

Research Article

COVID-19 and Social Distancing: Impact on Communication, Learnability and Mental Health

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ABSTRACT

Background: The new coronavirus (COVID-19) pandemic has had an unprecedented impact on the methods and assumptions underlying most fundamental basic human communication. The new definition of 'social distance' calls for a reexamination of social, psychological and interactional rules of engagement both in terms of interpersonal and intercultural communication. Factors related to 'fear' and 'anxiety' have reshaped the non-verbal and verbal rules of phatic communication. **Objectives:** The aim of this paper is three-fold: (1) to explore the two-dimensional conception of 'social distancing' in formal and functional terms and to examine the causes which underlay the emergence of new lexicon and the novel ways of communication impacting phatic and constative communication; (2) to study how masks and media transmit critical messages and construct new social identities; (3) to investigate the educational challenges of remote teaching to educate our young. Interwoven through our discussion of the three areas above will be an examination of the implications of COVID-19-related deprivation of sensory experience and social interaction and the effects of the resulting social isolation on human behavior and the human brain. **Methods:** This paper reviews relevant literature in linguistics and social sciences, advertising, technology and education to examine the impact of COVID-19 on (1) personal/interpersonal space, (2) communication through digital and other media, and (3) educational assumptions and practice. Observational data are also included. **Findings/Conclusions:** Most languages of the world are struggling to fill a lexical gap to capture the denotative and connotative meaning and content associated with and lost as a result of social distancing and social isolation. Masks and media play a new role in conveying the message of COVID-19. The digital media (virtual media) has taken precedence over face-to-face communication.

This shift in communication preference has serious ramifications in the arenas of social interaction and education.

Keywords: COVID-19, Interpersonal zone, Isolation and brain changes, Language change, Online learning, 'Proxemic' theory

INTRODUCTION

In the age of COVID-19, historical and cultural ways of human communication are undergoing radical changes, which have transformed the landscape of how social space is organized and how phatic and content-based communication is carried out at the global level. In this paper, we will first explore the traditional and socio-cultural organization of space (personal space) and its role in human communication. In that, we will explore new terms, their defining features and new (COVID-triggered) meanings, which have added a new cognitive dimension to the theory of 'proxemics'. The second and the third part will deal with the impact of the deadliest pandemic on new identities, the critical message to the public in media and the challenges of delivering content via technology, particularly in the education of children and adults. This section will end with the impact of social isolation on the brain. Finally, conclusions will be presented with recommendations for additional research and practice.

SOCIO-CULTURAL REORGANIZATION OF SPACE

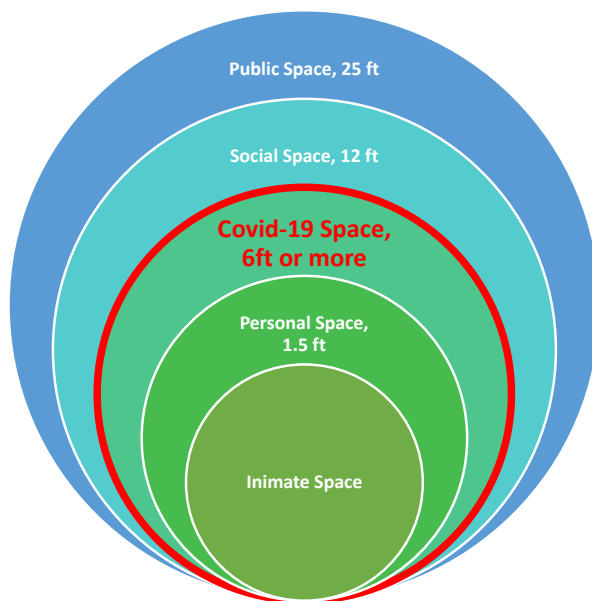
The theory of proximity (also termed 'proxemic' theory) deals with the socio-cultural organization of space. Accordingly, there are four types of human territorial space: (a) *Public territory* is a place which open to public, rarely under the control of an individual; (b) *Interactional/social territory* is a place where people congregate informally in a social space and where spatial boundaries are honored by interlocutors; (c) *Home territory* is an intimate place where individuals carve and control their spatial territories; and (d) *Body territory* is a territory which involves personal space. The physical parameters of and norms for these different types of space are determined by socio-cultural variables including gender, ethnicity and age among others (Smith, 1981). Social distancing norms or social zones in turn determine social interactional behavior and etiquette.

What is noteworthy is that social or individual zones are socially and culturally variable, yet they are subject to rules and governed by largely unconscious group norms of social distance. To be clear, the term 'social distance' is used in its traditional sense. Here, we are not talking about the 'social distancing' required by COVID-19. Personal space is also variable based on personal and cultural preferences (Hall, 1966; Sommer,

1969). Hall (1966) distinguishes between contact and non-contact cultures. Contact cultures, such as Southern Europe and Latin America, use closer interpersonal space and engage in more touching and hugging. Non-contact cultures of Asia and North America exhibit preferences for larger social distance and, generally, do not prefer touching or hugging. A 2017 study by Sorokowska *et al.* on preferences for interpersonal distancing at the global level found that personal space preferences with respect to strangers ranged between >4 feet (120 cm) in Saudi Arabia and <3 feet (90 cm) in Argentina and Peru (Kreuz and Roberts, 2018). Furthermore, research on cross-cultural distancing shows that violation of personal space has serious consequences both for violators and violated. Although violators are subject to severe negative evaluation (they can be viewed as rude and uncultured intruders), the violated experience negative reactions that include both physical (blood pressure) and mental/psychological symptoms (anger, frustration). For a detailed discussion of the consequences of personal space violations, see Sawada (2003).

COVID-19 has added a new dimension to social distance, which is rather global in nature with an impact both on contact and non-contact cultures. As shown in the Figure 1, a third layer (in red) has been added to the traditional personal and social space of both contact and non-contact cultures. This layer intersects/overlaps the second (personal) and the fourth (social) circle. In order to avoid the risk of being exposed to the new coronavirus, social distance between almost all interlocutors is set to at least 6' on a global basis. With the global lockdown, social isolation has become a new normal of daily life. These new conditions call for a recontextualization of human communication on one hand and highlight the tug of war between the two competing (traditional and new COVID-required) norms on the other. Although the traditional norms of social distancing are largely unconscious, the new norms are essentially conscious, adding new challenges and conflicts to interpersonal communication. Our world has been engulfed by the global coronavirus; even the natural reflex to speak with acquaintances or friends has a bumpy start. Prior to COVID-19 in Western cultures, eye contact has been traditionally associated with honesty and transparency. We make eye contact when we wish to initiate a conversation. An observational data collected by the first author (from May to July 2020) and informal interviews within his network, we found that it is becoming more common to avoid eye contact during the COVID-19 pandemic. Does this mean that we are reluctant to make conversation? The handshake, an additional hallmark of social communication, has become a casualty of COVID-19. For the past 3–4 months, none of my university colleagues have extended their hands for a handshake. At the end of this summer, when our gardener wanted to shake hands to say we will meet again next summer the first author struggled to accept that warm handshake, knowing the potential risk very well. I did accept the

Figure 1: New Social Space



handshake, but with a lot of discomfort. The rejection of a handshake would have been costly in terms of social relations and in terms of politeness, especially because my gardener belongs to a minority group. Individuals across the planet face the same small struggles every day, when norms of what is traditionally acceptable or polite come into conflict with what is safe in the COVID-19 pandemic.

In the new pandemic context, the term ‘social distancing’ is an emergent new term, which had previously been lacking in most languages of the world. This English-language term is sometimes employed as a stopgap to fill the corresponding lexical gaps in other languages. As a more permanent solution, translational equivalents are being coined with some degree of success across languages. For instance, in Hindi, the literal translation of social ‘distancing’ is *saamaajik* ‘social’ *duurii* ‘distance’. Another translation equivalent introduced is *tandoori*, after the Indian cooking style. Now *tandoori* has come to represent a polysemic term—*tan* ‘body’ from Sanskrit and *doori* ‘distance’ from Hindi. The morphological structure of the coined word is different from the Indian cooking style. Even though a bit light-hearted, it is a close approximation of ‘physical distancing.’ Along with linguistic innovations in different languages that the term ‘social distancing’ has come to represent, the new linguistic reality is that the English language has introduced a new word in the global lexical stock, even though COVID-19 originated in China. Moreover, if new lexical innovations such as *tandooii* gain social currency, they will trigger syntactic and semantic changes as evidenced by new conjunct verb constructions such as *tadoorii rakhnaa* (‘keep’ socially distant),

tandoorii honaa ('to be' socially distant). Sometimes simply the English word *social distancing* gives rise to mixed conjunct verbs with Hindi dummy verbs such as *rakhnaa* 'to keep', *honaa* 'to be', *karnaa* 'to do'.

Associated with 'social distancing', another new term 'social isolation' has been added to the global lexicon. The English term is synonymous with the lock-down order imposed by governments around the world. In that respect, the term is also reflective of government policies regarding personal space. In addition, it carries the overtones of volunteer isolation by those who have been exposed to the virus and who are at risk for coming down with COVID-19, and thus might practice self-quarantine volunteer isolation (2-week self-quarantine). Thus, the term is naturally distinct from the 'social loner' phenomenon described as Hikkimori in Japan (see Furlong (2008) for discussion). Whereas Hikkimori withdraw from society for largely self-motivated reasons, the decision to isolate under COVID-19 is made at least in part out of a concern for keeping others safe from disease.

COVID-19 culturally sanctioned social distancing is a hallmark of human social relations and warmth, which in turn regulates the rules of phatic communication and normal face-to-face communication. To begin with, new norms of 'social distancing' or physical proximity have stretched the boundaries of the traditional personal space zone, and these new boundaries are too far for comfort in most cultures. Thus, the push and pull between COVID norms and the culturally mediated norms continues. It remains to be seen whether this push and pull will yield only temporary discomfort, or whether cultures will adopt new norms and strategies to make the new uncomfortable space comfortable.

Even within one's own social group, the dilemma to engage in social rituals or not also weighs in. Reluctance to make eye contact between acquaintances signals desire to not to talk; one acquaintance is not acknowledging the other. Avoiding eye contact is reported to be relatively more prevalent during the COVID-19 period. When communicating across social circles, it becomes clear that some groups are more at risk than the others. We avoid direct contact with older and medically fragile individuals for fear of spreading the disease. Unfortunately, the unenlightened in our society avoid Chinese Americans, erroneously connecting them to the COVID-19 outbreak. For whatever reason, such groups are more shied away than before. There is an additional type of sometimes forced social isolation of these groups, and this new social isolation has serious impacts on interpersonal communication. Consequently, phatic communication is being reshaped, not only between in-group members but also across different social groups. Avoidance has gained primacy in the new mode of communication (Murphy, 2016). In short, due to the new official requirement of the

minimum of 6 feet of separation, normal phatic and informative communication has become more stressful than in the pre-COVID era.

Beyond avoidance, exclusion and linguistic change, new modes and degrees of interpersonal contacts are evidenced in both contact and non-contact cultures. For example, the Prime Minister of United Kingdom resorted to an Indian greeting of folding hands with a bow rather than a handshake. At a Democratic Party Debate, two presidential hopefuls Joe Biden and Berny Sanders replaced the handshake with the elbow bump. The Wuhan shake, a handshake named after the city where COVID-19 is emerging, is another COVID-stimulated manifestation of greeting behavior among the youth. The search for alternatives to hugs, kisses and handshakes points to a long-standing, socially ingrained sense of the significance of contact, and a feeling of loss now that this contact is somewhat impaired. If one out of natural reflex extends his/her hand to show warmth and is rejected, the social consequences of this discomfort have wide-ranging consequences including refusal to engage in social conversation.

Fear and anxiety have become the new drivers of communication, which in turn involve linguistic negotiation of personal zones or boundary styles (Adams, 2020) to make sure both interactors are on the same page with respect to communicating under the new normal of adhering to desired precautions. This negotiation even occurs among close friends. Communicative behavior between family members is not free from the fear of bringing the COVID virus home from outside activities on one hand and how best to protect adults and children on the other hand.

There is a group who is in the state of denial of the COVID reality. These individuals are enraged by what they see as a conspiracy, and they view the coronavirus pandemic and its concomitant restrictions as a pretext for oppression. Communication between skeptics and believers lends itself to antagonistic communication. Hugo's Tacos, a Los Angeles taco chain, was forced to close because its employees were unable to deal with the volume of confrontations that ensued over the store's mask mandate. The New York Times reported that in one location, employees observed as many as five confrontations in an hour, simply over the requirement to wear a mask while at the store (Bromwich, 2020). Will this antagonistic communication take place within the intimate space, where fights tend to occur, or will it take place within the COVID-19 space, where 'COVID believers' wish all interactions to occur? This question and all the above questions about COVID-mediated communication underscore a massive shift in phatic and informative interactions. As a result of COVID-19, the discourse practices of social communication are undergoing transformative changes. Will social communication return to the state prior to COVID-19? The answer is somewhat debatable. According to Adams (2020), 'some changes in how we interact with others

may be temporary while others could be long-lasting.’ The antagonistic communication which we have alluded to did not begin with COVID-19. There has been a noticeable uptick in ‘hate speech’ for many years. The Trump presidency has harnessed this increase in vitriol, and communication in the media, political and social arenas has continued to lose civility. This antagonism did not start with COVID-19, and so cannot be predicted to end with the end of the pandemic. All signs point to antagonistic COVID-19 communication as simply a different manifestation of the ‘hate speech’ that has been on the rise for some time.

NEW IDENTITIES, IDEOLOGIES AND MEDIA

The physical objects such as masks and plexiglass shields have further intensified interpersonal psychological distancing. A mask, for example, has become a marker of group identity with ideological overtones. The mask-wearing group and non-masked group display antagonistic behavior toward each other to an extent that engenders abusive and aggressive behavior. A case in point is the incidence of violent clashes between the defiant (non-masked) and conformist (mask-wearing) groups. At Hugo’s Tacos, frustrated customers sent threatening emails about the chain’s mask mandate, used racist language, and even threw cups of water at employees in the drive through (Bromwich, 2020). Finger pointing is also a common occurrence in the COVID-19 pandemic. For example, actress Sharon Stone publicly assigned blame to non-mask wearers for her sister’s COVID diagnosis. The conformist/mask-wearing group is usually an educated group who advocate protective face coverings in the public domain. The defiant/maskless group adhere to the traditional practice of not covering the face, symbolizing their belief that COVID-19 is a myth. The conformist group requires a mask to be worn in public, but even more importantly, in an appropriate way. This group holds the other accountable for the spread of the deadliest disease. A case in point is the recent reporting of a violent clash that occurred in a US department store between a female who reminded another partially masked female to wear her mask properly. For some groups, however, reminding someone to wear mask violates the rules of politeness and human rights. In the final analysis, it amounts to hate speech. Conflicts and confusion regarding space, face coverings and communication only serve to increase tension in this most stressful era in world history.

In spite of intrinsic negativity and stress caused by the pandemic, advertisers, poets, creative writers, fashion designers among others have seized on this opportunity to create public awareness towards the virus by transmitting uplifting messages. This marks a departure from gloom and doom messages and the pessimistic (even ideological) approach in much current political and journalistic discourse. To spread the awareness of the COVID pandemic, advertisers around the globe have advocated

and highlighted resilience to create positive content in their ads. For instance, using a globalization approach, Nike's English ads took advantage of the opportunity to echo a value-laden message of staying healthy in these difficult times, not to feel like caged animal but more like a warrior in sweatpants. Acknowledging tough realities, Ford made an ad explaining how its mass-production of ventilators during that the pandemic is comparable to its mass-production of tanks and other war vehicles during World War II. Hyundai offered to give its customers the opportunity to return their cars if they are experiencing financial difficulty. The media, at the very least, promotes a spirit of togetherness and strength in the face of the challenges we all share because of the COVID-19 pandemic.

Creative designers around the world have responded to the pandemic with positive themes and slogans such as 'stay together, stay safe'. They have transmitted their upbeat messages on face masks with visual and functional appeals utilizing environmentally friendly material. Although the Indian film industry played a notable role in transmitting messages based on 'we all together' themes in these challenging times, particularly noteworthy are the attempts of Indian folk artists to combat the coronavirus crisis in rural India, the home to 69% of Indian citizens (N=833 million). Indian folk art has always played a key role in the transmission of social-developmental messages (for example, Mother-Child health, immunization; see Bhatia, 2000: 235-265). The beginning of the lockdown period inspired rural women and men artists to educate the rural masses and to disseminate the epidemiological do's and don'ts during this health crisis. The approach of these folk artists is highly local and indigenous. Folk artists and craftspeople across India have produced illustrations and paintings in traditional styles. They have used Indian motifs and rural imagery intermingled with religion and nationalism. Messages are written in Hindi to convey the importance of social distancing, wearing face masks, washing hands with soap, avoiding group travel and so on (Tilak, 2020). Folk art includes images of women including Mother India with multiple weapons such as medicine box, hand sanitizer, mask, statoscope and weapon to destroy the virus. See the Figure 2 below (Artist: Sandhya Kumari). There are also scenes depicting hospitals treating Covid-19 patients. Some artists created their messages during the lockdown period in places such as Bhilwara, a hotspot of the coronavirus. The local and locally appealing message of these folk artists exploits a sense of togetherness and respect for culture to motivate the public to do what is needed to mitigate the consequences of the COVID-19 pandemic.

VIRTUAL EDUCATION

The COVID-19 pandemic has transformed the landscape of education world-wide. The key issue is how to educate adults as well as children while promoting active

Figure 2: Mother India. Artist: Sandhya Kumari
Source: Social Media



learning. For universities as well as schools, the dilemma is whether to teach in-person in physically distanced classrooms, to employ remote teaching with little human touch or to utilize yet a third option: a hybrid of the two. Yet there are no clear answers, as each approach carries with its unique benefits but also serious drawbacks.

In a Siena College study (McLoon and Berke, 2020), the three teaching modes were examined by carrying out several simulation exercises. The study revealed following three important findings:

1. Masks and spacing make it difficult to hear and be heard in a physically distant classroom setting.
2. Humans rely on visual/back channel cues more than they realize. Communicating while masked requires more energy and focus than usual. As with online communication, the process of transmitting a message while masked/physically distant requires a lot more energy than in a normal in-person classroom setting.
3. If some students are joining on Zoom or other web conferencing application in a hybrid classroom, a tablet is essential for the instructor. Without a tablet, the instructor is tied to the podium, rendering them unable to move around the room to interact with different in-person student groups.

Within an online educational environment, student–teacher communication is subject to several technological factors such as speed of the Internet, camera and microphone settings, computer screens among others. It is imperative for teachers and students that they stay connected by confirming they can both hear each other. These additional auditory/comprehension checks, while necessary, can be distracting, and they require energy that should otherwise be devoted to creating the teaching/learning experience. When interacting in a socially distant physical environment, speaking through masks impairs the quality and clarity of normal linguistic input (see Bhatia and Ritchie (2013) on the role of naturalistic input and the negative effects of input in language acquisition). This not only impedes accurate transmission of content but also puts some population groups such as students with hearing impairments and learners of English at serious disadvantage.

Beside the issue of input quality and quantity, when interacting masked and at a distance or when interacting online, the sensory experience is significantly diminished, thus, there is a necessary loss of qualia, the mental state to experience and process a wide range of sensory experience. All in all, social isolation together with virtual teaching causes setbacks for active learning, which calls for the new ways of teaching and curriculum development to overcome the limitations of virtual learning (Bruff, 2020)

Social isolation has devastating effects on the brain as well. Imperfect input quality and quantity combined with social isolation not only has adverse effects on language acquisition, but also on the brain. A recent article published in the *New England Journal of Medicine* found prolonged isolation in Antarctica led to a 7% shrinkage in the hippocampus region of the brain, a region responsible for forming and consolidating new memories (Stahn *et al.*, 2019). In addition to mitigating the impact of the input loss of online/socially distant teaching, we must investigate and possibly ameliorate the effects of social isolation, to ensure an effective learning experience for students in the era of COVID-19.

Impact on Elementary and Secondary Education in the United States

In adult education, the relationship between the student and the teacher is largely transactional, and responsibility for learning is more the province of the adult student. With younger learners, however, positive educational outcomes result from a more complex shared relationship between parents, teachers and the students themselves. Rapid changes in instructional delivery and a complete change away from in-person learning have caused significant stress on all the stakeholders involved in the education of our youngest (K-12) learners. Although some schools will reopen for in-person instruction in 2020-2021, to maintain social distance and to allow for COVID-necessary

quarantines and capacity limits, a significant portion of K-12 instruction will remain online. The stresses faced by teachers, parents and students are further heightened by the medium through which they must interact-technology.

Stress Caused by Technology

It has been widely established that increased technology in the workplace results in additional stress. Workers must process larger amounts of information, their roles may become more fluid, and they may feel overwhelmed by the changes brought about by new technology. Tarafdar *et al.* (2007) statistically proved an inverse relationship between what they termed ‘technostress’ and workplace productivity, explaining that the increasing complexity in roles and tasks cause workers to feel overwhelmed, dissatisfied and unable to cope. The social distancing and quarantine measures necessitated by the COVID-19 pandemic make digital instruction one of the only viable solutions to provide education to our youth. Even in the best-case scenario where all participants possess adequate Wi-Fi and appropriate devices, the post-COVID educational experience becomes more vulnerable to technostress. Students, teachers and parents must now become tech-support specialists, navigating a maze of new applications and technologies simply to access the educational content that used to be the main focus of classroom instruction. Technology and its associated stresses are a significant catalyst/contributor to other COVID-related tensions faced by the participants in children’s education.

Although they all share the stress caused by new or unfamiliar educational technologies, parents, teachers and students each experience their own unique set of stresses, each of which pose their own threats to successful education.

Teachers

The COVID-19 pandemic has intensified the potential for teacher burnout. Burnout, a phenomenon explored extensively by Christina Maslach, is a terminal result of the stress felt by those in the ‘caring professions’: nurses, social workers and teachers, for example. Maslach (2003: 2) defines burnout as ‘a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do ‘people-work’ of some kind. It is a response to the chronic emotional strain of dealing extensively with other human beings, particularly when they are troubled or having problems’. COVID-19 has caused us all difficulties of some kind. Although quarantines do isolate, digital instructional practices can actually foster more extensive and less predictable interactions between teachers and their students, all of whom are experiencing some sort of trauma. No longer bound by the constraints of

a traditional school day schedule, students often log in to complete work at odd hours, and they contact teachers with questions at these same odd hours. The result is that teachers' workdays no longer end when they leave the school. The traditional school day is spent delivering instruction and collaborating with other teachers to deal with student problems. After the end of the traditional school day, the teacher's second job begins; this is when students begin to complete work and require feedback. Some students are unable to communicate with their teachers until a parent returns home from work, as the student and the parent may be sharing a cell phone. Teachers attempt to use multiple modes of communication to reach students, to compensate for their lack of physical presence in the classroom. Often more tech savvy than their teachers, students often exploit all of these modes of communication to respond, sometimes asking for help, sometimes simply to reach out for the human companionship they might lack being quarantined at home. The increased temporal window for communication combined with the increase in possible modes of communication mean that teachers are confronted with potential sources of burnout far more frequently and extensively than before COVID-19. An example: at the time that this article was being drafted (after the end of the traditional workday, usually between 9 PM and midnight), one of the authors had three separate browser windows open for student communication/feedback: one for elementary student work, another for middle school work and another for parent communication. All were active, sometimes all at the same time. Student and parent messages were also coming to the teacher's mobile device through text and other social media/Internet-enabled communication modes. The author's phone does not keep more than 100 text messages per text thread, this quota was exceeded for multiple threads during almost every day of the pandemic. Teacher burnout is often associated with negative student outcomes such as lower achievement and motivation [Klusmann *et al.* (2016) for one such study]. Even if Tarafdar's (2007) technostress is removed and communication is decreased with the return to school, teachers burned out by the pandemic may be unable to provide the high-quality instruction that students need and deserve. The increased potential for teacher burnout is a call for improved teacher wellness practices and stress management coaching, to mitigate the already disastrous effects of the COVID-19 pandemic on our youth in schools.

Parents

As a result of the COVID-19 pandemic, parents have been called to participate in their children's education to a level thus far unprecedented in modern educational history. This forced participation came largely without any warning or preparation, and it came as an addition to previous duties as full-time wage earners. A recent Amazon

commercial (*Back to School: Kindergarten with Dad*), makes light of this situation, showing a harried father behind his rambunctious daughter who is excited about the prospect of attending kindergarten with her father. The reality of parents' involvement in COVID-19 education is not as cute as the portrayal in the Amazon ad. Parents feel a range of emotions ranging from uncertainty about their ability to educate their children to burnout related to the extra work they are called to undertake. Responding to the increased popularity of homeschooling, Lois (2006) investigated a representative set of mothers homeschooling their children. She found that nearly all mothers experienced a cycle of emotions (optimism, role strain, burnout) that was quite similar to teacher burnout, a phenomenon long associated with negative outcomes for students and with teachers leaving the field. In Lois's study, the optimistic 'honeymoon stage' ended when parents saw any decrease in their children's motivation or attainment. Internet search data from a National Bureau of Economic Research study (NBER) documents a similar trend in parents today. Across all socioeconomic and regional groups, parents' Internet searches for resources to assist in online learning rose significantly in March and faded in May (NBER, 2020). This trend is unlike the usual Internet search trend, which involves an increase in searches for educational resources only at the beginning of the school year. The timing of the COVID-related reduction in searches could correspond with the end of the 'honeymoon period' for COVID-19 homeschool parents. Unfortunately, the NBER study also served as proof of the 'Digital Divide' that has become more apparent with COVID, showing that Internet search intensity (and corresponding parent engagement in learning) rises by 15% for every 10,000 in additional mean family income (NBER, 2020).

An unsettling comparison between the parents in Lois's (2006) homeschool parent study and today's parents is that the homeschool parents studied had chosen to homeschool their children. With the exception of two mothers, parents in the study did not have a job outside the home. Imagine the added stress on today's parents, who did not make the choice to participate in their children's education in this way, and who are most often working full-time jobs outside the home. Teachers receive frequent communications from parents that illustrate these feelings. Parents often relate that they feel incapable of helping their child or of motivating their child to work on schoolwork. Parents are overwhelmed with the amount of additional duties that they have as home teachers for their children. An additional current concern that was not present in Lois's study: parents today are often uncertain of the future of their jobs and the economy, given the massive shutdowns caused by COVID-19. Parents in Lois's (2006) study only overcame burnout with structured support and emotional management strategies. It is vital that similar supports to be offered to parents today, who experience similar stresses as traditional homeschoolers, but to a far larger degree.

As parents are now taking on an increasing responsibility for the education of their children, their mental health is increasingly critical to positive educational outcomes in their children.

Students

In K-12 education, trauma-informed practice is gaining prominence as a tool to reach students who are experiencing or who have experienced family, social or academic stress. Trauma-informed teaching acknowledges that students facing family violence, caregiver substance abuse and a host of other adverse family or community events may have undergone changes in their emotions or even in the structure of the brain itself. These changes may make it more difficult for the student to learn, and they may pose challenges for successful integration into a classroom or effective teaching. Acknowledging the importance of the student's trauma and implementing strategies to help the student function in an academic environment are seen to be critical in helping the student victims of trauma succeed (Walkey and Cox, 2013; Chafouleas *et al.*, 2016 for more detailed discussion). COVID-19 is an additional trauma, one which affects all students to some degree or another. Using the lens of trauma-informed teaching, it is incumbent upon educators and parents alike to view students' interactions with learning as mediated by the stress they face due to COVID-19. Trauma-informed practice requires that teachers remain calm, stay attuned to verbal and non-verbal signals in the child, remain present, and maintain as much consistency as possible. Although calm and consistency may be under the control of the teacher and the curriculum, teaching online presents challenges to remaining present in the eyes of students. It is also difficult to interpret the wealth of verbal and non-verbal signals of a student when the student is a small window on a Zoom meeting or Skype call. Interpreting non-verbal behavior may also be more difficult when interacting in the new COVID-19 space of 6 feet or more, or when wearing a mask. The shift in learning necessitated by the COVID-19 pandemic is a call to research new ways to implement trauma-informed practices in an online and socially distant environment, so that student trauma can be managed in a way that allows for productive learning.

CONCLUSION

The COVID-19 pandemic has restructured the traditional social space in a way which runs counter to the cultural and social norms of social interaction and appeals. The collision of the two competing norms of disease protection and culture has set the stage for social anxiety and fear in social interactions and establishing social relations. This social anxiety and fear affect all levels of society, touching interactions as large as public gatherings and as intimate as family groups. Social isolation has further

intensified the stress of living in despair and changing norms and methods of communication during this deadliest outbreak. This social isolation could have negative effects on the brain, effects that could impede memory and learning in education. Along with linguistic changes at lexical, syntactic, sematic and thematic levels, new identities are being carved out and new ideological battles are brewing. Even in the challenging new normal, creative writers are finding constructive ways to combat the challenge of spreading awareness about the pandemic, and thus creating emotional resilience. New models of education are emerging to address COVID-necessitated requirements for distance, quarantine and personal protection. These new models have changed the quality of linguistic input, the ability to interpret non-verbal signals, the roles of the participants in education, and a host of other variables. All these changes call for increased research to improve educational practice in this ‘new normal’ environment. To say that the world will not be the same is an understatement. It is the responsibility of researchers, the media, educators and all of us to ensure that the differences improve our students and our society as a whole.

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