Cityscape And Bodyscape Between Material And Virtual

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The idea of *virtual reality* was born in the C*yberpunk* literature of the early 1980s. The term *cyberspace* was in fact invented by William Gibson in 1982 within the short story *Burning Chrome* and subsequently developed in the *Sprawl Trilogy*. Preceding the conversion of the internet into a mass medium the cyberspace of Gibson and Neal Stephenson's *Metaverse* shaped computer and communications technology and ideology during the 1980s and 1990s. On one hand, as the New Media scholar Wendy Hui Kyong Chun, highlights:

> The Internet, conflated with cyberspace, was sold as a tool of freedom, as a freedom frontier that by its nature could not be tamed. [...] By enabling anonymous communications, it allegedly freed users from the limitations of their bodies, particularly the limitations stemming from their race, class, and sex, and more ominously, from social responsibilities and conventions. The Internet also broke media monopolies by enabling the free flow of information, reinvigorating free speech and democracy. It supposedly proved that free markets — in a "friction-free" virtual environment — could solve social and political problems. [1]

On the other hand, this idea led to the conceptualization of a virtual substratum as a different and alternative space to the "real" and material world. From this point of view, cyberspace acquires the characteristics of a Foucaultian Heterotopia. Heterotopias are in fact "counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted. Places of this kind are outside of all places, even though it may be possible to indicate their location in reality". [2]

The aforementioned dichotomous ontology has been expressed both in a positive key, as the emancipation of man and liberation from material constraints (Nicholas Negroponte), and in a negative key, as a loss of contact with reality, obfuscation and oblivion caused by the progressive imposition of virtuality (Jean Baudrillard).

It was only since the end of the 2oth; humanity; has questioning this dichotomous opposition between virtuality and materiality. The philosopher and designer Tomàs Maldonado raised questions about the impact that the New Information and Communication Technology will have on our future, and by examining this issue he asked if we are approaching the emergence of a dematerialized world, solely made up of ineffable entities.

In the 21st century, is it likely that we will have to deal with intangible realities, with illusory and evanescent images, and with something akin to a world populated by ghosts, hallucinations and ectoplasm? [3]

Through a suggestive examination, the Argentinian philosopher brought up an issue that was in stark contrast with the dominant currents of thought of the 90's: the inevitability of the physical substrate and of its experience, both on an individual and on a collective level. Indeed, on physicality he claims the following:

It [...] is part of ourselves, as we are the result of a phylogenetic process, both biologically and culturally. Within this process [...] the aforementioned experiential relationship played a decisive role. Like it or not, we are condemned [...] to deal with our physicality and that of the environment. [4]

Of a particular interest is also the analysis developed by Pierre Lévy on the elements that define the virtual. Keeping away from any axiological judgment he highlighted the close link between virtualization processes and the concrete material, social and cultural activities that man has undertaken during his evolutionary development.

Virtualization itself represents the essence, the cutting edge of the mutation taking place. As such, virtualization is neither good nor bad, nor even neutral, but manifests itself as the very process of humanity's "becoming other"— its heterogeny. [...] The virtual is by no means the opposite of the real. On the contrary, it is a fecund and powerful mode of being that expands the process of creation, opens up the future, injects a core of meaning beneath the platitude of immediate physical presence. [5]

The conclusions of the two scholars seem to be in line both with posthuman philosophy and the *extended mind theory*. The first emphasizes man's ability to graft into himself inorganic elements of a technological nature such as to radically change his inner and outer appearance, transforming him into a cyborg, the latter develops in a non-Cartesian sense a conception of the mind that integrates organism and environment starting from their unavoidable correlation also on the social level. These paradigms, together with the new stimuli coming from the philosophy of mind and neuroscience, seem to invite us to restructure the notion of aesthetic experience starting from a revision of the traditional concepts of perception.

Indeed, in the contrast to the so-called *death of distance* theorists, who predicted the downfall of the very concept of localization with the rise of the internet, and in contrast to the *transhumanists*, whose dreams of brain emulation still seem to belong to the realms of fantasy and

science fiction, for us, the input of the material plane remains (for now) unavoidable. But on the opposite end of the spectrum, we cannot conceive a physical substrate completely separated from the digital anymore, either. In our contemporary reality materiality and virtuality blend together in a confounding fashion. And by colliding into a *Gestalt*-like *unicum*, a new kind of reality arises: this is what we experience as *augmented reality*. Consequently, any dichotomous contrast between the two elements seems to lose its entire *raison d'être*.

In the 1960s, metabolist urban planners defined a new linear and rhizomatic notion of urban space, by borrowing the notion of the network from the sociology of information. Such a notion re-traced the same structure from simple vertebrate organisms, up to the human nervous system. Nowadays, given how digital society has become innervated in the IT network, organic metaphors have finally begun to be translated and implemented within urban spaces. The Sendai Mediatheque designed by Toyo Ito Media is a paradigmatic example of this trend: a liquid-like building, whose transparency displays a new kind of architecture where the hardware of the container seems to have dematerialized, just like the software of its contents. It is no coincidence that its architect has significantly stated the following:

> I compared mankind to Tarzan. In the jungle, Tarzan creates his own body and develops it in contact with nature; likewise, in relation to the surrounding environment, the modern man is a new kind of Tarzan who inhabits the world of media, within a highly developed technology. Architecture should become a sort of media suit, necessary for people to relate to the environment and integrate into it. [6]

The fusion between the physical-material plane and the virtual plane is also highlighted by esteemed geopolitical analysts such as Parang Khanna, who designates connectivity as the new paradigm of global organization. Nowadays, new forms of urban aggregations are constantly emerging, thereby advancing the ongoing process of unraveling the unity of the city. And through this unraveling, the city is inserted into global and a-spatial networks.

> Connectivity has replaced division as the new paradigm of global organization. [...] [It] is one of the main drivers of the great transition towards an increasingly complex global economic system. Economies grow more integrated, populations become more mobile and cybernetic domination is merging with physical reality [...]. [7]

Such an impoverishment and de-structuring of material space leads to the inevitable overcoming of the hierarchical relationships between center-periphery and city-countryside typical of traditional metropolitan models. Instead, a new model arises, characterized by a multidirectional reticular system akin to digital networks, in which post-cities [8] act as nodes/*servers* of a globalized and rhizomatic space. This leads to Jean Gottmann's *web-city*. [9] It is no coincidence that

geographers, architects and urban planners, starting from the mid-80s, have emphasized the need to radically overcome the traditional paradigms of urban representation. These traditional paradigms display a propensity towards control and security, by representing cities as discrete, defined and perimetric entities. This tendency emerges through precise delimitations that facilitate the bureaucratic needs of the government, which in turn paints a hierarchical picture of territorial space. But nowadays this territorial logic, which constitutes the theoretical foundation of Walter Christaller's hierarchy of centers,[10] is replaced by the interpretative model of the city-network. Not only is this new model capable of accounting for the new systems of global relations between cities and for their population flow exchanges, but it also serves to represent the new reconfigurations of the different local subjects of the urban *milieu*. This transition from traditional city structure to a global network system takes place as an expansion of the urban living space. This brings about more transient and rarefied borders, according to the same principles of fragmentation typical of the NICT (new information and communication technologies) and to the logic of the transnational global market.

Such new *Global Cities*[11] develop on the basis of the bonds of financial and commercial interdependence between them, although their geographical position doesn't necessarily make them a driving force for the impact of financial investments on the region they represent. Their supranational connective infrastructures tend to create a widespread urbanity, capable of redesigning and redefining traditional territorial environments.

It is not a case that today we are witnessing a continuous expansion of urban space which, in history, has never grown as much as it has in the last twenty years. Not only that, it is precisely the most connected megalopolises that exert a greater force of attraction.[12] The space of flows, as Castells had already intuited, not being able to consider itself either absolute or completely other than the physical dimension, combines virtual networks and material space. In their lack of neutrality, digital configurations become signifiers of the physical world, which however, far from being a passive agent, respond to the network's influence by influencing the network in turn. As Ratti analyzes: "the internet, a two-way interface, became a tangle of top-down and bottom-up energy"[13]. The two dimensions, the physical-material one and the digital one, colliding with each other, strengthen each other by projecting us into a future augmented reality whose tendency is the integration and indistinction of the two dimensions.

> even though the digital revolution did not kill urban spaces [...] it did not leave them unscathed, either. The rise of the internet, a *space of flows*, [...] did not eliminate cities but still had a profound impact on them.[14]

Cities are increasingly becoming a hybrid space of integrated atoms and bits, giving shape to the reality in which we are immersed on a daily basis. In a sort of *coincidentia oppositorum* between proximity and connectivity, a field of action is created which leads to the emergence of new forms

of sociability and new spatial practices. Already in 1999, in his essay *E-topia*, the architect William Mitchell spoke of the need to "extend the definitions of architecture and urban design to include both virtual and physical places"[15]. The new metropolis of the digital age is founded on an interdependence between software and hardware that can only take place through the mediation of the network.

To corroborate the impact that digital systems have on the physical space of the city, Ratti highlights how the urban space becomes the place par excellence in which this interaction takes place.

> In the smart city, an ecosystem of sensors collects information from the urban space, on which a series of operator can act, modifying it. Data-driven processes, transform the city into a testing ground; a mixed digital and physical space, unified by a distributed computing platform.[16]

However, since every interaction creates data, there is also feedback from physical space to digital space. In this sense, the post-metropolis becomes the realm of widespread information technology in which hi-tech multinationals such as IBM, Cisco, Panasonic, and Fujitsu, have an ever-greater impact not only on the design of urban spaces but also on the way in which we relate to this space and experience it. Just think of how many smartphone applications have actually changed our way of relating to the city. Nowadays seems almost impossible to not rely on applications such as *Google Maps* that are able to both, give directions and to provide us with the shortest route to get to the desired destination, through the processing of traffic data in real time. Not only that, these types of applications, as well as many websites, and more recently even social network, also help us find the restaurant to go to, or the place where we want to spend the evening, becoming, among other things, a real showcase both for commercial establishments – through which digital marketing strategies compete to win new customers - as well as a potential resource for municipalities which can promote the use of public spaces and events connected to them.

Furthermore, the use of these platforms seems to be a good example of the integration between bottom-up and top-down practices mentioned above. If on the one hand the contents that are presented to us, especially in the case of social networks, arise from an esoteric algorithm, on the other hand, the system of reviews and comments that these virtual spaces make available to users can have a real impact on the businesses, in some cases even with extremely negative outcomes as in the case of the so-called "shit-storms". A similar process also pertains the municipalities and multinationals that plan smart cities. On the one hand we have the digital urban platforms, where citizens can not only vote on urban initiatives but also collaborate and solve specific problems together, to citizens acting as sensors for private or public bodies by, for example, flagging problems or creating content.[17] On the other hand, this raises questions concerning control and surveillance.

As cities become "smarter" and increasingly connected with sensors and reliant on algorithms being fed large quantities of real-time data, the power centered in the administration of city services moves from the mayor's office and city council chambers to the control rooms, from officials who are responsive to democratic will to those processing the data.[18]

An example in this sense is the Intelligent Operations Centre in Rio de Janeiro. A facility built by IBM that brings together in one place real-time data from thirty different agencies. This includes data from traffic cameras, social media posts, weather stations and police patrols.[19]

It is true that control and surveillance have always been an important part of urban planning. One good example of this tendency is Edo, where the Tokugawa bakufu created the Yamanote gated lots and cul-de-sacs that still characterize the city's narrow alleys today. In the same way, the need of control and surveillance by political power, led Georges-Eugene Haussmann to acknowledge the military value of having broader and straighter streets to dispatch riots quickly, when he projected the Great Boulevards of Paris.[20]

However, in the last decade, the deployment of ICTs in the urban space opened up a completely new scenario. On one hand, these technologies that include, but are not limited to predictive analytics, drones, motion detection, IoT, 5G, and autonomous devices, can be used to improve the cities' services and their economic and security status.

In this respect, surveillance is often closely associated with the optimization of services (e.g., urban services) and, more often, with an increase in security and prevention. However, it can also, and very easily, be used to control and influence citizens' behavior in extraordinary detail and pervasiveness.[21]

    On the other hand, the peculiarity of this phenomenon is
the fact that people themselves are also participating in their own surveillance, including through wearable devices. [...] Personal fitness tracking devices and data can be used in smart cities to inform public health and population health data, urban planning and environmental monitoring, fitness trends and social network analysis, and personalization of health information. Other scholars have found that such self- quantification has ambivalent or even conflicting effects, being empowering, disempowering, and overpowering.[22]

Even the smartphones, that most of the people carry with them work as a repeater transmitting detailed location tracking information and data that are collected by private actors often without citizens' consent.

From an aesthetics point of view, it is clear that the ubiquity of digital devices and digital infrastructures that characterize our life and the contemporary city do not only modify urban space, but also have a profound impact on our corporeality. In fact, in order to be able to inhabit and experience such an environment, bodies must be able to integrate mechanisms and prosthetic

devices that allow them not only to interact with the digital substrate, but to digitalize themselves, at least partially. The perfect embodiment of this is the cyborg. It gives rise to an ambivalent process in which the partial reification of the body is counterbalanced by a process of humanization of the machine. The cyborg is a hybrid creature that does not arise from contingency, but from man's need to adapt to a digitalized environment; in this perspective it is therefore part of an adaptive process. If, as Maurice Merleau-Ponty states, "my body is made of the same flesh as the world",[23] then a phenomenal variation of the real – the inseparable integration between material and virtual – necessarily entails a bodily mutation.

This also has an impact on socialization and interaction between individuals. Partially entering the network, relationships are profoundly changed. Speaking of the Japanese giga-city and the places dedicated to socializing and meeting people, the philosopher Roberto Terrosi points out:

> By simply entering one of the many Starbucks-style cafés, one realizes that there is actually a crowd of people sitting alone, reading, consulting their smartphones or using their notebooks. The maximum of sociability is represented by some couples of boyfriends, friends, or students who go to study together over coffee. In other words, all these people already know each other and therefore cafe is not a point of socialization. [...] The standard within the giga-city is that of a generic sociability without contact. An aggregative sociability that does not resolve itself into a communicative sociability: practically the apotheosis of the solitary crowd. Often, however, all these people communicate with someone via smartphone, as they did before with i-mode mobile phones.[24]

This trend seems to involve the vast majority of urban agglomerations. It is undeniable that new form of communication and socialization stem from the social media.

This is made possible by the digital infrastructures which, despite their slight physical invasiveness, permeate the contemporary city in an increasingly all-encompassing manner, interpenetrating and overlapping the heaviness of traditional infrastructure. As Livio Sacchi highlights:

> The telecommunications sphere consumes little physical space and is, in many respects, relatively imperceptible, invisible, non-noisy, non-polluting, etc. In this sense it envelops the contemporary city as well as the city of history, it works for ancient European villages of medieval origin as well as for Asian megacities.[25]

As a set of individuals constituting the community, the notion of civitas is profoundly mutated, giving rise to an interactive hybridism that inseparably connects the material component with the virtual one. In fact, the digital revolution has made it possible both to belong to a small community from a material point of view and, at the same time, to be part of forms of international, if not global,

virtual communities.

However, this also increases the possibility of meetings between people. By crossing telecommunications data with those of face-to-face meetings, the Senseable City Lab has shown that there is a direct proportionality between digital interactions and physical encounters.[26] Therefore, if it is certainly true that there is a transmigration of communicative sociability on the Internet, it is equally true that often these forms of communication create new possibilities rather than limiting encounters. It is no coincidence that applications like Meetup have become very popular nowadays. Through this type of app, you can find local groups, social activities and events with people who share your interests or have similar hobbies.

But probably one of the most drastic cultural shifts in how we meet is dating apps. But one of the most cultural shifts on how we meet is probably represented by the dating apps. In Japan, for example, applications such as Omiyai, Pairs, or Tapple have partially replaced or overlapped more traditional way of meeting potential partners like kekkonsōdanjo (結婚相談所), gōkon (合コン), or machikon (街コン). Looking at data can give us a concrete idea of this trend. In the U.S. alone in 2023, online daters are expected to reach 35 million. Additionally, internet dating generated 2.86 billion U.S. dollars in 2022, with the market showing no signs of slowing down. Worldwide by 2027, it is estimated that there will be 440 million people seeking love through online platforms.[27]

Surely, meetings mediated by technology are not an absolute innovation in the history of humanity. The creation of the newspaper personal advertisements in the 18th Century or the proliferation of the companies that helped match couples through video making in 1980s and 1990s are two good examples of this.[28] What makes the phenomenon of online dating something completely new is not only the large number of individuals who use these apps. First of all, there is a change in the relational experience. The speed of the internet on the one hand and capitalist and marketing logic on the other can lead to relationships that are not only more liquid and less stable, but also consumable, disposable.

In this sense, words like "situationship" seem to stem from the need to define a new state of affairs and relational phenomena, at least partially new. A "situationship" is in fact a casual, undefined, commitment-free relationship that promises to give you the chance to enjoy the benefits of a relationship without expending too much emotional energy. Even the increase in ghosting experiences, reported and perpetrated by many users, appears to be a perfect reflection of the speed and the disposability of the relationship. The term refers to: «unilaterally ceasing communication (temporally or permanently) in an effort to withdraw access to the individual(s) prompting relationship dissolution (suddenly or gradually) commonly enacted via one or multiple technological medium».[29]

This is connected to the second aspect that makes online dating a completely new phenomenon: the hegemony of the impact of the body image. Thanks to the structure of the dating apps, in which images usually occupy the entire screen, the selection of potential partners is based primarily and largely on visual affordance.[30] Furthermore, the intrinsic gamification dynamics that

characterize these apps can make the online dating equivalent to a form of entertainment.[31] "As a consequence, this swiping logic may create more emotional distance toward other users and less investment in dating relationships".[32] Due to the influence of SNS mixed with the logic of the liberal market, on dating apps, users expose themselves as if in a showcase, fostering the idea of the body as a commodity that expanded following the dynamics described by Guy Debord in The *Society of the Spectacle*.

It is clear that the rise of new information and communication technologies have drastically and inevitably revolutionized people's perception of their own bodies as well as those of other people. The meticulous presentation of one's outer appearance becomes the main focus of online social actors to approach others within a global dimension. That is not all: digitalization, through an interactive extension just as somatic as it is psychic, allows for forms of bilateral cybernetic exchanges that are absent from more traditional kinds of mass-media. All these aspects lay down the foundations for a diffused anesthetization process. On the one hand, this turns the body into a ubiquitous entity. On the other hand, this new dynamic replaces various kinds of intermediation processes in favor of new forms of direct virtual contact.

Considering this, it is no coincidence that the digital revolution tends to transform if not replace the traditional relationship between fans and VIPs with that between followers and influencers.

> Within traditional mass-media the perfect body of an actor or athlete represents a distant ideal, whose aesthetic perfection seems unreachable to the fan. Thus, that body is pervaded with the last remnants of a fading metaphysics. In contrast, the relationship between follower and influencer completely overthrows this paradigm. The Internet eliminates the very concept of distance or at least, creates the illusion of breaking down the barriers, simulating a direct relationship between who gets followed and who follows. The influencer is separate from myself, but at the same time seems like a potential version of myself. That is because the influencer represents the *everyman* who rises up to become an ideal; but instead of being an unreachable ideal, it is an ideal that could potentially be similar to myself.[33]

Such a relational dynamic is based on para-social psychological mechanisms. As if through a pane of semi-reflective glass, I get the impression that the other person is looking at me, even though they are actually looking at their own reflection. As some survey strongly suggest, among generation Z and younger millennials, Youtubers and influencers are better-known and perceived more positively than famous actors, athletes, or singers.[34]

Through this excursus, it becomes evident that ICTs and New Media, due to their inherent lack of neutrality, function not solely as agents within the physical world but also as signifiers of it. We exist in an augmented reality that combines atoms and bits, where the internet and the material substrate seamlessly intertwine, creating a feedback loop in which the influence of one

corresponds to a modification of the other. However, if we regard human beings as an integral part of the environment they inhabit, this transformation of the living space could potentially lead to the evolution of humans into cyborgs. These two facets are intricately woven into the same process: the increasing intensity and ubiquity of digital interfaces both extend and enhance human capabilities on one hand, while on the other, they give rise to new, distinct challenges.

Note

1）W. H. K. Chun, *Control and freedom: power and paranoia in the age of fiber optics* (The MIT Press: 2006), 2.

2）M. Foucault, *Of Other Spaces*, trans. by A. M. Sheridan Smith, diacritics (Spring 1986), 24.

3）T. Maldonado, *Reale e virtuale,* trans. by the author (Feltrinelli 1992), 9.

4）*Ibidem.*

5）P. Levy, *Becoming Virtual*, trans. by R. Bononno (Plenum Trade 1998), 17.

6）T. Ito, *Toyo Ito: design boom interview*, http://www.designboom.com/architecture/toyo-itodesignboominterview/, 12 November 2012.

7）P. Khanna, *Connectography*, (Random House 2016), 27-28.

8）The term post-metropolis, or post-city refers to the new urban form deriving from a radical transition process that has its beginning in the modern city and in which elements of deterritorialization and reterritorialization linked to global as well as local dynamics converge. The post-metropolis also leads to the advent of a new spatiality which tends to cancel the distinction between urban and non-urban. E. W. Soja, *Postmodern geographies. The reassertion of space in critical social theory* (London: Verso Press, 1989); E. W. Soja, *Postmetropolis. Critical studies of cities and regions* (Oxford: Blackwell Publishers, 2000).

9）J. Gottmann, "What Are Cities Becoming the Centres of? Sorting Out the Possibilities", in R. V. Knight, G. Gappert (ed.), *Cities in a Global Societies* (Sage Publications 1989), 57-68.

10）W. Christaller *Die zentralen Orte in Süddeutschland* (1933)

11）S. Sassen, *The Global City: New York, London, Tokyo* (Princeton University Press, 1991).

12）C. Ratti, *The City of Tomorrow* (Yale University Press 2017), 15.

13）*Ivi.* 14.

14）*Ivi.* 18.

15）W. Mitchell, *E-topia* (MIT Press 1999), 58.

16）C. Ratti, *The City of Tomorrow,* 19.

17）M. Ziosi, B. Hewitt, P. Juneja, M. Taddeo, L. Floridi, *Smart Cities: Reviewing the Debate about their Ethical Implications*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4001761 , 9th Aug 2022.

18）*Ibidem.*

19）R. Kitchin, "The real-time city? Big data and smart urbanism", *GeoJournal*, 79(1), 1–14. https://doi.org/10.1007/s10708-013-9516-8, 2014

20）S. Andrews, "Paris upside down: The city under Haussmann's renovations", *The Vintage News*, https://www.thevintagenews.com/2017/03/17/paris-upside-down-the-city-under-haussmanns-renovations/

21）M. Ziosi, L. Floridi, et al., *Smart Cities: Reviewing the Debate about their Ethical Implications*, p.9.

22）*Ivi.* p. 10.

23）M. Merleau-Ponty, *Le visible et l'invisible*,

24）R. Terrosi, "Tokaido giga-city. Il Giappone tra post-città e CPS society", *Alfabeta 2*, https://www.alfabeta2.it/2018/11/11/tokaido-giga-city-il-giappone-tra-post-citta-e-cps-society/, 8th Nov. 2018.

25）L. Sacchi, *Tokyo-to* (Milan: Skira 2004), 228.

26）F. Calabrese, Z. Smoreda, V. D. Blondel, C. Ratti, "Interplay Between Telecommunications and Face-ToFace Interactions. A Study Using Mobile Phone Data", in *PLoS ONE* 6, n. 7, 2011.

27）S. J. Dixon, *Online dating worldwide - Statistics & Facts*, Statista. https://www.statista.com/topics/7443/online-dating/#topicOverview

28）J. S. Wrench, N. M. Punyamount-Carter, "From The Front Porch to Swiping Right: The Impact Of Technology On Modern Dating", in J. S. Wrench, N. M. Punyamount-Carter (ed.), *The Impact Of Social Media In Modern Romantic Relationship* (New York, London: Lexington Books 2017), 2-3.

29）L. E. LeFebvre, "Phantom Lovers", in J. S. Wrench, N. M. Punyamount-Carter (ed.), *The Impact Of Social Media In Modern Romantic Relationship*, 220.

30）L. S. Chan, "Who uses dating apps? Exploring the relationships among trust, sensation-seeking, smartphone use, and the intent to use dating apps based on the integrative model", *Computers in Human Behavior*, 72, 2017. https://doi.org/10.1016/j.chb.2017.02.053

31）E. Timmermans, J. Van den Bulck, "Casual sexual scripts on the screen: A quantitative content analysis", *Archives of Sexual Behavior*, 47, 2018. https://doi.org/10.1007/s10508-018-1147-1

32）E. Timmermans, A. Hermans, S. J. Opree "Gone with the wind: Exploring mobile daters' ghosting experiences", *Journal of Social and Personal Relationships*, 38, 2, 2020. https://doi.org/10.1177/0265407520970287

33）F. Farnè, "Images Of Beautiful Body In The Internet Era", in C. Craig, A. Ozaki, R. Milani (ed.), *Images, Philosophy, Communication* (Milan-Udine: Mimesis International 2022), 188.

34）Todd Spangler, "YouTuber PewDiePie Is More Liked Than LeBron James Among Gen Z Males, Study Finds", *Variety*, October 5 (2019), https://variety.com/2019/digital/news/pewdiepie-lebron-james-gen-z-influencerstudy-1203393503/