Abstract
During the pandemic, there was an alarming escalation in reports of air rage in the United States. Prior to the pandemic, the yearly average of unruly airline passenger behaviors was around 100 incidents per year. However, after mask mandates were issued, 5981 unruly passenger incidents in the United States were reported by the Federal Aviation Administration (FAA) in 2021 alone. Therefore, we conducted a qualitative content analysis pertaining to mask-related incidents of air rage, to learn more about this recent social problem. We also applied an interaction ritual (IR) framework to the results of our analysis, to provide sociological insight concerning this issue. The goal of our exploratory research is to understand what it is about masks that cause certain groups of people to lash out violently while on airplanes. To date, little or no scholarly efforts have researched incidents of air rage in relation to masks. Therefore, our research provides a contribution by updating the literature on this topic.

Keywords Air rage · Interaction ritual · Mask mandate · Tourism · Qualitative · Content analysis

Introduction
Patterns of traveler behaviors have increasingly changed in recent years, and industry leaders and professionals are working diligently to change along with them. One of the most recent changes regarding patterns of airline passenger behavior is an
astronomical increase in air rage incidents. Although air rage is not a new phenomenon (Schaaf 2001; Hunter 2009; Dahlberg 2017), it has become newly relevant because of the recent escalation in frequency and intensity (Aljazeera 2021). It is well documented how significantly disruptive passenger behavior can threaten the safety and security of an aircraft, passengers, and crew. For example, recent attention from the International Transport Workers Federation (ITF) shows concerns and efforts regarding safety and defense for airline staff in the presence of unruly passengers (International Transport Workers Federation 2021). Therefore, a statement of the problem is that over the past 2 years, airline passengers are suddenly engaging in physical fights, and extreme verbal confrontations on airplanes, in record numbers. Therefore, one of our research questions is what has changed in the airline industry during the last 2 years that has contributed to alarmingly high numbers of air rage incidents? Our initial research efforts answered this question fairly quickly. The short answer is the biggest change in airline passenger behavior over the past 2 years was the introduction of wearing masks in public. During the pandemic, of the 5981 reported unruly passenger incidents in 2021, 4290 (nearly 72%) were mask-related incidents (FAA 2022). Put simply, masks and mask-related issues have been the biggest recent change in the airline industry over the past 2 years. That means masks and mask-related issues are at the core of this social problem. However, more importantly, we still do not fully understand why people are fighting on airplanes over masks and mask-related issues. Therefore, we asked a second (and more sociologically significant) research question. What is it about masks that contribute to groups of people fighting on airplanes in record numbers? Our exploration into this topic will provide valuable sociological insight into this recent social problem, as this exploratory study aims to investigate air rage using sociological perspectives. Our research may be beneficial to those interested in tourism and hospitality, among other industries as well.

Methodology

We conducted a qualitative content analysis of online material related to air rage incidents posted between 2020 and 2022. We triangulated data from several online sources, including news stories about air rage, YouTube videos of actual air rage incidents, comments posted below YouTube videos of air rage incidents, as well as interviews with professionals and experts who spoke about this issue. We decided to use a content analysis of online sources because it was the most strategic way to gather large amounts of qualitative data, within the limited time we had, along with the limited resources available to us researchers. Further, it was not possible (or realistic) for us researchers to be present in real time, to gather first-hand qualitative data (e.g., observations and interviews) during thousands of air rage incidents. Finally, this approach also gave us incredible access to a variety of perspectives, which included videos containing interviews and reports from industry professionals and experts whom we may not have been able to reach otherwise. For example, five lengthy interviews were included in our analysis of online video coverage concerning this topic with airline industry
professionals, experts, and airline leaders, which included the President of the Association of Flight Attendants-CWA, AFL-CIO, a flight attendant assaulted in an air rage incident, a University Professor of International Business, and author of the book *Air Rage. Crisis in the Skies*, and the former CEO of Spirit Airlines. Under ideal circumstances, we would have preferred to conduct personal interviews with previously mentioned experts and professionals, as well as with airline staff and passengers. However, we were not able to conduct personal interviews or make first-hand observations due to time and resource limitations.

During phase one of our research process, we collected data from dozens of website news articles written about this topic between the timeframe of 2020 and 2022. We analyzed articles and news stories on this topic that were relevant to our research. During phase two of the research process, we used the Internet to collect and observe roughly on 117 min of recent YouTube video footage captured and posted by bystanders of actual air rage incidents. We exhaustively watched the footage, as we gathered relevant data based on our observations. During phase three, we collected and analyzed the data from thousands of available comments posted below recent YouTube videos of air rage incidents. We gathered hundreds of comments that were relevant to our research. We realistically could not include every available comment in this study; therefore, any comments we provide as examples later in this paper are representative of our overall discoveries. For anonymity purposes, we did not include actual names or usernames of peoples’ comments who we selected to use as examples. We continued to gather data until we reached a point of data saturation. During the next step in our research process, we used an open coding approach, as we developed categories based on patterns that emerged from our data. We discovered the following categories, which we will provide specific quotes and comments as examples later in this paper: personal insults (including racial, homophobic, and gendered slurs), roll of technology, physical and verbal altercations, spatial factors, the uncertainty over usefulness and effectiveness of masks, politics, in-group/out-group statuses, and culture. Although interesting, our discoveries listed above do not get to the root of this issue alone. Consequently, it was vital to our research that we apply a sound theoretical framework to our analysis of the data, to gain rich insight into this social phenomenon. Therefore, our research is theoretically guided by Collins’ (2004) idea of interaction ritual chains (IRC), which he developed from Durkheim’s (1912) work involving religion and rituals, as well as the idea of interaction rituals (IR), which were offered by infamous sociologist Irving Goffman (1967). We found it useful to reference some of Collins’ most recent work regarding IR. According to Collins (2020):

…there are several ingredients or variables that go into a ritual that is successful in creating solidarity, and these can be analyzed in any social encounter, whether it has the formal qualities of explicitly recognized rituals, or are informal, ritual-like activities. (p. 3)

In a Durkheimian/Goffmanian sense, the “ingredients” (as Collins put it) necessary to create successful social encounters include co-presence (people
physically near each other), mutual focus of attention (people focus attention on the same thing), shared mood or emotion (people feel the same emotion), rhythmic entertainment (e.g., people speaking to one another during a good conversation), social solidarity (feelings of agreement with other members of a group), emotional energy (feeling pumped by an interaction), collective symbols (“sacred” objects), and moralities of right and wrong (shared standard of morality).

Ultimately, our research actualizes Collins’ (2022) statement that “‘Interaction ritual’ is a term of tradition and convenience; what is important is to see what affects whether solidarity will be high, low, or non-existent in any particular situation” (p. 479). Therefore, during the fourth phase of our research process, we compared categories we developed (which emerged from our data), with the IR framework discussed by Collins, to see what implications an IR framework may have on our research. Overall, we found conflicts between what the IR framework suggests is needed for successful social encounters (e.g., social order), and what our data reveal is frequently taking place inside aircrafts today. Our discoveries provide sociological insight into why groups of people are fighting on airplanes over mask-related issues, which we discuss more in detail later in this paper. First, however, in the following section, we will provide a brief review of relevant literature regarding air rage.

**Literature review**

Many changes have occurred in the air-travel industry over time, including seat size, technologies, delays and cancelations, and overcrowded airports, most of which are known to contribute to unruly passenger behavior. Other causes of air rage have been suggested over the last 20 years as well (McLinton et al. 2020; Coyle et al. 2021; Thomas 2001; Barron 2002; Anglin et al. 2003), with much research focusing on alcohol consumption being the leading cause of air rage (Anglin et al. 2003). Our review of the literature on this topic will show several passenger stressors (not related to masks, and prior to the 2019 pandemic) that are historically correlated with air rage incidents. Others (Schaaf 2001) identified disruptive passengers as a growing problem as early as the mid-1990s. McLinton et al. (2020) extensively explored “disruptive airline passenger behavior” (DAPB) prior to the pandemic. Their meta-review of the literature on this topic synthesized and summarized the overarching characteristics of 19 studies conducted on issues surrounding air rage. Their findings identified alcohol consumption as a primary cause of disruptive airline passenger behavior. As previously mentioned, their work was conducted prior to the onset of the pandemic; therefore, their research does not include mask-related issues. Coyle et al. (2021) also reviewed this topic from a historical approach ranging from 2000 to 2020, which included multiple factors such as year, flight details, age, nationality of passengers, involvement of flight crew, stage of air journey, flight diversions, presence of intoxication, psychiatric history, and fear of flying. Others, such as Goldsmid et al. (2016), also provide insight into this topic by researching service failure, intoxication, criminal and civil policies, and risks of harm and consequences.
Overall, a significant amount of literature on this topic reveals more about how the declining quality of air travel continues to plague the airline industry today. Long gone are the days when passengers ate a complimentary hot meal using actual silverware. The large luxurious seats of the 1950s slowly evolved into the highly cramped seats we see today also referred to as “sardine seating arrangements” (Schaaf 2001). Seat width and pitch have narrowed quite a bit and vary tremendously among airlines and aircrafts (NBC News 2020a, b). It was reported that seat width, the distance between armrests, has shrunk up to 4 inches over the last 20 years, from roughly 20 inches to 17 inches, with a few airlines as little as 16 inches (Seat Guru 2021). These have been compared to the average movie theater seat, where the average width is 25 inches (Ostrower and Michaels 2013). Airline seat pitch—the distance from one row to the next, has shrunk from 36 inches to 31 inches, with a few airlines as little as 30 inches (Seat Guru 2021; Martinez-Carter 2015). An adequate seat size and a comfortable seat promote proper rest, general comfortability, and sleep, while some passengers involved in air rage incidents have blamed the shrinking seat size (Engel 2014; Francis 2020). Another subtle change in passenger behavior is that the elegance of passenger-dress during the 1950s (Llewellyn 2020) has been replaced with more casual, sometimes “inappropriate” attire such as oversized pajama-pants and/or sleep-wear for some travelers. The novelty of flight seems to have worn off as, according to Dahlberg (2017), modern airline passengers are no longer in awe of the technology of flight.

Major aviation issues also include late arrivals, canceled flights, and lengthy tarmac times (US Department of Transportation 2021). The term tarmac time refers to the amount of time sitting on an airplane stuck on a runway where the aircraft is not moving. The stress from flight delays, cancelations, on-time performance, and tarmac time does not promote health and well-being, but instead contributes to a deterioration of comfort and overall satisfaction, which are known to contribute to incidents of air rage. Hunter (2009) reported that in 2007, planeloads of passengers sat locked in planes on airport tarmacs for 6–12 h at a time, sometimes with limited access to basic needs, such as food, water, and other resources. This is supported by Goguen (2021), who wrote that in August 2009, 47 passengers spent almost 6 hours sitting onboard a plane that was parked on the tarmac of Rochester International Airport in Minnesota. MPR News (2009) further elaborated that this was nearly an overnight tarmac stay. This infamous case got the Federal Government’s attention, and tarmac rules changed the following year. The unknown of sitting endlessly on the tarmac might trigger emotional insecurity and discomfort, which can account for some incidents of air rage.

In many instances, delays and cancelations are a common occurrence since the hub-and-spoke system in air travel was developed. According to Irving (2018), the idea of the hub-and-spoke system was to concentrate traffic to a given airport, which is considered to be the major hub, and the routes to-and-from the airports are referred to as the spokes, similar to a wheel-like process (hence, hub-and-spoke). Regarding the hub-and-spoke system, time management stands out as a major issue and may be correlated with incidents of air rage. The system relies on the arriving aircraft landing on time, so that this same aircraft can also depart on time with a plane full of new passengers. If one aircraft is delayed, the entire hub-and-spoke system
for that airline may be severely disrupted. This failure contributes to increased tarmac times and delayed flights with decreasing on-time performances. This system seems to make economic sense, since it increases city market share (Song and Ma 2006), although it does not come without drawbacks. Airlines do not seem to have an answer to this issue, as passengers have become increasingly agitated by delayed and canceled flights (Schaaf 2001). This system, along with many issues it presents, is known to contribute to disruptive passenger behavior.

While some literature (previously discussed) focused on the aircraft, temporal issues, and/or flight patterns, others have focused on the airport itself. For example, DeCelles et al. (2019) conducted an in-depth study of air traveler behaviors at gates before boarding their flights. Some of the stressors they found include flight delays, physiological disruptors, and overcrowding. They concluded that not only is an airplane a stressful environment, but so are airports in general. Moyle and Muir (2005) identified several airport stressors that can be connected to flight-related challenges mentioned previously. Another documented passenger stressor common to the airport experience is the role that technology plays during travel. “Techno-stress” (Jiang and Balaji 2021) is a term that refers to feelings of burnout and exhaustion, primarily due to technological overuse and overconnectedness. Techno-stress is something that many people experience in everyday life, as well as during modern travel experiences. All too frequently for many travelers today, intended relaxing holidays become full of exhausting and draining pressures, often due to technological demands. For example, Cohen et al. (2014) showed how many travelers rely on and trust technology to search for information, to buy products, to share opinions and experiences, and to search for information. However, as convenient and helpful as technologies can be, opposing demands that technologies impose on health and well-being are plentiful. For example, Ozdemir and Goktas (2021) thoroughly discuss how the overuse of Information and Communication Technologies (ICT) is associated with various health issues ranging from anxiety and depression to addiction and loneliness. In other words, modern technologies have been shown to have harmful social and psychological side effects. For example, technologies can create demands, even “false” demands, including, a sense of urgency to immediately reply to a non-urgent text message or social media post, which can additionally (and often subconsciously) add more stress to the already intense experience of navigating through an airport. Certain technologies can create more demands than necessary, as people attempt to keep up with the latest uses and gratifications of technological gadgets while traveling. Rather than enjoying restorative and rejuvenated travel experiences, many passengers find themselves bringing their work and personal “baggage” along with them on their travels via their technological devices, while often feeling drained and sometimes trapped by them.

Clearly, the travel experience has drastically transformed in recent years (Cohen and Cohen 2012). Our brief review of the literature provided above is twofold. Firstly, it is intended to acknowledge that there are several documented passenger stressors which have been historically correlated with incidents of air rage. And second, this review shows that there is a gap in the literature regarding how masks and mask-related issues are a new and significant factor in reports of air rage incidents, as we were not able to find any scholarly articles about this issue at this time. We do
not claim that our current research discoveries somehow “replace” other known passenger stressors in terms of air rage. Rates of alcohol consumption, delays, cramped seating, cancelations, and uses of technologies (among others) are still important contributors to unruly passenger behaviors to this day. Our research in the sections below shows that there is a new contributing factor to unruly passenger behavior that is worthy of scholarly attention. Hence, our research updates the literature on this topic and is intended to show how masks and mask-related issues are now added to the increasingly long list of social factors associated with air rage incidents.

Results and discoveries: overview of the data

Masks in general are deeply symbolic objects, loaded with various social meanings. For example, according to Inglis (2020), masks are powerful objects in various ways, including magical ones; they are intimately associated with identity and transformations of identity; masks play a role in citizenship; as esthetic objects; they impact policing; they invoke culturally and geographically variant responses; masks are deeply gendered (e.g., in some Middle Eastern cultures); they play significant roles in the symbolism of crime and social deviance; masks are often profoundly political; they are often involved in social disorder; masks are ambiguous; and they often represent issues of death and life (in theater for example). In other words, for a multitude of reasons, varying meanings of masks cause a great deal of contention in society, which is consistent with what we discovered throughout our research process. After observing nearly 117 min of recent YouTube footage of various air rage incidents, as well as analyzing several hundred recent YouTube comments about air rage videos online, analyzing interviews with experts and professionals, and analyzing dozens of website news stories concerning this issue, we identified the following themes/categories (some categories below may overlap, and/or some comments could be placed in more than one category). We did not include actual names or usernames of peoples’ comments for anonymity purposes. It is also important to note that we decided to keep the original quotes in-tact, regardless of punctuation and grammatical errors.

Category 1

Personal insults (including racial, homophobic, and gendered slurs): a mix of men and women were involved in the air rage incidents we observed. However, more than one woman was referred to as “Karen,” which is typically a pejorative term/insult usually used toward a white woman who is perceived as entitled or demanding. For example, during a video where a woman was kicked off an airplane for unruly behavior, a man yelled out, “Bye Karen!” as the woman exited the aircraft. A YouTube commenter wrote “The guy who said ‘bye Karen,’ was legendary…” (Now This News 2020). Yet another wrote “Geez Karen’s, arguing over masks is sooooo 2020” (Good Morning America 2021a, b). As mentioned earlier, the term
“Karen” refers to a stereotype about being the kind of person who is demanding, belittles service-industry workers, and carries out (racist) micro-aggressions toward others. In a separate instance, one YouTube commenter referred to women as “pavement princesses” when he wrote:

> Air travel is the rare situation where pavement princesses step out of their SUVs and take public transportation. They don’t take the bus or the train because in their eyes, those things are for poor people and losers, but they do get on planes. They’re used to getting away with road rage, so when they want to go on vacation, they take it to the skies. (CNBC 2022)

“Fat-shaming,” homophobic, and racial slurs were not uncommon as well. According to Sara Nelson, President of the Association of Flight Attendants-CWA, AFL-CIO, 61-percent of the reports they have seen were related to racial, gender, and homophobic slurs (Good Morning America 2021a, b). African American flight attendant, Teddy Andrews, stated that a passenger said to him after Mr. Andrews asked the passenger to put on his mask “N-word, I don’t have to listen to a Goddamn word you have to say. This is a free country…” (Good Morning America 2021a, b). Such terrible racial comments came during particularly turbulent times, as widespread news traveled regarding tragedies of the deaths of the likes of George Floyd and Breonna Taylor (among others), which sparked the Black Lives Matter (BLM) Movement.

**Category 2**

*Roll of technology:* the roll of technology was obvious in varying ways. For example, all of the clips we gathered and analyzed were filmed and posted on the Internet, and thousands of comments were made in the comment section below the videos, which is an interesting social phenomenon in-and-of-itself. There was also an awareness of being filmed on behalf of some air rage offenders. Several offenders stated that they did not care if the video of their outbursts went “viral.” In some instances, people even seemed to behave more aggressively because they knew they were being filmed.

**Category 3**

*Physical and verbal altercations:* during our observations of video footage, it was not uncommon to see multiple incidents of unruly passengers being restrained, tackled, screaming, and yelling at others on the plane, charging up and down the aisle, swinging and punching each other, and being pinned down by various people aboard aircrafts, while their hands were being restrained, sometimes with zip-ties. Shockingly, one highly intoxicated passenger was physically duct-taped to his seat from head-to-toe (not covering his nose and mouth).
Category 4

Spatial factors: lack of space is a common controversial issue on airplanes, especially during the pandemic where people were told to social distance from one another, which is nearly impossible to do on an aircraft full of passengers. As the pandemic continued, people became more aware that the risk of transmission of the COVID-19 virus is higher in poorly ventilated indoor spaces. One commenter wrote “The airline is full of it. They don’t EVEN try to social distant. Every seat is occupied and full of passengers. If they’re REALLY concern over the CDC Regulations… Then they’ll start with basic rule number one …. Six Feet” (NBCLA 2021). Many people are agitated in general by the increasingly cramped spaces on airplanes. For example, another person wrote “Flying has become exceedingly awful experience even without any incidents. The seats are getting smaller and smaller while the people are getting larger and larger. Overall, the whole system is designed to aggravate passengers. Then we have the anti-mask idiots—which is whole different problem all together. Feel sorry for the cabin crew” (CNBC 2022). Another person commented “It’s ridiculous that as seats are so cramped that they even have reclining seats, all packed in like sardines so the airlines can make even more money, I would never recline my seat knowing it was going to make the person behind journey even more uncomfortable” (CNBC 2020).

Category 5

Uncertainty and disagreement over usefulness and effectiveness of masks: many comments were made arguing back-and-forth about the efficacy of masks. Both sides presented seemingly valid points. Regardless of who is right or wrong about the effectiveness of masks, the key theme to identify here is the uncertainty surrounding the efficacy of masks that leads to frustration, which leads to aggression for some groups. One person wrote:

Masks work to contain respiratory droplets, which may contain virus particles. The virus itself needs a vehicle to spread about, and most pathogens do. This is why surgeons or anyone in an operating room wears a mask, to keep their snot/spit out of the patient’s open body. If you ever have surgery, just tell everyone not to worry about masking up. You don’t believe they work and they are welcome in spraying your insides with saliva, coffee, and whatever else they ate right before the procedure. (Good Morning America 2021a, b).

Conversely, another person wrote “I’m anti-mask to the fullest, they don’t work I honestly hate them…but to risk you’re flight over not wearing a mask is not worth the penalties that awaits you let alone embarrassment. I’ll wear the damn thing for hours to avoid a fine and then being banned. It ain’t worth it!” (NBCLA 2021). Many citizens were told by experts during the pandemic that there was evidence to suggest that the virus could be spread by tiny particles suspended in the air. On the other hand, many professionals claimed that tiny particles fall to the ground due to gravity, and they are not suspended in the air for lengthy periods of time. Others believed there was nothing you can do to avoid the virus at all. One person wrote
“Know what is stupid? The idiotic idea that wearing a few pieces of thin paper over your nose and mouth actually protects you and your fellow passengers while all of you are stuck in a flying sardine can for hours” (Good Morning America 2021a, b). Opposingly, another person replied:

perhaps not in your fantasy world, but in the real world, masks work. Well described and proven. I’m sorry that you can’t grasp the understanding of how and why they work, they just do buddy. Hey…let me just explain it the way I had to for my daughter when she was 5…magic. Thankfully she now understands how masks work at the age of 8…I’m such a proud papa! (Good Morning America 2021a, b).

Early information from the World Health Organization (WHO) stated masks should only be worn by people who had symptoms such as coughing and sneezing. Relatively shortly after that information was released, citizens were then told that many people who have the virus may not have symptoms, but can still be contagious. Therefore, officials stated that masks were able to stop infected people from passing the virus on to others. In other words, conflicting reports from experts at the time, contributed to mass confusion regarding whether or not masks were effective in stopping the spread of the virus. One person wrote “What’s the use of mandating masks if people take them off when eating/drinking and take all the time of the world to so in order to not wear the mask for at least one hour” (Good Morning America 2021a, b). Information on this topic frequently changed during the course of the pandemic, which made it difficult for people to agree upon the effectiveness of wearing a mask in public.

Category 6

Politics and masks: masks became highly political during the pandemic, as we found evidence to show that they reflect issues regarding Constitutional rights for some groups in America. The issue also reflects a classic American struggle between groups who feel as though they are defending public safety, and those who believe equally as strong in personal liberty. For example, one YouTube commenter wrote “You know it’s been a long time since I read the Constitution. But I do not remember reading where wearing a mask for public health safety issues was unconstitutional. In fact I don’t remember reading about masks in the Constitution at all. So do tell me, where do you get this nonsense from” (WPLG Local 10 2021). Responding to a comment made likening mask mandates to Nazis, another YouTube commenter wrote “Trying to compare a cloth masks to Nazis only reinforces OPs point. You sound like you have been threw real hardship if your comparing a cloth masks to the Nazis” (WPLG Local 10 2021). One person wrote

Honestly though, the US is one of the last countries to not just roll over belly up. I’m not even republican, didn’t vote for Trump, but I know what standing up for yourself is. Sure, put up with ‘inconvenience,’ you’ll soon be putting up with the trampling of your rights. That said, just wear the damn mask. It’s not even an inconvenience. My point is, God bless a country that CAN act that way, and knows how to not just give up (WPLG Local 10 2021).
The dispute over masks embodies many political dynamics. Wearing a face mask in public can potentially signal one’s political identity to others, as well as convey loyalty/disloyalty to certain groups. During the pandemic, the general Democratic position was supportive of the mask mandate, while the general Republican position on the mask mandate was not necessarily in favor. Some people stated that former US President, Donald Trump, was to blame for the mask mandate. Further, many Republicans identified with then President Donald Trump, who was not initially in favor of a mask mandate. Some people stated that Trump was to blame for the spread of the virus. While others stated that Trump didn’t start the pandemic, he was only forced to react to it. In July 2020, nearly over 1 year into the pandemic, President Trump ultimately wore a mask in public for the first time during a visit to a military hospital. Regarding masks and the mask mandate, a YouTube chat exchange included the following comments – one commenter wrote “Trump supporters,” while another commenter wrote “Biden’s administration,” and another commenter wrote regarding the mask mandate (on airplanes) “what a political sham” (WPLG Local 10 2021).

Category 7

In-group/Out-group statuses: some groups may feel at odds with other groups who have a different outlook(s) on an issue (in this case wearing a mask or not wearing a mask in public. The mask mandate sparked considerable debate on the issue between groups. For example, one YouTube commenter wrote “Nah, flying is easy and stress-free. It’s just low-cost flights attracting thugs like anti-maskers” (CNBC 2022). Another YouTube commenter wrote “So funny how these ‘I love law enforcement types’ love law and order until it applies to them. Then, they have no problem assaulting law enforcement (WPLG Local 10 2021). The divide between “maskers” (e.g., those who wear masks), and the “anti-maskers,” as they have been frequently called, is significantly large. A YouTube commenter stated “Absolutely. The most entitled travelers I have seen in my years of international travel. They always seem to place their ‘rights’ above common sense and personal responsibility” (WPLG Local 10 2021). While another YouTube commenter wrote “Next time you contemplate flying, do the world a favor and go Grayhound or Amtrak” (WPLG Local 10 2021). Opposing sides defended their position for wearing a mask in public, while others argued against wearing masks in public. For example, a YouTube commenter wrote “hhaha.. you covidians and your seat belt analogies... you’ll do anything to fit in wont you” (WPLG Local 10 2021). One person commented “I’m so tired of these ‘the rules apply to everyone but me’ people. Just get off the plane and go” (Now This News 2020). Many people were deeply mistrustful of others, and blamed the other side for contributing to the public health crises. One YouTube commenter stated “This is what happens when peasants can afford plane tickets” (KSDK 2020). Another commenter wrote “Why not fine air rage thugs the round sum of $100,000. and a lifetime ban on airlines? DO SOMETHING” (WHAS11 2021). Another YouTube commenter wrote (referring to people who act out in air rage over masks) “second rank citizenship” (KSDK 2020). One YouTube commenter wrote (referring to
people who act out in air rage over masks) “Ban them from all airlines!!!! Permanently” (Good Morning America 2021a, b). Comments provided above are evidence of in-group/out-group mentalities of either being ‘in” with wearing masks, or “out” with not wearing masks or vice versa, with a clear division between opposing sides.

Category 8

Culture: we discovered that culture played a significant role regarding this topic. According to Borer (2006), one way culture can be understood is “The way people make sense of their world and the symbolic and material products that express that way of life” (p. 175). Masks are not only highly symbolic material products, but for some wearing a mask in public is a way of life in the post-pandemic world we live in today, and may continue to be for the foreseeable future. Further, the adoption to wear them or not had some relation to cultural norms and expectations. For example, groups from other countries like Italy may have adopted mask wearing more readily as they were hit sooner and harder by the virus, more than those in the United States. Further, people from countries other than the United States that had previously experienced the Sars pandemic in 2003, or other respiratory outbreaks in the past, were seemingly more willing to start wearing masks. Our research also shows that air rage is an issue that mostly occurs in the United States (which is widely known to be a more violent culture than many others). According to Jeffrey C. Lowe, CEO of Asian Sky Group in Asia, air rage is mostly an American phenomenon. During an interview about air rage incidents in Asia, Lowe stated “I have not heard of any incidents — zip, none” (CNBC 2022). One YouTube commenter wrote “This shit is only happening in America.” Another wrote “Probably none of these air rage incidents happen in India IN or Pakistan PK” (CNBC 2022). One comment on a YouTube air rage video read “This is an American video, I’d assume it’s mostly Americans acting out. The people in this country can’t behave. This is why we can’t have nice things” (CNBC 2022). Another wrote “I can assure you not much, mostly what I see being frequent flyer the Americans mostly behave like they are entitled. That psychology never gets old” (CNBC 2022). Another YouTube commenter stated “I’m an American, I can do whatever I want” (Good Morning America 2021a, b).

One YouTube commenter stated, I live in Europe and these type of incidents don’t really happen here. That being said, the EU has incredibly strong consumer protections when it comes to airlines. Unexplained cancellations and delays are uncommon and, when they do happen, you’re entitled to a lot (accommodations, food, refunds). If Spirit stranded me in the middle of no where because they screwed up their scheduling, I would be really on edge too (CNBC 2022).

Our overview of the data in this section shows there is a general, widespread disagreement among and within groups of people about masks and mask mandates. Outlined in this section, we identified several ways that a lack of social solidarity exists regarding mask-related issues on airplanes. Moreover, based on comments
made from both sides on this topic, we found an outright rude and discourteous sentiment, sometimes even a seeming hatred toward others. We will now move on to the next section to see what the application of the interaction ritual (IR) framework may have on our categories.

**Discussion: masks and contested meanings**

According to Collins’ (2020) interaction ritual (IR) framework, eight criteria are necessary for successful social interactions include *co-presence* (people physically near each other), *mutual focus of attention* (people focus attention on the same thing), *shared mood or emotion* (feel the same emotion), *rhythmic entertainment* (has been measured in patterns of speaking), *social solidarity* (feelings of agreement with other members of a group), *emotional energy* (feeling pumped during interaction), *collective symbols* (“sacred” objects), and *moralities of right and wrong* (standard of morality). By comparing our research discoveries with Collins’ IR framework, we will attempt to shed light on where a breakdown in social interaction is occurring during incidents of air rage. According to Collins (2020) “…successful interaction rituals are the micro-process that generates almost everything that we refer to as ‘social order’” (p. 5). Two components of the IR framework were consistent with our data analysis including *co-presence* (people physically near each other on airplanes), and *mutual focus* (masks were the object of peoples’ focus during air rage incidents). However, the remaining six components of the IR framework were *not* consistent with what our categories suggest is taking place during incidents of air rage.

Again, for clarity purposes, Collins’ stated in order for social order to exist, the IR framework suggests that all eight (*co-presence, mutual focus, shared mood or emotion, rhythmic entertainment, social solidarity, emotional energy, collective symbols, and moralities of right and wrong*) need to be agreed upon or understood by all sides during a social interaction. However, our analysis of the data shows that six of the eight criteria of his framework were *not* agreed upon, or shared during the incidents we analyzed. In other words, our research shows that people did not share the same emotion(s) about masks, they did not have a rhythmic pace during their interactions (there was a great deal of shouting and yelling at each other in the videos, and similar sentiments were expressed in peoples’ comments about the videos), there was no social solidarity, or shared feelings of membership involved with masks or masking mandates on airplanes, there was not a shared emotion present for people to bond over (mixed emotions were present such as anger, frustration, annoyance, irritability, etc.), there was no sense of collective agreeance over a central point of focus (e.g., effectiveness of a mask) as a positive symbol (some groups like wearing masks, some groups do not like wearing them, while some groups are indifferent), and there was no shared sense of morality of right and wrong (people highly disagreed over the standard of morality and politics involved with wearing masks). Our research indicates that masks are highly contested symbols, with varying meanings. Masks are symbols that polarize people, and have the potential to bring out the worst in certain
groups. At the very least, contested meanings surrounding masks can cause a great deal of frustration, which often leads to aggression, especially in cramped spaces, and already stressful situations like air travel. In other words, certain groups of people feel differently about being mandated to wear a mask, especially on an airplane, therefore their frustration with others who feel or behave differently (based on several factors according to our theoretical orientation discussed in this section) leads to aggression, which results in physical or verbal outbursts (hence, air rage). During the next section, we will discuss larger implications of our research, along with our future areas of interest.

Conclusions

Over the past 2 years, travelers experienced many unforeseen circumstances during uncertain times. Along with traditional passenger stressors such as alcohol consumption, long waits and delays, effects of technologies, etc., we have shown evidence of a more recent factor that contributes to air rage as well – masks and mask-related issues. As of 2022, although mask mandates are currently being lifted in many regions, some businesses still recommend that people wear masks. Moreover, regardless of the recent lift on mask mandates that occurred this year, some people prefer to wear masks, while others do not, which has the potential to create future outbursts over this issue. Put shortly, this social problem does not appear to be going away anytime soon. It is staggering to see that more air rage incidents occurred in the year 2021, than occurred in over 30 years combined (before the pandemic and/or masking requirements). Our research explored this social phenomenon, in-depth, to look beyond the surface, to better understand what is taking place with this ongoing social problem (acts of violence in public over wearing masks). We found that one of the biggest changes in the airline industry today was the introduction of mask-wearing passengers, which we also discovered was at the center of this recent issue. Masks being at the center of the issue may not necessarily be a surprise to many; however, our research provides sociological insight into what it is about wearing masks that caused record-breaking numbers of air rage incidents. Regarding interaction ritual (IR), Collins (2020) wrote:

…successful interaction rituals are the micro-process that generates almost everything that we refer to as ‘social order.’ It gives people their identities; makes them enthusiastic or antipathetic to various things in their social environment; creates leaders, heroes and villains, the popular and the unpopular; it fills our minds and discourse with meaningful ideas—i.e., those which are emotionally most marked; and it generates morality, both in directing us to positive goods and against emotionally repugnant evils. (p. 5)

Collins passage above embodies our research insofar that we found unsuccessful interactions based on contested meanings of masks. The division over this topic creates “good” guys and “bad” guys, “likable” and “dislikable” people, as well as “positives” and “negatives.” However, the reality of what the pandemic showed
us is that we ought to unite, and work together to find common-ground to agree upon, and to understand and respect opinions and feelings that are different than our own. Based on our findings, important take-aways include insulting, shaming, or abusing others, physically or verbally, are not constructive ways to get others to adopt a certain behavior, or to get them to understand a given position on an issue. Efforts toward overcoming this issue ought to focus on how we can achieve collective harmony and solidarity on important social issues.

While adapting to what is often referred to as “the new normal,” it appears that the world of travel is no longer primarily focused on entertainment, pleasure, desires, and consumption. Instead, travel industry leaders are also increasingly focused on the safety of the experience itself, along with the task of putting travelers at ease, mentally and physically. Air rage is a complicated topic, which makes mask-related issues a compounding factor to contend with. Aviation and travel are typically about bringing people together. They are not about tearing people apart. Airline policymakers can potentially design more effective public messages to increase compliance among non-mask wearers, by better understanding what social cues either wearing, or not wearing a face mask sends to other people. Our research has implications on airplane etiquette, passenger safety, security, verbal and physical abuse, and violence on the job for airline employees. We are by no means claiming our research discoveries fully explain this extremely complicated social issue. We are simply adding a “piece” to the puzzle to go along with several other pieces discussed during the literature review section of this paper, thereby using qualitative methods and sociological concepts to update the literature on this topic. Our research may be useful for other groups and organizations such as teachers, and school employees, as well as businesses where large amounts of violent acts are taking place based upon mask-related issues.

Other areas not explored in this current study, but we hope to explore in the future include conducting in-depth interviews to find out how wearing masks, or being mandated to wear masks impacts the values that Americans hold such as independence, freedom, equality, and achievement. We are also interested in finding out how mask-related issues impact peoples’ sense and ability to communicate verbally and non-verbally, especially in unfamiliar settings such as those associated with travel. We would like to find out more about race and ethnic, age or gender associations involved in wearing masks. For example, we would like to find out if men are less willing to wear a mask than women, or vice versa. We would like to explore the role that religion plays in this issue, and to what extent. We are also interested in how groups perceive aspects of tourism including travel and vacation, which have been affected by the pandemic (including shutdowns, mask mandates, curfews, and possible limits on public gatherings). In conclusion, we explored Collins (2020) claim that interaction rituals produce emotional energy, the gathering of which is a central motivating force for individuals, in which the effect is the driving force of social order. Further, we addressed his statement that it is important to see what affects whether solidarity will be high or low in any particular situation, specifically on airplanes in the case of our research. We discovered when multiple elements of the IR framework are missing, we see social disorder, conflict, or social instability surrounding mask-related
issues on airplanes. Overall, we answered our research question as we have identified, outlined, and discussed what it is about masks and mask-related issues that are related to incidents of air rage, thereby providing sociological insight into why groups of people are fighting on airplanes over mask-related issues.

**Author contributions** BO and HS contributed to study conception and design, data collection, analysis and interpretation of the results, and draft manuscript preparation. All authors reviewed the results and approved the final version of the manuscript.

**Funding** There was no funding associated with this research.

**Data availability** The authors confirm that data supporting the findings of this study are available within the article, and its reference section. All sources used are properly disclosed (correct citations).

**Declarations**

**Conflict of interest** There is no conflict of interest associated with this paper. There are no financial or non-financial interests that are directly or indirectly related to the authors’ work in this paper.

**Ethical approval** The authors confirm that the appropriate ethics and welfare protocols have been followed and that there are no known ethical conflicts associated with this study. Informed consent from participants was not necessary for this study, as data and information gathered during the research process derived from public sources. Further, to ensure anonymity, usernames were not included in our study. This material is the authors’ own original work, which has not been previously published elsewhere, and is not currently being considered for publication elsewhere. This paper reflects the authors’ own research and analysis in a truthful and complete manner.

**Informed consent** This article does not contain any studies with human participants performed by any of the authors.

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