Proceeding Paper

Everybody Lies: Misinformation and Its Implications for the 4th Space †

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Abstract: Combining earlier spatial typologies of places and communities with computer-mediated communication technologies, Hardegger developed the idea of the 4th space. Given that misinformation has become a crucial problem in many online environments over the course of the last few years, this article attempts to assess the implications of this development for the 4th space. This article begins with an analysis of people's tendency to lie in different environments. Afterwards, properties of the 4th space are assessed that create opportunities for misinformation-based communities to emerge. Finally, open questions in relation to misinformation and the 4th space that deserve further attention are addressed.

Keywords: 4th space; misinformation; conspiracy theories; virtual communities

1. Introduction

"It's a basic truth of the human condition [...]", Dr. Gregory House tells his audience in the eponymous TV series, "[...] that everybody lies. The only variable is about what." Although this might seem somewhat exaggerated, lying nevertheless is a fundamental aspect of everyday life. Research points out that people tend to lie at least once per day. Oftentimes, these lies are self-serving—people lie to appear "kinder or smarter or more honest [...] and to protect themselves from embarrassment or disapproval or conflict" [1] (p. 991). Lying can be used to achieve social goals by helping others at the expense of the liar or in a way that helps both the liar and another third party [2,3]. Subsequently, lying is understood as a practice that serves to deceive others deliberately.

Unsurprisingly, the internet is full of lies. Very few people (16–32% of participants) report to be always honest across different sites found on the internet (e.g., social media, online dating, anonymous chat rooms) and only a fraction (2%) expects others to stick to the truth at all times [4]. Comparing computer-mediated communication and face-to-face interaction, research found a higher frequency of deception when information and communication technology (ICT) is used, which indicates that reality distortion might be the norm online [5].

Aside from lying, research on misinformation has gained prominence over the last few years, especially concerning its dissemination online and its effect on recipients. Misinformation is commonly understood as information that is incorrect or misleading [6], yet it is not deliberately used to deceive people. In contrast, disinformation is purposefully employed to manipulate its recipients. Disinformation often blends misleading and true information to achieve its goals and is in many cases spread by organized actors, e.g. intelligence agencies [7]. A special case that lies at the intersection of misinformation and disinformation is conspiracy theories. Most commonly, conspiracy theories refer to the causes of significant social and political events that are attributed to powerful actors with malevolent intentions [8]. Beliefs in conspiracy theories are subsequently termed conspiracy beliefs.

In this article, I will discuss information-based deception in the context of Hardegger's 4th space. To begin, there is a section on lying and its implications across the typology of

places by Oldenburg, Brissett and Morisson [9,10]. Afterwards, I point out the properties of the 4th space that make it an effective environment for the dissemination of misinformation, before concluding my contribution to this developing concept by pointing out some of the open questions in relation to misinformation and the 4th space that deserve further attention.

2. Lying across Place and Space

Hardegger builds his conceptualization of the 4th space on the basis of Oldenburg and Brissett's typology of places [9], which differentiates between three environments: the home and its inhabitants ("first place"), the workplace ("second place"), and places where "people gather primarily to enjoy each other's company" (p. 269), such as cafés, bars, and restaurants ("third place"). With the emergence of the knowledge economy, this separation is increasingly blurred [10]. As places overlap, so do the respective activities that characterize them. Morrison calls the resulting social environments comingling (first and third place), coworking (second and third place), and coliving (first and second place). Additionally, he identifies a fourth place, which represents the intersection of the first, second, and third place, which further blurs the lines between these spheres.

Hardegger's conceptualization adds another layer to it: with the introduction of the virtual space, the 4th place evolves to a 4th space, in which an individual is both present in the physical world as well as the virtual space. However, the connection to the virtual space is an indirect one, as individuals cannot enter the virtual realm without a computer that serves as a mediator, which Hardegger calls the medium. As a third component of the 4th space, Hardegger identifies time. In the virtual space, communication can be both synchronous and asynchronous, and individuals can directly talk to each other using videoconferencing tools or text messengers but can also leave voice or text messages for the recipient to interact with and respond to later. In parallel, the individual is present in the physical world and might interact with another person face-to-face. The 4th space is therefore understood as a multidimensional setting in which individuals can interact with others in multiple alignments of time, space, and through various media.

As complex as these different typologies are, the contexts in which people tend to lie are similar. In general, people tend to lie more frequently to strangers than to close friends. If individuals plan their deception, they more often use text messaging than other forms of communications and are more likely to tell them to people they feel close to [11]. As mentioned earlier, the use of communications technology seems to make people more willing to lie [5].

Accordingly, lying and its costs differs across the four places under assessment. At home, frequent and exposed lying might cause serious problems with people's family or significant others, a loss of trust, and, eventually, an exclusion from the family. At work, being caught lying can damage the career and cost liars their jobs. In the third place, the sphere of recreational activities, relationships with friends can suffer when lies are exposed; given that these relationships are based on affection, it is unlikely that one enjoys the company of someone who does not care to stick to the truth. Morisson's fourth place constitute a special case, in which there are strong interconnections between private and professional spheres that can spill over and amplify the effects of exposed lies. Hardegger's 4th space finds itself somewhere in between the first place and the fourth place in this respect; while physical relationships are arguably more difficult to switch, finding new online communities does not necessarily incur the same costs as the physical equivalents.

Except for the fourth place, the consequences of lying arguably decrease from a loss of close intimate relationships at home (e.g., romantic relationships), over employment issues at work, to lost friendships at the third place. Simultaneously, the ease with which communities can be switched increases. Finding a new romantic partner and founding a family is certainly more difficult than changing jobs or switching an online community. This low-cost, high-mobility environment virtual communities find themselves in increases the chance of people engaging in deceptive behavior.

3. Misinformation in the 4th Space

People do not solely lie for the sake of deception or self-serving purposes but might also be genuinely seeking answers that they cannot find in their regular social environment, making them prone to engage with conspiracy theories. The following section discusses how the characteristics that make the 4th space can gives rise to communities built around misinformation.

3.1. Misinformation-Enabling Characteristics of the 4th Space

Three properties make the 4th space an especially nourishing environment for misinformation: persistence, diffusion, and "conspiracy economies of scale".

If you consider virtual communities not limited to verbal communication, which use, for example, a messaging board or social networking site, misinformation often remains indefinitely accessible. As long as neither the moderators nor the author decides to remove misleading information, new users might encounter them long after it was initially published. It can therefore easily spread and reach many people just because it remains online. This persistence makes virtual communities that lack content moderation an ideal tool for misinformation agents to spread their deceptions, but also a wealthy source of information for those individuals who seek to immerse themselves in this type of content.

Beyond that, as the 4th space permeates through communities and life situations, misinformation is more easily diffused here than in the other places. The hybridity of the 4th space allows its members to share information they encounter in their virtual community in their physical one, e.g., telling their family members about the supposedly true origin of the Coronavirus or the truth behind 9/11. Misinformation is therefore not bound to the virtual space but can permeate at any time to other places. It also reaches individuals in the 4th space in situations in which they feel anxious, are losing control over their lifes, or have negative emotions. In the case of conspiratorial thinking, individuals seem especially likely to adopt these beliefs when their existential needs are threatened [12]. Research in the context of the ongoing COVID-19 pandemic has shown that a perceived lack of control and feelings of anxiety can increase an individual's propensity to adopt conspiratorial thinking [13].

The third aspect concerns what I call the "conspiracy economies of scale". Once individuals are embedded in conspiracy-prone communities, they frequently encounter a large number of fellow believers that serve as a protection against feelings of doubt and foster further conspiratorial thinking. Research provides evidence that people who believe in a certain conspiracy theory oftentimes believe in other theories as well [14], even if they are contradictory, indicating an underlying support for conspiracy theories in general [15]. It is therefore likely that pre-existing tendencies to adopt conspiracy beliefs are nurtured by the continuing supply of conspiracy theories. Furthermore, the 4th space does not come, by default, with constraints to conspiratorial thinking. Arguably, most conspiracy beliefs are not openly discussed in the other four places, as they would likely illicit fierce rejections from family members, friends, or colleagues—especially if the conspiracy theories touch sensitive issues such as COVID-19. In these places, conspiracy theories are hence debunked swiftly and the person bringing up these topics might face social punishment, in terms of damaging relationships or one's status and reputation. If people are anxious about losing their loved ones, they might restrain themselves from sharing their beliefs [3]. The conspiracy economies of scale therefore tend to increase the supply of conspiracy theories available to willing consumers and, in parallel, reduce the costs of further engaging with them, as social punishment by others becomes unlikely, as long as discussions remain in the dedicated virtual community.

3.2. Misinformation Communities in the 4th Space

Although conspiracy communities can thrive in the 4th space, they are hardly the only communities individuals can engage with. From online dating [16,17], gaming [18], and, in more general terms, "groups of people with shared interests" [19] (p. 449), various

communities flourish online. In each of these communities, different norms emerge over time that govern the behavior and expectations of their members, making them more or less prone to misinformation.

As Morisson pointed out, the fourth place is especially relevant for the knowledge economy, as it serves to "foster networking, to promote mingling, and to favor collaboration, face-to-face interactions, and the exchange of tacit knowledge" [10] (p. 5). In communities that emerge in these environments, it seems unlikely that individuals remain part of these communities for a longer time if they repeatedly deceive their colleagues. Assuming that misinformation is most prevalent in virtual communities, it is reasonable to assume that there will be an ever-growing number of communities that develop as a result of individuals seeking to engage with misinformation and are excluded in other environments. The anonymity granted by the virtual space helps these individuals to connect to like-minded others, without inhibiting social cues and norms, that might otherwise not have found each other [20]. However, once these online communities have been established, they can reach into the physical world.

4. Conclusions: Addressing the 4th Space of Misinformation

There are qualitative and quantitative differences between misinformation communities that emerge in the 4th space compared to communities built in other places, such as the home, workplace, or recreational locations. Deceptions—either through lies, misinformation, or conspiracy theories—go beyond an immediate social purpose in the 4th space. While lies at home or at work are many times told to avoid blame and are frequently not planned [3], the 4th space enables communities entirely based on misinformation, oftentimes embedded in overarching belief systems. Misinformation is spread easily and with little cost in the 4th space, reaching a potentially large audience within virtual and physical communities. Additionally, misinformation might be less frequently, if at all, debunked in 4th space communities, given that these groups might be dedicated to the discussion of these false claims or conspiracy theories, without the presence of critics that might otherwise questions these claims. This highlights the effects of fragmented social spheres that help to strengthen members'—and are therefore likely to polarize—beliefs in ideas that are otherwise perceived to be outrageous. The time-indifference of the 4th space can contribute to the problem, as misinformation remains accessible and can therefore self-proliferate; new members of the community can search through old messages and engage with them, even if their authors have changed opinions but failed to delete their now obsolete postings.

The issue of spillovers should also be considered when discussing misinformation in the 4th space. As Hardegger stated, individuals can be present both in the virtual space as well as the physical world at the same time. This makes it likely that people who encounter pieces of information online that they find particularly interesting can share those pieces with their environment in the physical world, potentially creating spillover effects where 4th space misinformation communities reach out into the real world. Although constraints in the physical world, such as debunking efforts by peers, might reduce the uptake of misleading beliefs, especially when people experience feelings of powerlessness and a lack of control, they might more easily driven towards these communities and further engage with them [13].

Many questions remain in relation to misinformation and the 4th space. Further research needs to investigate how misinformation, and especially conspiracy theories, affect community building in the 4th space. It seems plausible that communities that emerge around misinformation exclude those who do not willingly adopt them, and those communities unwilling to engage with misleading claims might, respectively, exclude those who share them. This can be seen as the emergence of social norms, which regulate the diffusion of misinformation. Beyond that, the impact of misinformation spillover to other places demands further analysis. If the presence of misinformation in the virtual

space proliferates even further, it is likely that its impact on the physical world might also increase over time.

Ironically, ICT's potential to give us access to an unprecedented wealth of information and knowledge and that creates the 4th space is also enabling misinformation to spread widely. Although it is not a novelty that information is used to deceive, today's overwhelming volume of information that individuals encounter every day and the almost unlimited access to it creates vast opportunities for manipulation. With virtual reality on the horizon, which unquestionably will have implications for virtual communities and, therefore, the 4th space, it is likely that the problem of misinformation will become even more severe. Eventually, it remains a basic truth of the human condition that everybody lies—even if that human is digitized.

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