HOSPITALITY AND SENTIMENT ANALYSIS IN HYBRID EVENTS AND ON DIGITAL PLATFORMS DURING THE COVID-19 PANDEMIC

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ABSTRACT

This article presents an analysis of people's feelings during the COVID-19 pandemic. In order to do so, the period from March 11, 2020 to March 11, 2021 was selected, in which only aspects related to hybrid events and events occurring on digital platforms were considered. Therefore, in the first phase, bibliographical research was conducted, from which the keywords of this study were collected. In the second phase, it continued with documentary research in two distinct communication vehicles, considering relevant aspects in each activity. The question here is, what are the feelings identified during the COVID-19 pandemic when we consider the news associated with hybrid events and those occurring on digital platforms? The goal is to verify people's feelings expressed through information and communication technologies - ICTs in events developed in a hybrid way and on digital platforms during the COVID-19 pandemic. In view of these considerations, the debate on the analysis of people's feelings in adverse times, such as the period of the COVID-19 pandemic, and also in environments sometimes stereotyped or not imagined, such as the metaverse, is enriched. Or even activities that increase and are highlighted due to the rise of technological resources. Consequently, the analysis of the data obtained indicates possibilities for action and for the sector.

Keywords: hospitality; sentiment analysis; hybrid events; events held on digital platforms; information and communication technology - ICTs.

HOSPITALIDADE E ANÁLISE DE DOS SENTIMENTOS EM EVENTOS HÍBRIDOS E EM PLATAFORMAS DIGITAIS DURANTE A PANDEMIA DO COVID-19

RESUMO

Este artigo apresenta uma análise dos sentimentos das pessoas durante a pandemia da COVID-19. Para tanto, foi selecionado o período de 11 de março de 2020 à 11 de março de 2021, no qual foram considerados apenas aspectos relacionados a eventos híbridos e eventos ocorridos em plataformas digitais. Para tanto, na primeira fase, foi realizada pesquisa bibliográfica, da qual foram coletadas as palavras-chave deste estudo. Na segunda fase, deu-se continuidade à pesquisa documental em dois veículos de comunicação distintos, considerando aspectos relevantes em cada

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atividade. O problema é: quais são os sentimentos identificados durante a pandemia da COVID-19 quando consideramos as notícias associadas a eventos híbridos e aqueles ocorridos em plataformas digitais? O objetivo é verificar os sentimentos das pessoas expressos por meio das tecnologias de informação e comunicação - TICs em eventos desenvolvidos de forma híbrida e em plataformas digitais durante a pandemia da COVID-19. Diante dessas considerações, enriquece-se o debate sobre a análise dos sentimentos das pessoas em momentos adversos, como o período da pandemia da COVID-19, e também em ambientes por vezes estereotipados ou não imaginados, como o metaverso. Ou ainda atividades que aumentam e ganham destaque devido à ascensão dos recursos tecnológicos. Consequentemente, a análise dos dados obtidos indica possibilidades de atuação e para o setor.

Palavras-chave: hospitalidade; análise de sentimentos; eventos híbridos; eventos realizados em plataformas digitais; tecnologia da informação e comunicação - TICs.

INTRODUCTION

This article was presented in Rome / Italy at the 10th Advances In Hospitality And Tourism Marketing and Management – AHTMM in english, and was published in the book of this conference - Edited by Dogan Gursoy & Fabiola Sfodera. This research is about emerging aspects in the field of hospitality, such as the sentiment analysis of people's. To this end, a specific study was conducted on hybrid events and also those developed on digital platforms, which got evidence due to the advancement of technology during the COVID-19 pandemic.

The originality and importance of this investigation is presented by bringing together these questions, so this literature contributes to the development of knowledge in areas of applied social sciences, especially in the field of hospitality and events. For reasons of public safety, the COVID-19 pandemic anticipated the insertion of technological factors in the hospitality sector (Gursoy; Chi, 2020). Therefore, even in the face of the challenges established by the COVID-19 pandemic, the effects of this virus on the tourism and hospitality industry were observed, in the face of lockdown and social mobility restriction measures taken to reduce the spread of the virus.

The insertion of technological resources has been boosted in recent years in different fields of activity. In the hospitality area, human resources are being replaced by robots that perform concierge and delivery tasks, information assistants through mobile devices and self-check in/check out machines (Kim *et al.*, 2022). This reality influences people's feelings, either due to existing differences in physical interaction or the way the service is presented. It appears that from the 1990s onwards, information and communication technologies (ICTs) have affected organizations operating in the hospitality sector, which have evolved into websites, social media and mobile technologies (Buhalis ; Law, 2008; Leung *et al.*, 2013; Wang; Wang; Wang, 2022).

In the field of business, mobile Internet and inventions that support the sustainable shift towards social robotics have grown (Kim *et al.*, 2022) In addition, Business Intelligence and Analytics are being considered as management strategy to assess customer satisfaction and the positioning of the organization (Ramos, 2022) in relation to other players in the market. For the purpose of this study, the core concepts of the research are shown below, in Table 1.

Table 1 – Core research concepts:

CONCEPTS	SPECIFICATION	AUTHORS
HOSPITALITY	Leads to different places where business, public institutions and ICT developments meet.	Breukel and Go, 2009
ANALYSIS OF FEELINGS	The ability to detect positive and negative opinions in the text, making it a component in tourism and hospitality investigations using big data.	Carvache-Franco *et al.*, 2022

Thelwall, 2019 |
| HYBRID EVENTS AND EVENTS HELD ON DIGITAL PLATFORMS | Promising activity that uses virtual reality and can be applied to the sector of meetings, incentives, conventions and exhibitions - MICE, in which these innovative methods prove to be viable to achieve organizational objectives in an effective and efficient way | Pearlman e Gates, 2010 |
| INFORMATION AND COMMUNICATION TECHNOLOGY – ICTs | Channels that allow professionals in the tourism and hospitality industry to reach their customers by combining mobility and ICTs. Mobile technologies such as smartphones, tablets and mobile applications (apps) have become the main devices for users to access the Internet and have become indispensable in consumers' daily lives. | Law; Chan; Wang, 2018 |

Source: Created by the authors, based on Breukel and Go (2009), Carvache-Franco *et al.*, (2022), Law; Chan e Wang, (2018), Pearlman e Gates (2010), Thelwall (2019).

Before the considerations made by Breukel e Go (2009), Carvache-Franco *et al.*, (2022), Law; Chan e Wang, (2018), Pearlman e Gates (2010), Thelwall (2019) in the Table 1, the problem and the general and specific goals of this investigation were elaborated. In this way, the research problem is: what are people's feelings identified during the COVID-19 pandemic when considering the news associated with hybrid events and those held on digital platforms?

The propositions are, (P1) through the scenario of the spread of COVID-19 and the development of information and communication technologies - ICTs, it becomes possible to identify people's feelings, and (P2) through the analysis of people's feelings expressed in events developed in hybrid

way and on digital platforms during the pandemic, a set of issues related to hospitality is demonstrated.

The purpose of this study is to verify people's feelings expressed through information and communication technologies - ICTs in events held in a hybrid way and on digital platforms during the COVID-19 pandemic. The specific objectives are (O1) to reflect on the relationship between hospitality and events developed in a hybrid way and on digital platforms; (O2) analyze feelings through the lens of hospitality; (O3) present the feelings manifested in information and communication technology tools.

Thus, new technologies (e.g., web and mobile apps) like Facebook, Twitter and TripAdvisor, as well as big data, artificial intelligence and augmented reality, have emerged and got attention from researchers., An explanation for this could be that the tourism and hospitality sector is an application and market-oriented activity (Wang; Wang; Wang, 2022). This has had an impact on other issues such as the perspective of innovation in the hospitality sector, where users' senses are being provoked to try sensations, experiences and emotions never seen before, especially when considering the interaction of people and machines.

HOSPITALITY AND SENTIMENT ANALYSIS

Hospitality focuses on offering a place where the 'stranger', in his capacity as a worker, traveler or individual, is welcome (Breukel; Go, 2009). But it also involves other activities such as consumer satisfaction, sentiment people's, the way organizations act and society behaves in times of crisis. In this context, hospitality studies deal with receptivity and its opposite, hostility, and, at the same time, with situations that involve risk to the lives of human and non-human animals, or acts of empathy and indifference.

Therefore, a universe of possibilities exists when it comes to hospitality. Going further, when analyzing human beings and the paradigms that are part of their daily lives, it becomes possible to verify intangible aspects like values, sentiment and emotions. However, this activity is difficult to measure. Even so, there are studies that carried out the analysis of the feelings of consumers in the tourism and hospitality industry through the evaluation of their comments regarding the services provided in organizations operating in this sector (Carvache-Franco *et al*., 2022), as demonstrated in Table 2:

Table 2 - Studies on the analysis of sentiment consumer's in the tourism and hospitality sector.

CONCEPTS	AUTHORS
TRAVEL AGENCIES	Tu; Hsu; Lu, (2021)
ONLINE TRAVEL AGENCIES	Su; Chiu; Lin, (2022)
AIRLINES COMPANIES	Misopoulos *et al.* (2014)
TOURIST DESTINATIONS	Liu *et al.*, (2019)
HOTELS	Xiang *et al.*, (2015)
RESTAURANTS	Nakayama e Wan (2019)
TOURIST SERVICES IN GENERAL	Gomez *et al.* (2018) Ramanathan e Meyyappan (2019)

Source: Created by the authors, based on Gomez *et al.* (2018); Liu *et al.* (2019), Misopoulos *et al.* (2014), Nakayama e Wan (2019), Ramanathan and Meyyappan (2019); Su; Chiu; Lin, (2022), Xiang *et al.* (2015)

Table 2 presents different studies conducted in the area of tourism and hospitality that deal with the analysis of feelings. Activities are presented such as travel agencies in the most traditional ways and those websites or mobile applications that rely almost exclusively on online operations, airline companies, tourist destinations, hotels, restaurants and also tourist services in general. These activities provide positive and negative feelings, aspects of hospitality and hostility regarding their consumers/users. This will depend on a number of factors.

Therefore, advances in technology have changed the way information is produced and consumed (Alaei; Becken; Stantic, 2019) by stakeholders in the tourism and hospitality sector. Since 2017, this methodology has been growing and provides discoveries (Mehraliyev; Chan; Kirilenko, 2022; Wang; Wang; Wang, 2022), possibilities of research and applicability for those who work in the tourism market. Thus, this activity is emerging as a way to examine semantic relationships and their meanings (Alaei; Becken; Stantic, 2019), in which it becomes possible to combine feelings analysis techniques from text and other data, which previously could not be understood (Alaei; Becken; Stantic, 2019; Carvache-Franco *et al.*, 2022).

In a study carried out by the editorial team of the Journal of Hospitality Marketing & Management, published in 2020, when vaccination against the COVID-19 virus was carried out in several parts of the world, such as in North America, it is shown that, after this period, part of the population wanted to travel again, go to hotels and restaurants, but customers' feelings showed variables associated with time of travel (Gursoy; Chi, 2020; Gursoy; Chi; Chi, 2020). This analysis also demonstrated that further research needed to be carried out to identify the elements that would bring customers back to these organizations and, eventually, boost business in the hospitality sector.

When questioning hotel users, some respondents considered hygiene of the premises as an essential aspect, such as hand disinfectant stations, frequent cleaning of areas and surfaces, staff training to comply with sanitary protocols. Regarding the insertion of technology in order to avoid human contact, the need for services performed through robots, contactless payments and digital menus was increased (Gursoy; Chi; Chi, 2020). Thus, it has been observed that practices such as attention to the proper cleaning of all areas in organizations, combined with technological factors, becomes relevant to circumventing the crisis of lack of demand generated in the period of the pandemic.

HYBRID EVENTS AND EVENTS HELD ON DIGITAL PLATFORMS

Sentiment analysis may present a bias either by the academic degree or financial factors of the researcher or of those surveyed, by the gender of the members of a given organization, or by the region in which the research was conducted. These discussions become more complex when it comes to applying the analysis of feelings to activities carried out in the metaverse - in this case, to events developed in a hybrid way or on digital platforms. Therefore, the metaverse has attracted the interest of consumers and professionals because it is growing, and because organizations are developing strategies to participate in this new world (Gursoy; Malodia; Dhir, 2022).

Organizations, with the help of technological resources, seek strategies to create experiences and customize settings that involve hybrid (mixed reality) and virtual (digital) environments by allowing the participation of customers, where users interact in a social way, create immersive experiences, use virtual identities (avatars) (Buhalis; Lin; Leung, 2022). This activity is complex and involves practical and operational approaches such as administration support, literacy and

technological capacity, competence and technological infrastructure, proper structure and internal resources, and, finally, distribution of financial resources (Yavuz *et al*., 2023).

Virtual experiences change people's perspective on traditional concepts, many of them already consolidated and, at the same time, instigate researchers in common areas of study such as administration, economics, health, tourism and hospitality, especially when it is understood that the metaverse creates a sense of presence (Gursoy; Malodia; Dhir, 2022). Hence, Table 3 is presented.

Table 3 – Companies /Organizations that develop activities in the metaverse

COMPANY / ORGANIZATION	SECTOR	COUNTRY / HISTORY	FIELD
FIRST AIRLINES	AIRLINE COMPANY	Started their operations in 2016, in Japan. Started their customer service in 2017. Started flights to Finland in 2018. Started flights to New Zealand in 2019. Go To Travel and Fan Lounge services were started in 2020. Crew recruitment in 2021.	Virtual flights from Tokyo to Hawaii, New York, Rome, Paris and Singapore. Occupation might reach 100%, so it is important that consumers mind occupancy levels.
NATIONAL GEOGRAPHIC VR	TV CHANNEL ENTERTAINMENT STUDIO GLASSES	Part of National Geographic group, a joint venture operating in several parts of the world. The group's first channels were launched initially in 1997 in Australia, Europe and the United Kingdom In the United States it was first broadcasted in 2001.	Introduces the mission to capture photographs for National Geographic. Allows interactive experiences to its users in locations such as Antarctica, Machu Picchu (Peru), in languages such as German, Korean, Spanish, French, English and Japanese.

Source: Created by the authors, based on First Airlines (2022), Gursoy; Malodia e Dhir (2022), Meta Quest (2022).

Table 3 shows applications developed for the hospitality sector with the purpose of providing different experiences to application users. Therefore, the metaverse is revolutionizing the

hospitality sector (Gursoy; Malodia; Dhir, 2022). It is noteworthy that, despite having their headquarters in a given country, these organizations operate in several parts of the world, sometimes in locations their users would have difficulties to be physically present, due to factors such as access, geographic distance, cost and travel time.

It must be said that these companies already existed before the pandemic. In the case of First Airlines, the company provides comprehensive hospitality to customers related to the five senses, with the help of virtual reality technology and exclusive meals from the chef on board (First Airlines, 2022). There is an effort by scholars to understand this phenomenon, its impact on the consumer market and also on the academic environment (Gursoy; Malodia; Dhir, 2022).

Organizations operating in the hospitality sector offer services such as accommodation, food and beverages, entertainment and events (Buhalis; Lin; Leung, 2022), such as the MICE segment (Meetings, Incentives, Conferences and Exhibitions), but this field of activity and others activities in society have been changing due to a mixture of experiences, which blend real and virtual environments, allowing different perspectives to stakeholders. In this context are events that now take place in a hybrid environment and on digital platforms with increased prominence during the COVID-19 pandemic, when people's mobility became restricted.

In the case of events held virtually, their participants can interact with other people and enjoy the atmosphere, where technology plays a key role in inducing emotions (Lei *et al*., 2022). Therefore, practical aspects aimed at preparing the event and analyzing its organizers in its different phases is essential. The digitalization of events, including those located in the MICE segment, through digital platforms and immersive technologies, has been transforming ideas and businesses, thus drawing the attention of the business community by diversifying businesses and promoting the new technologically immersive economy (IFEMA Madrid, 2022).

In research carried out with participants of events, conditions such as the ease of being in the home environment (sometimes with the family), costs, interaction and engagement of the participants are considered, demonstrating the construction of positive feelings in order to support the development of entertainment activities (Lei *et al*., 2022), which also involves the field of activity of the tourism and hospitality sector. Therefore, organizations in the area seek to enrich their expertise in the traditional business model and expand into new channels (IFEMA Madrid, 2022). Thus, the technological and organizational vision of companies enables economic and social

impacts on the development of corporate activities (Yavuz *et al*., 2023) within and around the organization.

METHODOLOGICAL PROCEDURES

In the first part of this study, bibliographical research was adopted on topics related to hospitality, feelings analysis, hybrid events, events on digital platforms and information and communication technology. In addition, websites of organizations that carry out actions in the metaverse environment (First Airlines, 2022; IFEMA Madrid, 2022) were analyzed according to their sector (activity), country of origin, history and area of activity, demonstrating the evolution of these organizations.

This research can be considered a documentary as it analyzes the materials linked to the hybrid events and events held on digital platforms displayed in two communication vehicles, G1 and UOL, from March 11, 2020 to March 11, 2021. On this date the director general of the World Health Organization – WHO, Tedros Adhanom Ghebreyesus, announced the first pandemic caused by a coronavirus (World Health Organization, 2022). Such announcement mobilized the population of different countries and made government officials adopt measures considered unpopular to curb the spread of this virus.

The impact caused by the contamination of this virus, the news released and the measures adopted by governments has had a major impact on the population in the fields of health, social (human) relations and the economy (United Nations, 2022), especially when considering data such as the number of cases of COVID-19 outside China increasing 13 times and the tripled number of affected countries (World Health Organization, 2022). People's feelings analysis has been growing mainly due to the development of information and communication technologies – ICTs (Mehraliyev; Chan; Kirilenko, 2022; Wang; Wang; Wang, 2022).

As for the communication vehicles with analyzed news, these have visibility in Latin America and South America. UOL is a company in the area of technology, services and payments which also started operations in the cybersecurity, service management and information technology infrastructure businesses in 2021(Grupo UOL, 2022), providing different experiences to its customers, readers and users. G1 is a news portal that produces content in areas such as motoring, science, culture, economy, education, employment, environment, politics, health and technology

(Globo Comunicação e Participações S.A., 2022). This is the scope of the areas of activity of these companies.

RESULTS & DISCUSSIONS

The analysis carried out in the two communication vehicles demonstrates the dynamics of disseminated information. When intertwining with the research objectives, news associated with hybrid and digital events is considered, where the evolution of this activity during the pandemic period is highlighted. This is demonstrated in Table 4.

Table 4 - Evolution of news about hybrid and digital events

	COMMUNICATION VEHICLE	
PERIOD	G1	UOL
MARCH 2020	92	86
APRIL 2020	355	174
MAY 2020	541	34
JUNE 2020	541	34
JULY 2020	501	35
AUGUST 2020	462	20
SEPTEMBER 2020	283	23
OCTOBER 2020	237	18
NOVEMBER 2020	222	5
DECEMBER 2020	198	13
JANUARY 2021	116	10
FEBRUARY 2021	171	12

MARCH 2021	30	6

Table 4 shows the exposition of news on the subject. On the G1 website, the months of May and July 2020 had the highest number of occurrences showing 541 each. The month with the lowest incidence of cases was March 2021. This communication vehicle also presents the highest number of occurrences both in general and when the specific topic addressed is considered. Thus, the relevance of this communication group in Latin America and South America is verified. The propagated news is more linked to locations within Brazil.

At UOL, the peak of news occurred in April 2020 with 174 subjects addressed. November 2020 was the period of lowest incidence. On this website, it can be seen that the news inform about issues that occurred in different parts of the planet such as the USA, Spain and Italy. Or entities/organizations like Huawei, which launched products, the United Nations and the WHO. The number of news spread in the first months of the pandemic caused panic and stress in the population, in addition to problems such as depression.

This can be caused by lack of regular activity, exercise and change in lifestyle, in which affliction and anguish become common among the population, as well as variations in food consumption and sadness. In the analysis of the data, it appears that there were positive responses, such as the development of online activities that include socialization events among the elderly, which fit in the characteristics of hospitality and hope.

In March 2020, the period in which the pandemic was declared, some sporting events, such as the NBA season in the USA, were suspended. After that, other events followed the procedure, like the Argentine MotoGP Grand Prix. In football, Conmebol postponed next week's Libertadores games, Fifa postponed South American Qualifiers for the 2022 World Cup, Uefa changed Champions games, Flamengo tested for Coronavirus in the squad, and the Copa do Rei final match was also postponed. This had an impact on the finances of clubs due to the money destined for box office and TV. In Formula 1 there was the cancellation of the Australian Grand Prix and there was also suspension of tennis tournaments. In that month, there was an increase in virtual job offers, medical appointments, masses and services, birthday parties, artist presentations, language courses and yoga classes.

In April 2020, the number of cases of the disease intensified, which became a subject considered in the researched media and more festivals were held in the virtual sphere, with cinemas and museums providing online presentations. In Chile, there was a limitation on the number of participants in public events. In Colombia, public events were suspended. Places like Broadway were closed. The name Coronavirus proved to attract an audience and draw the attention of the population, such was the care and lack of effective measures to deal with it. In Brazil, the Backstreet Boys asked fans to wash their hands listening to songs. Singers were infected. There was also an increase in the number of virtual tours.

In May 2020, artists reinvented themselves by performing live shows for donations, showing solidarity with each other, the quest to maintain philanthropic institutions and empathy. Due to the moment of crisis, some organizations had reduced funds to maintain their routine activities. Personalities such as Anitta, Barack Obama, BTS, Lady Gaga, Mick Jagger and Will Smith were the target of both positive and negative news. Virtual weddings also emerged.

In June 2020, there was an online business fair with live broadcast, concerts with regional artists, a gastronomic contest, job and internship offers, and sales made over the Internet, a sign that its organizers sought to create means to maintain the interest of participants in this activity. Lives were created with the theme of fighting child labor and provision of free courses. Presentation of doctoral papers in virtual space were also held, indicating that the spread of COVID-19 reached even events located in the academic environment.

In July 2020, adaptations were made to gastronomic festivals in celebration of the anniversary of cities having the option of food delivery, as well as presentations at online events such as Paul McCartney's and Metallica's, lives organized by companies to get closer to customers, lives to collect hygiene materials for donation and music festivals held in drive-in spaces. People were hired to work at online business fairs, some of which had been infected by the coronavirus. There was also an increase in the schedule of presentations (agenda) in events developed online.

As a result, a systematization in the development of these activities was observed. An also the lack of belief about the real causes of transmission of COVID-19. In those months, rules were established for the work from home, debates on the interaction between participants in online events, symposiums held with The University of Queensland in Australia on contamination by the coronavirus, presentations of online cultural attractions, and tournaments of surf and karate were broadcast in the virtual environment.

In August 2020, virtual Jazz shows were held, as well as international film shows with tickets sold at reduced prices. In the online environment, there were events to discuss technology and entrepreneurship, cattle auctions, artistic workshops, competitions for lyrical singers, semi-digital gastronomic festivals, presentations of symphony orchestras, remote classes at universities, holding party conventions, solidarity events with acrobat pilots, cycles of lectures to help the recovery of the tourism sector, transmission of music festivals over the Internet for 5 days and online religious congresses.

In addition, educational institutions started actions to develop digital inclusion, philanthropic institutions pursued to leverage donations through motorcades and online lectures, audiences were held by videoconferences, digitized companies became indebted, TV programs had an increase in virtual audience and there were bans on lives in condos, demonstrating that these facts have become central issues in society and involving different places and institutions.

In September 2020, there were events in online format, business fairs with job offers, bands performing concerts in drive in convention center, LGBTQIA+ Pride celebrations in 'live' format, debates on freedom in the pandemic, ballet presentations, G20 meetings, fashion shows, increased risk of virtual scams and virtual assistance provided by government agencies. Thus, different players in society already understand the importance of hybrid and digital activities.

In October 2020, there were online activities related to literature, poetry, theater, dance and art festivals, and business fairs for entrepreneurs in the fashion area. The popularization of virtual meetings in companies and weddings broadcast over the Internet also drew attention. Among the various themes, there was a live with a mechanics course for women, marathons of technological solutions and BTS concerts.

In November 2020, in the online and hybrid spheres, there were student games, real estate fairs, sales actions such as Black Friday, task force of conciliations for labor processes, virtual task force for debt renegotiation and increased demand for parties in these formats. In addition, there was the development of brewing lives, virtual events for supermarkets, charity street races transmitted over the Internet, trials and online short courses.

In December 2020, in the hybrid and digital environment, there were exhibitions, activities such as babysitters, secret friends, virtual end-of-year get-togethers, events to foster adoption of dogs and cats and meetings with representatives of Mercosur member countries. New Year's Eve also

had virtual shows, release of balloons, presentations of local artists, representatives of Catholic, Evangelical and African religions.

In January 2021, among the most relevant events, there was an online survey by Fiocruz to assess the perception of vaccines against Covid-19, events that connected architects through digital platforms and clients, free pre-university courses, shows with views on YouTube and virtual elections in government spheres.

In February 2021, there were courses with online meditation practice, dance and children's theater shows, online profession fairs, social themed shows, agribusiness fairs with virtual visits and vaccination projects. In Brazil, there were also online carnivals with folk music - forró, bossa nova, MPB and rock, and. carnival lives with axé stars, like Olodum and Margareth Menezes. In addition to the Women's Fashion Week in Milan and the virtual bilateral summit between the United States and Mexico.

In March 2021, a year after the COVID-19 pandemic was announced, the amount of news on the subject no longer attracted the attention of the population. Even so, some issues were the subject of exposure in the media, such as sessions in governmental institutions, still carried out in a virtual way, shifts with psychologists online, and disabled people taking online classes to circumvent loneliness.

CONCLUSIONS & IMPLICATIONS

The literature on the subject shows that, given the range of themes that involve hospitality, issues such as receptivity or hostility, people's satisfaction and society behavior are included. There are also issues such as feelings and positive/negative emotions in the developing relationships between people and organizations, where it becomes possible to find studies that deal with these issues by involving players in the tourism / hospitality sector, such as travel agencies, traditional and online travel, airlines, stakeholders of tourist destinations, hotels, restaurants and, finally, tourist services in general.

Sentiment analysis presents variables that need to be considered such as academic degree, financial factors, gender and region. These issues in the virtual environment force researchers to review traditional concepts, as this activity creates the sensation of presence and other approaches. This provided a wide range of possibilities for the development activities of organizations that offer

food and beverages, accommodation, entertainment and events in the MICE segment. The integration of these stakeholders with technological factors becomes a decisive element.

It also highlights the means to circumvent moments of crisis, such as compliance with health protocols and the insertion of robots to ease the services provided and reduce human contact, for example. Investigations into hybrid and digital activities provide advances that discuss the atmosphere of this area and the creation of experiences, digitization and diversification of businesses, and technological immersion, customer engagement, social interactions, virtual identities and adequate technological resources in the development of these activities.

Confronted with the problem, what are the feelings identified during the COVID-19 pandemic when considering the news associated with hybrid events and events held on digital platforms? Issues pertaining to the risk to lives of human and non-human animals became the stage for debates in the media. As of March 11, 2020, due to the increased demand for medical services, it was identified in the two communication vehicles analyzed, that in addition to the statement by the director general of the World Health Organization - WHO, Tedros Adhanom Ghebreyesus, there was the statement of authorities in countries such as Spain in declaring a state of emergency due to the coronavirus and restriction of movement throughout the country. In addition to the approval of the calamity decree in other locations.

Eventually, these communication vehicles released similar information, and the first news broadcast in many channels about virtual events occurred from the virtual audience held by the Pope on March 11, 2020. But this also occurred in other areas of activity. This impacted society with the perception of deserted streets, which generated feelings of fear and mistrust. Apprehension and fear of contamination took hold of the population during this period, in which staying at home, avoiding contact with other people and reducing travel seemed to be the most effective measures, thus changing the dynamics of people's lives. And there was also the rescheduling or cancellation of events. These measures were taken in an attempt to control the spread of the COVID-19 virus.

In relation to the goal, it was to verify people's feelings expressed through information and communication technologies - ICTs in events developed in a hybrid way and on digital platforms during the COVID-19 pandemic. It highlights that part of these feelings were hostile, due to the fear of the population regarding the increase in the spread of COVID-19, which also includes the cancellation of regular services previously provided, the possibility of lack of supplies and the

general increase in prices. These facts would cause social isolation and hinder the development of relationships among people, that is, people had to avoid exchanging handshakes, hugs and on-site conversations. The combination of this scenario allowed the emergence of a feeling of loneliness, because of the absence of relationships with other people, in which it was necessary to develop activities, sometimes not imagined or rarely performed in the virtual environment, either as a way to fill the free time that existed in the period of restriction of people's mobility or as a way of expressing relationships.

There was also the use of public spaces, such as stadiums, which were previously intended to host sporting events and were then used to treat infected people. In this context, aspects of security and empathy with others emerged, even if silently. This occurred because, at first, the news about the intensification of actions corresponding to the hybrid and digital events had a positive/negative impact on the population, mainly when considering issues such as the imposed difficulties and foreseen readiness.

In this perspective, technological issues began to help people and organizations in the development of their activities, where the pandemic accelerated many changes that were to come in society. These issues led to the reproduction of activities in hybrid and digital environments in sectors such as gym, agriculture, commerce, communication, culture and entertainment, education, economics and finance, sports, gastronomy, law, medicine and health, politics, religion, security public, supplies, commuting, technology and health. These are examples that events in this sphere are present in different areas of activity.

This scenario has impacted the different stakeholders of the tourism/hospitality sector and also of society, since it took a global dimension. So, companies/organizations and people had to deal with this adverse scenario in a different way, with the resources and means available. But this also presented the eventual momentary hope of keeping activities previously considered common in people's daily lives, through subjects that involve hybrid and digital events, in which the evidence of lives is observed, with the participation and protagonism of personalities from the television area and music, sometimes dressed in pajamas, which would be impossible if it were in person, mainly because shows were cancelled, theaters were closed and audiences were suspended for events.

REFERENCE

ALAEI, A. R.; BECKEN, S.; STANTIC, B. Sentiment analysis in tourism: capitalizing on big data. **Journal of Travel Research**, [*S.l.*], v. 58, n. 2, p. 175-191, 2019. DOI: https://doi.org/10.1177/0047287517747753.

BREUKEL, A.; GO, F. M. Knowledge-based network participation in destination and event marketing: A hospitality scenario analysis perspective. **Tourism Management**, [*S.l.*], v. 30, n. 2, p. 184-193, 2009. DOI: https://doi.org/10.1016/j.tourman.2008.05.015

BUHALIS, D.; & LAW, R. Progress in information technology and tourism management: 20 years on and 10 years after the Internet - the state of etourism research. **Tourism Management**, [*S.l.*], v. 29, n. 4, p. 609-623, 2008. DOI: https://doi.org/10.1016/j.tourman.2008.01.005

BUHALIS, D.; LIN, M. S.; LEUNG, D. Metaverse as a driver for customer experience and value co-creation: implications for hospitality and tourism management and marketing. **International Journal of Contemporary Hospitality Management**, [*S.l.*], v. 35, n. 2, p. 701-716, 2022. DOI 10.1108/IJCHM-05-2022-0631.

CARVACHE-FRANCO, O. *et al.* Topic and sentiment analysis of crisis communications about the COVID-19 pandemic in Twitter's tourism hashtags. **Tourism and Hospitality Research**, [*S.l.*], v. 23, n. 1, 2022. DOI: https://doi.org/10.1177/14673584221085470.

First Airlines Concept – 本物の航空体験をお届. 2022. Disponível em: https://firstairlines.jp/ikebukuro/index.html. Acesso em: 02 dez. 2022.

GOMEZ, Hector F. *et al*. Introduction to the analysis of tourism services through feelings mining. **Journal of Information Systems Engineering and Management**, v. 3, n. 4, p. 33, 2018.

GLOBO COMUNICAÇÃO E PARTICIPAÇÕES S.A. **G1**. Últimas notícias. 2022. Disponivel em: https://g1.globo.com/. Acesso em: 02 dez. 2022.

GRUPO UOL. História. São Paulo: Grupo UOL, 2024.Disponivel em: https://sobreuol.noticias.uol.com.br/historia/. Acesso em: 02 dez. 2022.

GURSOY, D.; CHI, C. G. Effects of COVID-19 pandemic on hospitality industry: review of the current situations and a research agenda. **Journal of Hospitality Marketing & Management**, Philadelphia, v. 29, n. 5, p. 527-529, 2020. DOI: https://doi.org/10.1080/19368623.2020.1788231.

GURSOY, D.; CHI, C. G.; CHI, O. H. COVID-19 Study 2 Report: Restaurant and Hotel Industry. *In*: **Would They Come Back? If They Would, WHEN?**. Pullman: Carson College of Business, Washington State University, 2020.

GURSOY, D.; MALODIA, S.; DHIR, A. The metaverse in the hospitality and tourism industry: An overview of current trends and future research directions. **Journal of Hospitality Marketing & Management**, Philadelphia, v. 31, n. 5, p. 527-534, 2022. DOI: https://doi.org/10.1080/19368623.2022.2072504

IFEMA MADRID. Cómo aplicar la digitalización y metaverso en eventos. Madri: Ifema. Disponivel em: https://www.ifema.es/en/organise-event/digitisation-metaverse-events. Acesso em: 12 dez. 2022.

KIM, T. *et al*. Robots, artificial intelligence, and service automation (RAISA) in hospitality: sentiment analysis of YouTube streaming data. **Electronic Markets**, [*S.l.*], v. 32, n. 1, p. 259-275, 2022. DOI: https://doi.org/10.1007/s12525-021-00514-y.

LAW, R.; CHAN, I. C. C.; WANG, L. A comprehensive review of mobile technology use in hospitality and tourism. **Journal of Hospitality Marketing & Management**, Philadelphia, v. 27, n. 6, p. 626-648, 2018.

LEI, W. S. *et al*. Virtual music concert attendance motives and experience through the lens of uses and gratification theory. **Event Management**, [*S.l.*], v. 27, n.4, p. 607-624, 2022. DOI: https://doi.org/10.3727/152599522X16419948695134.

LEUNG, D. *et al*. Social media in tourism and hospitality: a literature review. **Journal of travel & tourism marketing**, [*S.l.*], v. 30, n. 1-2, p. 3-22, 2013. DOI: https://doi.org/10.1080/10548408.2013.750919

LIU, Y. *et al*. Listen to the voices from home: an analysis of Chinese tourists' sentiments regarding Australian destinations. **Tourism Management**, [*S.l.*], v. 71, p. 337-347, 2019. DOI: https://doi.org/10.1016/j.tourman.2018.10.004.

MEHRALIYEV, F.; CHAN, I. C. C.; KIRILENKO, A. P. Sentiment analysis in hospitality and tourism: a thematic and methodological review. **International Journal of Contemporary Hospitality Management**, [*S.l.*], v. 34, n. 1, p. 46-77, 2022. DOI 10.1108/IJCHM-02-2021-0132.

META Quest. **National Geographic**: Explore VR. Disponivel em: https://www.oculus.com/experiences/quest/2046607608728563/?locale=pt_BR. Acesso em: 02 dez. 2022.

MISOPOULOS, Fotis *et al*. Uncovering customer service experiences with Twitter: the case of airline industry. **Management Decision**, v. 52, n. 4, p. 705-723, 2014.

NAKAYAMA, M.; WAN, Y. The cultural impact on social commerce: a sentiment analysis on Yelp ethnic restaurant reviews. **Information & Management**, [*S.l.*], v. 56, n. 2, p. 271-279, 2019.

PEARLMAN, D. M.; GATES, N. A. Hosting business meetings and special events in virtual worlds: a fad or the future?. **Journal of Convention & Event Tourism**, [*S.l.*], v. 11, n. 4, p. 247-265, 2010. DOI: https://doi.org/10.1080/15470148.2010.530535.

RAMOS, C. M. Q. Business Intelligence Approach and Sentiment Analysis as a Management Strategy Applied to Study Customer Satisfaction in the Hospitality Sector. *In*: CARVALHO, J. V. d., LIBERATO, P., PEÑA, A. (eds). **Advances in Tourism, Technology and Systems**. Singapore: Springer, 2022, p. 537-547. DOI: https://doi.org/10.1007/978-981-16-9701-2_44

RAMANATHAN, Vallikannu; MEYYAPPAN, T. Twitter text mining for sentiment analysis on people's feedback about Oman tourism. In: **2019 4th MEC International Conference on Big Data and Smart City (ICBDSC)**. IEEE, 2019. p. 1-5.

SU, K. W.; CHIU, P. C.; LIN, T. H. Establishing a blockchain online travel agency with a human–computer interaction perspective. **Journal of Hospitality and Tourism Technology**, [*S.l.*], v. 13, n. 3, p. 559-572, 2022. DOI 10.1108/JHTT-01-2021-0038.

THELWALL, M. Sentiment analysis for tourism. *In*: SIGALA, M., RAHIMI, R., THELWALL, M. (ed.). **Big Data and Innovation in Tourism, Travel, and Hospitality**. Singapore: Springer, 2019, p. 87–104. DOI: 10.1007/978-981-13-6339-9_6.

TU, S. F.; HSU, C. S.; LU, Y. T. Improving RE-SWOT Analysis with Sentiment Classification: A Case Study of Travel Agencies. **Future Internet**, [*S.l.*], v. *13, n.* 9, p. 226, 2021. DOI: https://doi.org/10.3390/fi13090226.

UNITED NATIONS. Department of Economic and Social Affairs: Social Inclusion. **COVID-19**. Disponivel em: https://www.un.org/development/desa/dspd/everyone-included-covid-19.html. Acesso em: 02 dez. 2022.

WANG, G.; WANG, H.; WANG, L. Research trends in tourism and hospitality from 1991 to 2020: an integrated approach of corpus linguistics and bibliometrics. **Journal of Hospitality and Tourism Insights**, [*S.l.*], v. 6, n. 2, p. 509-529, 2022. DOI: https://doi.org/10.1108/JHTI-09-2021-0260

WORLD HEALTH ORGANIZATION. **Who Director-General's opening remarks at the media briefing on COVID-19**. 2020. Disponivel em: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020. Acesso em: 02 dez. 2022.

XIANG, Z. *et al*. What can big data and text analytics tell us about hotel guest experience and satisfaction?. **International journal of hospitality management**, v. 44, p. 120-130, 2015. DOI: https://doi.org/10.1016/j.ijhm.2014.10.013

YAVUZ, O. *et al.* Industry 4.0 technologies, sustainable operations practices and their impacts on sustainable performance. **Journal of Cleaner Production**, v. 387, 2023. DOI: https://doi.org/10.1016/j.jclepro.2023.135951.