interacts with the others the way he does during that work" (Ashforth et al., 2008:334). Identity is a multi-level construct since it exists at the individual (i.e. personal identity), interpersonal (i.e. relational identity), and collective level (i.e. social identity) (Brewer & Gardner, 1996). According to an interpretive perspective, identity construction (including reconstruction) refers to the process through which actors come to define who they are (both as individuals and as members of groups), how they communicate that definition to others, and how they use that definition to shape their professional and private lives (Ashforth & Schinoff, 2016; Ashforth et al., 2008). Identification, the extent to which individuals internalize a given identity of an entity as a definition of self, is a key outcome of identity construction (Ashforth & Schinoff, 2016). When the entity is the organization (i.e. organizational identification) the individual simply feels a sense of belonging to that organization; otherwise, he includes the organization in his self-concept. In the first case, identification is "situated" i.e. it arises in specific situations and tends to be weak, temporary and unstable; in the latter case, the individual is strictly connected to the organization and identification is a stronger, more durable and stable entity (Ashforth et al., 2008).

In order to understand how the construct of identity has been used in organizational research, it is appropriate to take into consideration the contributions of authors from various disciplines (e.g. philosophy, psychology, and sociology). In this respect, it is important to highlight that between the 19th and 20th centuries both European and American cultures refused to attribute to the self a static meaning. Inspired by Nietzsche's concept of perspectivism and Freud's psychoanalysis, identity has become something indefinite and associated with an array of representations; it has been considered increasingly influenced by the processes that regulate social exchanges. In 1959, in *The Presentation of Self in Everyday Life*, Erving Goffman described identity as the mere result of a theatrical performance. Goffman claimed that the subject represents himself in front of an audience of actors who, in return, use the same technique to showcase their own personality. Beyond these "dramaturgical strategies" identity becomes only an abstract entity. Later on, Berger and Luckmann (1966) conceptualized identity as the mere result of a "social construction" enacted through negotiation and compromise. In 1976, the Norwegian sociologist Jon Elster, in contrast to the perspective of methodological individualism, claimed that each individual is composed of many selves. In this direction, Remo Bodei (2016) stated that individuals have become "multiple" subjects since they perform different roles depending on the different social contexts in which they find themselves. Within this debate, a relevant position is adopted by the French philosopher Michel Foucault (2019). He claimed that the cognition of our body is achieved through a complex process that requires, first and all, a relationship with others. In fact, by ourselves, we cannot perceive some parts of our body (the back, the nape of the neck, and not even our face). The only way we can perceive these parts is to see them reflected in a mirror or to see them through the eyes of the others who outline and describe them to us. In a certain sense, the others work, for us, like a mirror. They tell us who we are, how we are made, and what we represent.

Their narrative implicitly assigns us a role and shapes our perception of ourselves. However, beyond their narrative, physical contact is highly effective in producing similar effects. Handshakes and physical interactions sharpen the perception of ourselves. Our body becomes more sensitive "under the fingers of the other." The social nature of identity, its interpretation through the dramaturgical lens along with the acknowledgment of

the key role or physical interactions for identity construction provide a valuable frame of reference to understand the effects produced by remote working on identity and identity construction. In office-based work, individuals' identity is more likely to be clearly defined and socially recognized through "identity cues" that enable identity enactment by a) "priming or rendering salient an identity"; b) "providing descriptive and normative information about the identity (what the prototypical member thinks, feels, and does)" (Ashforth et al., 2018: 332). The first type of identity cues (e.g. punching a time clock, formal dressing, and working at a personal desk), is highly relevant for both situated and deep identification.

As workers start to carry on activities remotely, they lose these cues and need to re-construct their identity. At the same time, from the worker's perspective, regular face-to-face interactions in the office provide workers with the opportunity to communicate their identity to others through descriptive and normative information about their thoughts, emotions, and behaviors.

The transition to remote working can be considered as a novel and disruptive event that "threats" existing identity and triggers identity construction (Bean & Eisenberg, 2006; Brocklehurst, 2001). Indeed, in the new work arrangements employees feel the pressure to re-define and communicate externally their role and position mainly to other organizational members (peers and managers). Empirical research showed that electronic connections enabled by different technologies (e.g. e-mail, smartphone, social media, and cloud-based technologies) are used by remote workers to "perform" their identity online with the aim of maintaining informal bonds with colleagues and be recognized as a member of the organization (Dery & Hafermalz, 2016). As the intensity of remote work increases, individuals rely more on impression management (or self-presentation) practices (Barness et. al 2005) in the attempt to convey impressions that are biased in the direction of their desired identity image (Leary & Kowalski, 1990).

By examining how smartphones are used by a group of mobile workers, Symon and Pritchard (2015), for example, showed how connections are used to perform different work identities that can also coexist: connection as being contactable and responsive, connection as being involved and committed, and connection as being in-demand and authoritative.

In general, studies converged that remote workers tend to exacerbate their level of connectivity in order to reaffirm their role (e.g. authority, status, sense of self) and communicate to others their professional commitment (e.g. in terms of responsiveness, trustworthiness and constant support) and that tensions and paradoxes can arise from too much connectivity (Leonardi et al., 2010; Mazmanian et al., 2013; Sewell & Taskin, 2015). Leonardi et al. (2010) consider connectivity as a paradox since perpetual connectivity threatens the expected benefits of remote working (e.g. flexibility and autonomy) producing increased stress, burnout, and feelings to be controlled and not trusted by colleagues and supervisors. Barber and Santuzzi (2015) showed how benefits in staying connected and increased flexibility afforded by ICTs are counterbalanced by negative physical and psychological outcomes (e.g. physical fatigue, poor sleep quality) deriving from workplace telepressure, a preoccupation with and an urge to respond quickly to work-related electronic messages. Mazmanian et al. (2013) found that knowledge professionals use mobile email devices to work anywhere/anytime to perform both autonomy and responsiveness, but basically their autonomy is reduced because they end up being constantly connected. Similarly, Sewell & Taskin (2015) showed that after telework adoption both professional and nonprofessional workers paradoxically accept restrictions on their autonomy to convey the image identity of the ideal worker constantly available to colleagues and connected to the organization.

4. Work identity (re-)construction between real and virtual workplaces

In light of the analysis carried out so far, we can come to some general conclusions: when the individuals, in order to perform their identity, augment their virtual connections, they risk to obtain an effect opposed to that

that they intended to achieve. They can fall back into a kind of loneliness that implies the loss of freedom and a consequent sense of alienation and increasing stress conditions. In fact, as we have discussed in the previous section, the social construct of identity is conditioned, first and foremost, by physical contacts (Foucault, 2019). The priority that such contacts gain in the assertion of self-identity also leads us, however, to recognize the crucial importance of the "anthropological places." These are those territories of space in which people interpenetrate: where they meet and collide, where they intersect multiple relationships. In examining the properties of these places, Augé listed three essential characteristics of a place: a historical one, a relational one, and a more specifically identity-related one.

A place is historical, according to Augé, when it does not deny past housing traditions when it incorporates itself into pre-existing architectures without distorting their conformation. It is relational when it opens to the outside through streets and road ducts (but also corridors or passageways that allow, at the same time, access and exit). It is, lastly, a place of identity thanks to the combination of the two previous characteristics: only in so far as it allows historical residents to relate to allochthonous elements, only in so far as it allows the interpenetration between a sedentary and a nomadic component. Even for Augé, indeed, identity is a continuous mixing of social representations, something that is defined only at the price of being manipulated by many actors. When young people go away and foreigners replace them, the references of an already given identity tend to disperse and fade away. Then, however, the combination of tradition and innovation leads to new representations of identity. The problem is that the processes of industrialization, of mechanization and, then, of computerization (i.e. the spread of the Internet, of the ICTs, the proliferation of mobile connections) have created spaces that do not strictly place because they do not accommodate these three characteristics. To define these spaces Marc Augé coined the concept of "non-place." Non-places are one-way spaces as they allow only uninterrupted transit. They are the spaces of circulation, communication, and consumption, where people can sometimes meet without ever really contaminating themselves. Spaces in which loneliness coexists without creating material and emotional bonds (Augé, 1992; 1996). Next to physical spaces such as motorways, airports, motels, and shopping centers, archetypal non-places described by Augé also include the virtual spaces of communication and media technologies, such as chat rooms, multi-user games, and virtual reality environments (Coyne, 2007; Merriman, 2004).

However, non-place is an ambiguous and contested category (Coyne, 2007). As Merriman (2004) noted, Augé failed to recognize that "individuals such as maintenance workers, security guards, shoppers or business travelers often do see spaces such as supermarkets, motorways, and airports as places" (p. 149). He overlooks 'the ways in which virtual or highly mediated social relations … [can] construct a familiar sociality and the sense in which places such as supermarkets, Internet chat rooms, airports and motorway service areas do act as 'meeting places' where all manner of social relations are performed" (p. 151).

Later, Augé himself recognized that it is impossible to classify space as a place or non-place[7] and agreed with Merriman (2004) who claimed that "place and non-place are relational, contingent and continually folded into one another" and that the non-absoluteness of the concept derives from "the multiple and relational "placings" which arise through the diverse performances and movements associated with travel, consumption, and exchange" (p. 147). According to this argument, any space - whether physical or virtual - can be a place or non-place in relation to the meanings that individuals attach to that space and the nature of social relations that they perform in it.

On the basis of the previous analysis, we can argue that, when the focus is on remote working, individuals "create" and "re-create" a workspace as a place or non-place contingently to their decisions (and actions) about if, when and how to connect through ICTs. As an illustrative example, consider mobile workers that

[7] "Nonluoghi e "surmodernità"-Incontro con Marc Augé. Retrieved on 14th April from: https://maurogarofalo.nova100.ilsole24ore.com/2008/07/17/i-nonluoghi-e-i/

increasingly find themselves in archetypal non-places like motorways and airport lounges. In such circumstances, performing their identity online through electronic connections enabled by the phone or the tablet allows them to maintain social bonds with their colleagues and nurture a sense of belonging to the organization, i.e. organizational identification.

The same happens for remote workers when they decide to work far from office buildings, e.g. at home or coffee shops. This means that the "virtual space" that workers access through choosing to stay connected is contingently created by them as "place" and this secures their identity construction. However, if remote workers find themselves in traditional physical workspaces, such as corporate offices or co-working spaces, too much connectivity (i.e. hyper-connectivity) can turn both the virtual space and physical workspace to non-places. In fact, if workers consider physical workspaces only as "gateways" to cyberspace they contribute to creating them as non-places, showing no interest in social relationships with other people working in those spaces. However, this kind of behavior compromises their identity construction since self-recognition – based on talks and visual interactions - cannot be sustained.

To understand how physical and virtual workspaces can be constituted as places in relation to remote workers' connectivity behaviors, we rely on the theoretical perspective of connectivity as "duality", assuming "connects" and "disconnects" as complementary states, intertwined in interdependent relationships (Kolb, 2008). This perspective draws on "practice theory" (Orlikowski, 1992; 2000): human action is both "enabled" and "constrained" by technology, and individuals can always exert human agency to adapt technology's features and attributes to their preferences and needs. Accordingly, remote workers should balance their states of connection or disconnection to achieve and maintain "requisite connectivity," i.e. a middle ground between extreme and counterproductive states of "hypo-connectivity" and "hyper-connectivity" (Kolb et al., 2012). Indeed, states of too little or too much connectivity are both detrimental to work performance. This argument also applies when expectations and needs are referred to as identity construction. Indeed, connectivity as duality helps to understand how being in the cyberspace can offer relational intimacy and satisfy the remote worker's unresolved needs of identity construction (i.e. "connects") but it also produces detachment from reality and antisocial behaviors that are detrimental for identity (i.e. "disconnect"). In the first case, a virtual workspace is a place, and connections are "enabling." In the latter case, both the virtual space and physical space are non-place, and connections are "constraining" (i.e. they disconnect in practice). To address this tension and avoid what can be considered as an "identity paradox" remote workers should at first look for a "requisite connectivity" aimed at balancing identity performance (next to work performance) in both physical and virtual workplaces.

4. Conclusions

Future cities will be increasingly designed worldwide as smart cities. In urban and metropolitan contexts, the re-design of traditional workspaces will be a tangible statement of the new paradigm. In the aftermath of the pandemic, the high potential of connectivity offered by advanced ICTs will contribute to increased workers' flexibility enabling them to choose where and when to carry on their activities. However, our analysis clearly cautions about the "dark side" of a state of hyper-connectivity in the cyberspace, shedding light on the serious risks that a prolonged detachment from reality and the loss of places can put on the identity of individuals.

In this paper, we focused on remote working to show the contradictions inherent to too much digital connectivity as well as the tensions of remote workers' identity construction between virtual to physical workspaces.

In this respect, in section 2 we underlined that our expectation for the future is that many private companies and public institutions will re-think their traditional offices embracing a smart logic and that new investments will be realized to build innovative workspaces, notably Smart Work Centers, specifically designed for flexible

workers. However, if corporate offices will likely be designed as SWCs and contribute to transforming the future city, the analysis provided in previous sections offers us some valuable insights that should inform their physical design and guide work practices enacted by remote workers within their physical boundaries. In this respect, it is worth highlighting that SWCs are mainly designed for employees often belonging to different companies. This means that these workspaces tend to lack the physical and cognitive proximity among peers that characterizes traditional co-working spaces mainly designed for self-employed professionals usually belonging to the creative class (e.g. architecture, design, and communication), as well as entrepreneurs and/or teams working on innovative projects (e.g. startups) (Gandini, 2015; Merkel, 2015).

In coworking spaces, a shared work identity is likely to exist among professionals. Moreover, in these workspaces, informal networking contributes to workers' identity construction e.g. in terms of social reputation and professional status. On the contrary, SWCs can easily turn into non-places where remote workers only "transit" to connect themselves to the virtual workspaces being disconnected from the physical surroundings. We discussed how to realize SWCs as the emblem of an "interconnected way of working" (Boorsma & Mitchell, 2011) and exploiting their potential in boosting remote workers' creativity (Errichiello & Pianese, 2018), the potentialities of technologies available within SWCs should be aimed at enabling a "requisite" state of connectivity resulting from a balanced and synergic combination of connections among physically close workers (sharing the same workspace) and connections between situated and distant individuals. With these premises, SWCs actually are likely to work as places.

Indeed, in these circumstances, they would preserve workers' identity construction and even contribute to creating a shared work identity among SWCs' users.

Our analysis has broader implications for the design of future cities beyond workplaces. Indeed, the dominant image of the smart city is that of an innovation ecosystem contributing to new and improved services mainly developed through public-private partnerships (Errichiello & Micera, 2018; Marasco & Errichiello, 2016; Paskaleva, 2011). However, the rise of the smart city and the related surge of telematic connections risk distorting the concept of cohabitation that is the very foundation of the living city.

The danger is to transform our urban environments into what Paul Virilio (2004) called "metacity:" a ghost city, without limits and without laws, the capital of a world without consistency that has its center nowhere. Although we caution about this risk and thus refuse an "integrative perspective" centered on ICTs (Kummitha & Crutzenb, 2017), we are not totally critical of the concept of smart city and its practice. Rather, we embrace a "pragmatic school of thought," focused on enabling citizens to enhance human interaction and use a social agency to "invent and promote the usage of technology while addressing their own problems" (p. 47). Indeed, this perspective resonates with practice theory (Orlikowski, 1992, 2000) and the theoretical "duality" of connectivity (Kolb, 2008) we have drawn on to build our argument.

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