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Clocks, Calendars, and Claims: On the Uses of Time in Social Problems Rhetoric

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ABSTRACT

Social problems claims use rhetoric and other tools of symbolic communication to persuade audiences that some troubling condition is important and needs to be addressed. This paper considers how common measures of social time are employed as rhetorical elements in social problems claims. It is argued that time units operate as temporal frames that contribute to the structure of claims, articulate core meanings, and facilitate spread into relevant public arenas. A typology of three general ways that social problems claims incorporate temporal frames is offered; these include metered time units, attention maintenance mechanisms, and epochal markers.

The constructionist approach to social problems views social problems as processes, rather than conditions. Spector and Kitsuse (1977) offered the founding principles for the modern sociology of social problems, suggesting that constructionist analysts ought to focus on meaning-making activities that transform "troubling conditions" into "social problems" (Best 2021). At the center of all meaning-making activity is rhetoric, which is broadly defined as the array of tools and strategies people use to communicate and persuade audiences (Jasper and Young 2007).

Social problems claims aim to persuade, to convince listeners that some troubling condition is important and needs to be addressed. This means that claims can be analyzed rhetorically as arguments with component parts (Best 1987). Social problems claimsmaking is built upon two rhetorical components – grounds and warrants – that combine to support a third, the conclusion (Best 2021; Toulmin 1958). Grounds are statements that articulate the nature of the troubling condition, typically by offering definitions, examples, statistics, frames, names for the problem, descriptions of the people responsible or affected, or critiques of earlier constructions. Warrants are invocations of values; they explain why a condition should be considered troubling, why something ought to be done about it. Conclusions are statements about what actions should be taken to address the problem. In addition to a claim's rhetorical elements, there are contextual forces that influence how a claim takes shape and circulates in public life. These include competition among claimsmakers, limitations on access to public arenas, social power differentials among claimsmakers or audiences, and shifting political or cultural forces (Best 2021; Bogard 2001; Hilgartner and Bosk 1988).

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This paper considers time as an important but largely overlooked element in the social problems process. Sociologists who study the social construction of social problems have neglected how time figures into those constructions, aside from the use of various natural history models to trace the ways problems emerge and evolve (Best 2021; Blumer 1971; Spector and Kitsuse 1977).[1] What follows represents a preliminary attempt to inductively catalog some of the ways that time is commonly integrated into the rhetoric of social problems claims. We have gathered problem claims that incorporate time metrics as rhetorical tools for building the claim's underlying grounds and warrants. Our focus is primarily on the U.S.; we collected and analyzed claims nonsystematically from press coverage, bureaucratic reports, and organizational social media communications. Our goal is not to offer a definitive statement about all the ways that time metrics are used to construct social problems; rather, we seek to develop a preliminary framework that will encourage constructionist analysts to more fully consider time's role as a framing tool in social problems claimsmaking. This view of time as a rhetorical resource parallels research on the role of social statistics in claimsmaking (c.f., Best 2012; Stone 2020). Like statistics, time-oriented frames enable claimants to gloss over the complexities of social issues and offer seemingly straightforward statements about the size, scope, and urgency of a social problem.

We suggest that commonly used words, measures, and images related to time, when embedded in social problem claims, operate as *temporal frames* that enhance the structure and persuasiveness of social problems rhetoric and facilitate the spread of claims into relevant public arenas. A typology of temporal frames is offered that includes metered time units, attention maintenance mechanisms, and epochal markers.

Temporal Frames

As sociologists of time have noted, all social interactions – and therefore all social problems claims – are imbedded in definitions of temporality (c.f., Elias 2007; Nowotny 1994; Sorokin and Merton 1937). Much of the structure and order of social life is tied to temporally coordinated schedules and shared reliance on standardized categories for measuring time's passage (Zerubavel 1985, 1981). Individuals use time to make sense of experiences, categorize observations, and organize their emotions and behavioral schema (Flaherty 1999, 2011; Roth 1976).

Other analysts have used the term *temporal frame* (or *framework*), in very different ways, and the term has no generally accepted meaning (cf. Boden 1997; Bos et al. 2005; Çaglar 2016). In this project, we define a temporal frame as the use of time metrics in communication as a means of organizing the core meanings within a message and guiding audience interpretations of those meanings. This definition incorporates two key strands of framing in sociological theory: first, the view that frames are a way to structure communications (Entman Robert 1993; Snow and Benford 1988); second, that frames provide interpretive channels that individuals use to process information and try to understand the world around them (Gamson et al. 1992; Goffman 1974). This is well understood in social problems theorizing (c.f., Best 2021; Holstein and Miller 1990; Loseke 2003; Lowney 2008; Snow and Benford 1992). Temporal frames, then, link the literatures of social problems theory, social movement framing, and the sociology of time.

Time-oriented message frames generally influence if and how a message is received, processed, and acted upon. Researchers have shown that adding temporal elements to

marketing messages (e.g., limited time offers) directs consumer preferences and behaviors (Swain, Hanna, and Abendroth 2006). Disaster scholars have found that embedding elements of time in messages about mitigation or evacuation informs how people receive and respond to risk communications (Boyd and Zimbardo 2006). Similarly, studies of cognition and behavior related to health and wellness (e.g., food choices, commitment to weight-loss efforts, disease-prevention strategies) consistently show that message framing that incorporates elements of time influences the seriousness that people ascribe to stated risks or gains and, thus, the likelihood of altered intentions or behaviors (Guan and Jiyeon 2020).

The notion that temporal frames alter perceptions of proximate risks and promote social action aligns with constructionist views of social problems. Claimsmakers seek to raise concerns about troubling conditions by constructing claims that speak to an issue's nature and scope and suggest ways to deal with it. Claimsmaking is a competitive process; claimsmakers struggle to get their message heard amid all the other claims being promoted (Hilgartner and Bosk 1988). Integrating language and images related to time may enhance the persuasive appeal of rhetoric and create favorable communication contexts, thereby adding credibility to claims as they travel through the stages of the social problems process.[2] Time represents a "vernacular resource" for claimsmakers (Adorjan and Kelly 2022), a type of "rhetorical idiom" (Ibarra and Kitsuse 1993) that brings a familiar structure to claims, but also helps to elaborate and elevate the problem status of attached conditions. Because of the ubiquity of time in everyday life (Flaherty 1999; Zerubavel 1981), time-oriented frames offer a high degree of discursive flexibility for claimsmakers and broad appeal for audiences. Time can be invoked in different ways to infuse claims with different meanings and guide audience interpretation. From this, we suggest that common measures of social time, when embedded in claims, operate as "master frames" (Snow and Benford 1992) that can be modified as needed to promote alignment with preferred ideologies, cultural contexts, and political trends (Swart 1995).

Our focus in this study is on occasions when claimsmakers become *temporal entrepreneurs*, when they choose to explicitly incorporate time as a rhetorical element in their claims, by building frames that link aspects of time with the condition being defined as troubling. We identify three general ways in which time appears in social problems claims: (1) using *metered time units* to portray a problem's scope and likelihood of risk and issue urgent demands for change (these typically involve claims built upon what we might think of as "clock time," such as seconds, minutes, and hours); (2) creating *attention maintenance mechanisms* that enable claims and claimants to find recurring placement in media and other public arenas (these framings tend to rely more on calendrical measures of time, such as holidays and other designated days, weeks, or months that help to guide collective remembrances); (3) building *epochal markers* that locate a social problem within a particular period in historical time and space (common examples include time-lapse imagery, trend reports, or other techniques that compare the current state of a problem to some idealized past or predicted future as a way to depict a worsening condition and promote earnest calls for intervention).

These three forms of temporal frames should be understood as ideal types rather than mutually exclusive categories. Each offers a distinctive view of the role of time in social problems rhetoric, but they also have elements that overlap. Taken together, they highlight the rhetorical malleability that time-oriented frames afford claimsmakers. Different time

scales give different meaning structures to claims and may even influence whether and for how long claims take residence in prominent public arenas. Claims incorporating smaller measures of time, such as seconds and minutes, suggest widespread, equal, and proximate risks. Claimsmakers who utilize medium-level time scales – such as days, weeks, and months – may gain competitive advantages in the social problems process by designating specified moments in time for awareness or social action. Invoking larger, more nebulous spans of time (e.g., past, present, future) creates rhetorical context for dire statements about worsening current conditions or worrisome future trends.

Metered Time Units

Claimsmaking is a persuasive exercise. Audiences are more likely to care about an issue if they come to see it as being *real* and *relevant* to their day-to-day lives. Making a problem real is a relatively straightforward task, achieved by effectively building the grounds (e.g., offering examples of what the problem looks like, providing statistics, or hearing from those said to have experienced the problem). Constructing relevance, on the other hand, is trickier. It is one thing to get people to see something as *a problem*, and quite another to get audience members to interpret it as *their problem*. There are limits on how many issues people can pay attention to and care about at any given moment (Downs 1972; Hilgartner and Bosk 1988; Kinnick, Krugman, and Cameron 1996). One way to prompt situated interpretations of relevance is through rhetoric that depicts a problem's associated harms as being both widespread and proximate, such that audience members might come to see it as a threat to themselves and loved ones, personal property, or valued aspects of their local community (Howell and Shepperd 2012; Stallings 1990).

Clock-based time units (e.g., seconds, minutes, and hours) are particularly effective in this regard because most people hold a synchronistic relationship with standard units of clock time (Flaherty 1991), which often leads to an uncritical reliance on such measures when processing information and navigating social experiences. Advocates can weave assumptions about time into their arguments (Ciocănel, Rughiniş, and Flaherty 2021) in ways that audiences often uncritically accept (Adorjan and Kelly 2022).

The use of metered time units as a rhetorical framing is readily found in press accounts of the COVID-19 pandemic, where numbers have taken on an important role in how we shape understanding of the pandemic and assess the effectiveness of masks, mandates, vaccines, and other interventions (Best 2020a). For instance, in the winter of 2020, when a great deal of media coverage was focused on COVID-19′s death tolls, news workers often converted the staggering array of daily numbers into units of clock time to frame their reporting. Thus, a December *CNN* report transformed that week's daily average of 2,403 US deaths into "an average of one Covid-19 death every 40 seconds" to underscore its claim that "the number of families mourning the death of a loved one to Covid-19 keeps growing at a devastating rate" (Yan 2020). As the death tolls rose in the weeks that followed, reporters were able to create even smaller time intervals in support of claims about the worsening threat and challenges associated with the vaccine rollout. Similarly, the World Health Organization (WHO), a massive global organization that combats a wide array of public health concerns, environmental challenges, and human rights issues, regularly uses such time-based framing techniques in its public communications. WHO's Twitter account contains numerous examples of using clock time to construct risk. For instance, a recurring tweet sent out by

the WHO includes an image with two-thirds of a clock face shaded red and a caption stating that "Every 40 seconds someone dies by suicide. Suicides are preventable." (World Health Organization [WHO] 2019). Such calculations offer a way of translating large, seemingly abstract numbers into more familiar and easily understood formats.

One of the longest-running and most widely circulated examples of a social problem being depicted through metered time units is the FBI's "crime clock." The FBI publishes *Crime in the United States*, an annual volume of that presents the most recent data from the FBI's Uniform Crime Reports. Since 1960, these reports have included crime clocks, which are essentially graphs showing a shaded area of a clock face, accompanied by a caption stating that in the most recent year, an instance of crime X occurred every Y minutes (or seconds). The FBI crime clock focuses on 7 of the 8 designated "index crimes" (homicide, rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft; arson is excluded from the clock), with the first four of these also fused together as "violent crime" and the latter three combined as "property crime." The 2019 clock's statistics – the most recent version as of this writing – noted that "a violent crime occurred every 26.3 seconds" and "a property crime occurred every 4.6 seconds," as well as metrics for each of the seven featured index crimes (Federal Bureau of Investigation 2020).

These crime clocks have long been the subject of critical commentary (e.g., Baer and Chambliss 1997; Wolfgang 1963), much of it having to do with the flawed simplicity of the mathematical calculations used to build claims based on metered time units. Statistics for the clock are created by dividing the total number of reported crimes for each category by the number of seconds or minutes in a year. But criminologists rarely find it helpful to consider crime in raw numbers; more often, they refer to crime rates (usually calculated as crimes per 100,000 population). Crime clocks seem designed to highlight the risks of crime. As Wolfgang (1963:730) argued: "If the purpose of this 'crime clock' is to frighten consumers of the UCR, the statements probably succeed, for they are reproduced in scores of newspapers and read by millions, including congressmen, state legislators, and city councilmen who appropriate funds for police budgets."

Time units such as minutes or seconds are not particularly effective as denominators because they do not capture any of the contextual factors that influence the frequency or distribution of crime. In a country where the population increases each year, even if the crime rate stays the same, the average length of time between crimes will decline. It is quite possible that the rate for some crime could decrease, even as the crime clocks show those crimes occurring ever more frequently. For instance, according to the annual UCR reports, the rate of burglaries fell from 458 per 100,000 in 1960 to 337 in 2019, yet the crime clocks for those years showed the average time between burglaries shrinking from 39 seconds to 28 seconds (Federal Bureau of Investigation 1960:4, 2020). This damages the utility of the crime clock for making sense of crime as a social concern. At the same time, it also underscores why clocks such as these are effective rhetorical tools. The notion that crimes occur every few minutes or seconds suggests that serious crime is almost always happening, that its effects are equally distributed, and that no one and no place is beyond its reach.

Claims built upon these smaller spans of time are compelling and may appear, in the absence of scrutiny, to be like official rates. But such framings are inherently flawed and often turn a straightforward count into a less clear metric (see Table 1). Such conversions invariably strip away much of the complexity of the social issue that is ostensibly being measured. Returning to the matter of COVID-19 deaths, this framing technique glosses

Table 1. Average time intervals between different numbers of event units.

Number of Events	Estimated Rate of Occurrence Based on Number of Events
100	Once every 3.6 days
1,000	Once every 8.8 hours
10,000	Once every 52.6 minutes
100,000	Once every 5.3 minutes
1,000,000	Once every 31.5 seconds
10,000,000	Once every 3.2 seconds

over the importance of geography, sociodemographic factors, comorbidities, state-level variables, and other factors understood to contribute to COVID-related risks and fatalities. Notice, also, that claims built upon standard time units depend on having some tally of instances of a social problem, which are then divided into the number of days, hours, minutes, or seconds in a year. The global focus of organizations such as the United Nations and the World Health Organization means that they encounter a very large numbers of cases for the many issues they study, thus allowing for the use of smaller time intervals to frame the scope and extent of focal problems.

Imagine a social problem with 10 million cases per year – that would yield an interval of a case every 3.2 seconds. Now suppose that this problem occurs at the same rate throughout the world. This would mean that the United States, which has roughly 4% of the world's population, would have 400,000 cases – this would mean that a case would occur in the U.S. every 78.8 seconds. Thus, the time intervals for the world and the U.S. are very different, even though the rate at which cases occur is the same. Problems of very different orders of magnitude can all be expressed in this way (Table 1). In every case, these claims could simply present the number of cases, but translating that number into a familiar and widely accepted measure of time makes threats seem vaster and risks more immediate. Such clock-based framings seem to have purely rhetorical purposes. It is not clear how the information they convey could have any practical use. They exist solely to make claims more compelling.

The "Doomsday Clock" is another widely circulated example of clock-based temporal framing. The icon, created in 1947 by the editors of the *Bulletin of the Atomic Scientists*, is intended to symbolize how close human-produced technologies are to destroying the world. The clock imagery was originally designed to convey the threat posed by nuclear weapons – a particularly acute concern at a time when the United States and Soviet Union were engaged in an escalating nuclear arms race – but the range of concerns considered when positioning the clock's hands has since broadened to now include climate change, cyber-threats, biological weapons, and political movements (Chappell 2017). The clock uses the number of minutes (and sometimes seconds) until midnight as a frame to convey the current level of risk: the minute hand moving closer to midnight signals worsening risk of catastrophe, while moving the hands back is intended to suggest a lessening of risk and perhaps a period of relative stability. Despite sharing the usage of the clock as a metaphor, the Doomsday Clock and the crime clock measure time quite differently and seem designed to communicate different meanings related to their principal concerns. Whereas the crime clock uses metered time to depict the scope and frequency of certain crimes, the Doomsday Clock employs clock imagery for its capacity to invoke a sense of urgency.[3]

The rhetorical value of this sort of framing lies in the fact that many of our shared constructions and colloquialisms related to time are built around its fleeting nature (e.g., time runs out, there isn't enough time), thus giving an urgent character to our relationship with time (Tiryakian 2001). Research has shown that risks framed as more likely in the near term tend to be perceived to be more real and concrete (Guan and Jiyeon 2020). Temporal frames that portray a problem as urgent and in need of immediate redress are appealing to claimsmakers, who must jockey for public attention against competing claims in crowded social problem marketplaces.

The Doomsday Clock is updated annually, usually shortly after the start of the new calendar year, thus offering a recurring opportunity to renew public focus on the concerns of the *Bulletin*'s editors and do so in urgent tones that carry dire warnings of imminent harm. The clock's hands have been reset on numerous occasions since the icon was created more than seventy years ago (Bulletin of the Atomic Scientists 2021a). The annual updating of the clock hands is accompanied by a press release and media event, usually held in January. Media coverage in days following the clock's annual updating suggest that the exigency prompts embedded in the clock and the *Bulletin's* rhetoric are effective at instilling greater urgency in the reception of their claims. The release of the 2021 report offers a clear example of the typical messaging and media-reception process. The *Bulletin's* report was recast by news organizations throughout the world in alarming media headlines proclaiming that the world is "perilously close to catastrophe" (*NBC News*), "closer to apocalypse than ever" (*The Independent*), and facing "the most dangerous situation humanity has ever faced" (*CNN*) – despite the fact that placement of the clock's hands did not change in 2021, but remained set at the 2020 designation of 100 seconds to midnight (Brown and Rosner 2021; Chow 2021; Griffin 2021).

The Doomsday Clock is a symbolic device that uses clock time to frame problem rhetoric. Determining placement of the clock's hands is a subjective process: a panel of scientists considers various issues and then issues a collective determination of risk by adjusting the clock hands closer to or further from midnight (in some years, the hands' positions remain unchanged). The introduction of the 2018 clock offers a typical example of this process: when announcing that the clock had been set at 2 minutes to midnight – 30 seconds closer than the previous year's setting – one of the scientists involved in the deliberations said the move should be understood as "a clear statement that we *feel* the world is getting more dangerous" (Rice 2018: – emphasis added). With this, we can see that the clock is not an objective measure of risk, but an emotional device for symbolic representation of general or specific fears about the economy, politics, environmental issues, and of course nuclear risk. Clock time is used to frame those concerns in urgent terms. However, the Doomsday Clock masks that subjectivity and emotional framing by the seemingly objective nature of clock-based time units and the prominent involvement of scientists.

There are other examples of clocks being used to track evolving social problems and add urgency to calls for action.[4] The National Debt Clock was created in 1989; located in Manhattan, it featured a digital electronic display showing the national debt (Wikipedia 2021). The physical clock has moved to various locations in New York City in the ensuing years but has continued to register a tally intended to increase consciousness of the ever-increasing national debt. Advocates for climate change awareness and action have created the "Climate Clock," which is presented in a collection of electronic displays on buildings in

New York and other major cities, as well as a website that displays information that uses time metrics to convey increasing risk and underscores the stated need for urgent action.[5] The advent of the Internet has led to various websites offering constantly changing tallies of economic and population figures (e.g., usdebtclock.org, worldometer.info). In all these cases, clocks are used as a rhetorical tool to advance claims that trends should not be ignored, that a problem is growing, and that it is increasingly urgent that we act. Using clocks to count down the time remaining until some catastrophe is, of course, a way of conveying extreme urgency and elevating the significance of one's claims.[6]

Attention Maintenance

One of the most familiar ways to encourage audiences to devote attention to some issue or past event is to set aside some period of time for dedicated awareness. Usually this is framed in positive terms by designating a day (St. Patrick's Day, Mother's Day) or month (Women's History Month, Pride Month) as a special time to recognize and celebrate the societal importance of some group, issue, or event. The ritual calendars of religions are filled with such temporal reminders of key moments in a faith's story, just as governments designate holidays to commemorate aspects of some jurisdiction's history (Zerubavel 1982). Throughout U.S. history, ethnic groups have campaigned for commemorative holidays to celebrate their contributions, such as the campaigns to recognize Martin Luther King's birthday and Juneteenth as marking significant aspects of African-Americans' history by designating them as national holidays (Dennis 2004; Freking 2021).

Calendars are "primarily responsible for creating the regular temporal patterns through which nearly all societies, social institutions, and social groups introduce and manage orderliness" (Wajcman 2019:318–319). Designating a day as "special" (e.g., holidays, anniversaries, and other forms of collective recognition) imbues it with cultural values and shared meanings, which then get communicated and strengthened through various associated celebrations, rituals, and commemorative elements (Etzioni and Bloom 2004; Schwartz 1982). Engagement with a calendar date's reflective markers forges emotional ties to that date and the issues it is said to represent, which may guide how people think, feel, and behave on and around those dates. In the United States, "holidays" such as St. Patrick's Day and Cinco De Mayo have been culturally defined as occasions for alcohol consumption, resulting in significant increases in alcohol sales around those days (Teeter 2015). September 11 is now a day that guides public discourse in a variety of ways because, after the September 11, 2001 terrorist attacks, that date was constructed as "9/11" and assigned meanings intended to promote somber reflection, patriotic displays, and acknowledgment of sacrifices made by soldiers and first responders (Monahan 2010). A similar phenomenon occurs with food donations in the United States, which tend to spike in November and December – months that include Thanksgiving and Christmas, two holidays culturally defined to carry a "spirit of giving" – followed by drastic declines in January and February (Stevens 2017).

When we consider these issues in relation to social problems claimsmaking, it becomes clear that having a date on the calendar offers important contextual support for claims about issues that have come to be associated with that date. In this way, calendar days represent a kind of "cultural opportunity" (McAdam 1994) whereby people and organizations may be more willing to share and receive claims about issues tied to that part of the calendar. This is

important because a claim's success in the social problems marketplace is not determined solely by the quality of its content and persuasive appeal; claims rely to some extent on broader contextual forces (Einwohner 1999).

Modern life offers more opportunities and ease in creating calendar-issue pairings than ever before. This is the case for several reasons. First, trends in marketing and commerce have shown that audiences are likely to take note of commercial activities that are paired with calendar dates (Hamblin 2019). Consider the case of *National Donut Day*, celebrated on the first Friday in June each year. In 2017, donut sellers reported a 76% increase on that day relative to average Friday donut sales (Bailey 2018). Similar trends have been noted with tequila sales on its associated holidays, which include *National Margarita Day* (February 22) and Cinco de Mayo (May 5). As of this writing, nearly every date on the calendar now has a "National Day" linkage, and most dates have several associated products or activities (Garber 2014; Hamblin 2019).

This brings us to a second factor: the commercial appeal of calendar pairings has contributed to the emergence of an entire subindustry dedicated to their creation and marketing. There are now several companies and websites that help individuals create new dates and provide an evolving catalog of "established" days: *Chase's Calendar of Events* has published a book annually since 1957, while prominent websites include *nationaldaycalendar.com, nationaltoday.com, reasonfunding.com*, and *daysoftheyear.com*. This network of commercial interests and organizational supports fuels the propagation of calendar date pairings for all manner of products, services, relationships, events, and social issues. Throughout these date catalogs one finds implicit and explicit indicators of temporal framings being used for marketing purposes. For instance, *nationaltoday.com* offers a statement to prospective clients about the value of "calendar-based marketing and time triggers" and touting the company's ability to "reach your audience when they are paying attention the most" (*nationaltoday.com*). Calendar date-product associations drive awareness, public discourse and, of course, commercial activity.

Third, there are few barriers to creating and marketing a calendar pairing. Of the more than two thousand national days listed in the various calendars, fewer than one hundred are what we might consider "official" (i.e., created via legislative channels or government-sanctioned national observances); in the U.S., these include holidays such as Christmas, Independence Day, and Mother's Day. Thus, most of the holidays cataloged on the various websites and calendar books are unofficial, created by individuals or organizations seeking to draw public attention.

We suggest that the proliferation of calendar date "holidays" – along with the unregulated manner in which they are created and shared – offers opportunities for claimsmakers. The fact that calendar time has been set aside for directed attention toward a problem suggests that the specified troubling condition is important and has some measure of collective support for recognition, policy intervention, or social change. This may add a sense of legitimacy to the work of claimsmakers and garner increased attention from media, politicians, and the public.

Designating a day, week, or month as an occasion to promote an issue can provide a recurring opportunity to bid for recognition. Hundreds of days are now aligned with particular social concerns. January 11 is internationally recognized as *National Human Trafficking Awareness Day*. There is *National Gun Violence Awareness Day* (first Friday in June), *National Child Health Day* (first Monday in October), and *National Stamp Out*

Hunger Food Drive Day (the second Saturday in May). Some issues are afforded weeks (the third week in October has been recognized as *National School Bus Safety Week* since the 1970s) or, in some notable instances, entire months (e.g., Black History Month [February] and Breast Cancer Awareness Month [October]).[7] The United Nations, which pursues ambitious global goals that will take time to achieve, often extends its timeline by designating years or decades (e.g., the International Year for the Elimination of Child Labor [2021] or the United Nations Decade of Action on Nutrition [2016–2025]) (United Nations [UN] 2021a, b).

The fact that anyone can designate a day, week, or month adds further appeal for claimsmakers. There are no mandates or onerous requirements to be met; in fact, there are few barriers to adding one's cause to the commemorative calendar, and the various companies and websites that now exist simplify the process. Often, it is possible to get some additional, quasi-official recognition once on the calendar (e.g., having a member of Congress introduce a resolution in favor of designating a day) (Straus and Nagel 2019). Presumably, these designations are intended to attract and sustain attention of governments, funding agencies, and the general public. They serve as evidence of concern about the issues being promoted, create occasions when such concern is deemed especially important, and encourage support for claimsmakers and those affected by the social problem being constructed, although of course there is no guarantee how much attention will be attracted by designating a commemorative time. Calendar dates are subject to the sort of competitive dynamics that claims face in the social problems marketplace. Dates that attract little attention are easily abandoned when they no longer seem to serve a purpose. Shifts in collective memories may lead to abandoning some once-institutionalized occasions (e.g., celebrating Indigenous People's Day instead of Columbus Day or the gradual move away from holidays celebrating the Confederacy, such as the state of Georgia's 2015 decision to stop using the names Confederate Memorial Day and Robert E. Lee's Birthday and relabeling the associated dates simply as "state holidays") (Grinberg 2015). In sum, claimsmakers often try to maintain attention for themselves and their causes by proposing and promoting moments of commemoration in the collective calendar.

Epochal Markers

It is common for people to talk about problems as belonging to some past, present, or future moment. This type of temporal framing, which we refer to as *epochal markers*, locates a troubling condition within a specific historical milieu or general period of time. The simplest, most straightforward form of social problems claims incorporating this type of temporal frame are what we might refer to as presentist problem formulations; they identify a troubling condition in the here and now, saying, in effect: "X is a troubling condition in today's society, and we ought to do something about it." Focusing on issues in the present often serves to inject a sense of novelty to the claim (i.e., claiming that this is a new problem which has not arisen previously). Claims addressing technological changes often make this point, such as the various social problems that emerged with the Internet; Internet addiction and cyberbullying could be presented as completely new phenomena. Innovations are disruptive, and they almost always inspire claimsmaking about their troubling consequences, such as the worries that once accompanied the diffusion of bicycles (Aronson 1952) and telephones (Fischer 1992). Similarly, the historical record is littered with claims

about the dangers posed by new social types, drugs, or forms of popular culture (cf., Maratea and Monahan 2016; Pearson 1983; Sternheimer 2015). Here, too, the focus tends to concentrate on the present because the troubling condition seems to have no history. Locating the focus of a claim in the here and now – whether the problem is said to be newly emerging or newly discovered – is a valuable rhetorical strategy for heightening emotion and exigency in problem formulations.

It is possible to have more elaborate epochal framings. For instance, claimsmakers can rely on presentist formulations without focusing the claim strictly in the present moment. Notice that many claimsmakers depict a condition through a change-over-time lens, using allusions to the troubling condition's history to underscore claims about its worsening dangers in the present. This enables claimants to organize their claims around themes of prior neglect through accounts that describe a benighted past in which the troubling condition was ignored or viewed with indifference. Claims about inequality often invoke such stories: people used to take racism or sexism or some other form of inequality for granted, but now we are more enlightened and recognize their seriousness. Alternatively, neglect arguments might focus on unsuccessful policies – half-hearted or misguided efforts that failed to effectively address some troubling condition, such as poverty or substance abuse. Invoking a dismal past when a troubling condition was ignored or mismanaged may add rhetorical heft to claims by suggesting that acting today will not only right a current wrong but may somehow help correct a long legacy of neglect or failure.

Another variant of this sort of temporal framing is found in rhetoric that centers on identifying trends, usually over a period of years or across decades. Here there is some attempt to track the troubling condition over time. Most often, these claims suggest that the problem has been growing or that things have been getting worse, thus allowing claims-makers to argue that the present situation is now bad enough that something must be done. Time often features prominently in claims rooted in past-present trends, such as graphs documenting rising obesity rates or time-lapse imagery showing melting glaciers. Time-lapse techniques have been found to be effective for communicating about environmental change because they render complex environmental problems in visual forms and truncate large swaths of time into more discernible measures (i.e., years or decades of ice melt or deforestation can be shown within a matter of minutes or seconds) (Brinley Buckley et al. 2017). Trend-based statements or images can effectively lay out grounds and warrants in concise and direct terms, thus affording claimsmakers the rhetorical space in which to offer their views on the trend's origins and solutions.

In many cases, claimsmakers seek to explain the trend by showing how cultural or structural changes have caused the troubling condition to increase. Perhaps the society's age distribution or ethnic composition has shifted, or perhaps new means of communication or transportation have emerged, or perhaps public opinion has changed – virtually any of the topics studied by sociologists can be used to account for the need to address the troubling trend at this moment. In some cases, claimsmakers argue that the troubling condition is an ironic or unanticipated consequence of these changes, in other cases they may argue that society's neglect or ineffective policies caused or exacerbated the troubling condition.

Epochal markers need not be limited to presentist or past orientations; claims about both the troubling present and the histories of social problems can be coupled with rhetoric about the future. Future claims inevitably invite skepticism and criticism: one can always

challenge claimsmakers' ability to forecast what is yet to come (Best 2011). Even claims that draw upon seemingly authoritative interpretations of large bodies of evidence that document trends face skeptical counterclaims. Climate change offers an example of this challenge. Despite consensus among climate scientists about rising global temperatures, activists often have trouble mobilizing response actions, which many attribute to the fact that the effects are presumed to be confined to a distant future (Adam 1998). In such instances, future-oriented temporal frames allow claimsmakers to suggest that the impending crisis will be: (1) large (consider the wide variety of military, economic, medical, and environmental scenarios for future problems capable of ending all human life, or at least life in the sorts of advanced civilizations we now take for granted); (2) likely (there are claims that various catastrophes such as floods and pandemics will inevitably occur at some point), and/or (3) soon (obviously the closer the crisis, the more compelling the claim).

Future claims range from short- and middle-range warnings about what lies ahead in the next few months or years, to long-range forecasts about what may occur decades or even centuries from now (Best 2020b). They also vary in their relationships to the past and the present. In some cases, claimsmakers may argue that some condition that is going unnoticed or does not seem particularly worrisome today has the potential to become an extremely troubling condition in the future. In other cases, a trend that shows things have already gotten worse may be predicted to extend into an increasingly dire future, thus using an epochal framing of past trends to formulate non-evidentiary claims about impending problems.

A common form of future-oriented problem claims is found in the centuries-old tradition of time-certain predictions for the world's end. At this writing, *Wikipedia*'s "List of Dates Predicted for Apocalyptic Events" catalogs 21 world-ending predictions for certain days or years between 2001–2021; the list includes forecasts by seers, mystics, evangelists, and conspiracy theorists, both prominent and obscure. Time-certain predictions of the world's end often involve seemingly learned, calendar-based calculations. The most widely discussed of the recent failed forecasts involved interpretation of the Maya Long Count calendar, which was scheduled to start a new b'ak'tun (a period of 144,000 days) in late 2012. A host of New Age commentators speculated that this might be accompanied by Earth's collision with an asteroid or Nibiru (the "hidden planet"), civilization-destroying solar flares, or perhaps an alien invasion (cf. Joseph 2007). Alternatively, warnings about Y2K argued that the practice of programming computers to register the current year using only two characters would lead to widespread difficulties when 2000 would be misunderstood to be 00 (Quigley 2005).

Other predictions involve some sort of trend or model. There has been a long series of predictions by environmentalists about the date (usually set in the relatively near future) when the production of some finite resource will "peak," thus creating a context for claims about problems related to human consumption of oil, water, and so on. These forecasts envision a grim future in which a growing human population will confront a world where the supply of some necessary resource has begun to dwindle. Like their end-of-the-world counterparts, these predictions have a poor track record. Thus, the forecast dates for peak oil have been pushed back on numerous occasions as estimates for the global supply of oil have been revised upward after new oil reserves have been discovered or new methods of extracting oil have been introduced. Optimists argue that, even if some resources are eventually depleted, new technologies may enable humanity to adjust. Of course, this

does not discourage claimsmakers from making pessimistic environmental and economic predictions built upon claims of future harms. Epochal markers are virtually omnipresent in claimsmaking. Locating troubling conditions within some broad span of time provides a broad framework within which to offer dire statements about threats in the present moment or past or future trends that must be faced immediately.

Discussion

Most constructionist studies of social problems are case studies tracing the creation of and responses to some claim about a troubling condition (Best 2021). Clearly, developing this perspective requires making comparisons – determining how and why the processes examined in various case studies turn out to be similar or different. Because claimsmakers in a particular time and place must both draw upon a set of cultural resources that make sense to them and face similar structural constraints on their activities, we can expect that their claims will resemble one another in important ways: claimsmakers in highly religious societies are likely to frame their claims in religious terms; just as contemporary U.S. claimsmakers often invoke statistics as authoritative bits of evidence and offer familiar narratives to make claims seem reasonable and convincing (Loseke 2003, 2018). Constructionist analysts have only begun to identify and explore these patterns across different claimsmaking campaigns (Best 2015).

This paper has drawn attention to ways claimsmakers invoke time. As we have suggested, these invocations are both extremely common, to the point of being virtually omnipresent, yet easily ignored, overlooked, or taken for granted. We have presented examples of social problems claims incorporating three types of temporal frames: (1) metered time units that rely on quantifiable temporal measures to imply that a troubling condition poses widespread and relatively equal risks that must be addressed immediately; (2) attention maintenance mechanisms that use standardized frameworks of time to compete for attention in heavily contested social problems marketplaces; and (3) epochal markers that locate troubling conditions within the broad temporal frameworks of past, present, and future. We make no claim that this is an exhaustive list of temporal frames – there may well be others. It was easy for us to identify multiple examples of claimsmakers adopting each of these three temporal frames. Since almost all claims present some sort of epochal frame, we conclude that, while social problems analysts have not explored this topic systematically, temporal framing is a virtually ubiquitous element in today's social problems rhetoric.

Patterns within the anatomy of claims and the strategies employed by claimsmakers remind us that rhetoric is firmly rooted in its surrounding culture. Claimsmakers draw upon cultural resources – such as shared conceptions of the meaning of time – to craft arguments that their audiences will find persuasive. As cultures and social structures change, the combinations of resources that constitute a persuasive argument may evolve. To take one obvious example, scenarios about how the world might end fall in and out of favor. One need only consider such once-prominent environmentalist claims, such as *The Population Bomb*'s focus on near-term global overpopulation (Ehrlich 1968), or *The Limits to Growth*'s warnings about imminent resource depletion (Meadows et al. 1972), which have been supplanted by concerns about climate change (and – at least in popular cultural depictions – asteroid strikes). Familiar arguments fall out of favor, only to be replaced by other claims.

Studies of claimsmakers' rhetoric tend to focus on the aspects of claims that analysts view as problematic – atypical typifying examples, dubious statistics, and the like. In contrast, claims-makers' use of calendars and clocks to build their arguments often seem less noteworthy (although criminologists' denunciations of the FBI crime clocks reveal that temporal frames can sometimes attract critical attention). But many temporal frames – e.g., an SMO declaring a date as being dedicated to their cause, or claimsmakers tracing their troubling condition's history or warning that some threat is urgent – are so familiar, they are easily overlooked.

This raises a question: what other aspects of claimsmaking rhetoric pass unnoticed? Designating days as a means of attention management reminds us of other devices that serve similar purposes – buttons, fabric patches, bumper stickers and magnetic ribbons for cars, the vast array of pink products advertising breast-cancer awareness, and other means of denoting people's adherence to causes. These have attracted occasional sociological attention (cf. Moore 2008), but for the most part they seem to fall beneath analytic notice. Similarly, we might consider how ideas of space or place – spacial or geographic framing – probably shape many social problems claims. As Zerubavel (2018) observes, much is always, inevitably taken for granted and awaits our discovery; this creates opportunities for apply-ing a sociological imagination.

Notes

1. An exception is Adorjan and Kelly (2022) whose focus is the "hermeneutics of temporality" – how constructionists adopt the time frameworks used by claimsmakers.
2. See Adorjan and Kelly (2022) for discussion of how constructions about time lend credibility to claims and claimsmakers.
3. The *Bulletin*'s founding editors have explicitly stated that the clock imagery was designed to "suggest that we [don't] have much time left to get atomic weapons under control" (Bulletin of the Atomic Scientists 2021b).
4. Clockfaces can even be used in ways that seem divorced from conventional timekeeping. The some QAnon claims use clocks as a graphical device to show links between seemingly unrelated phenomena (Hannah 2021).
5. Instead of the minutes-to-midnight frame used in the Doomsday Clock, the Climate Clock uses the notions of a DEADLINE (the number of years, days, hours, minutes, and seconds left to "achieve zero emissions" [when we were drafting this paper, there were about six and a half years remaining]) and a LIFELINE ("% of the world's energy from renewables" [a bit over 12% when we checked]) (Climate Clock 2021).
6. In other cases, claimsmakers don't count down to future turning points, but their logic is similar. Thus, demographers have offered various projections for the date when the U.S. will become "majority-minority" (i.e., when whites will constitute less than half of the nation's population). Critics have suggested that these claims substitute bureaucrats' racial categories for those actually used by the people being tallied (Alba 2020).
7. Pink October began in the 1990′s as a campaign promoting increased awareness, education, and fundraising for breast cancer screening and research (Carneiro 2021). The success of early campaigns lead other claimsmakers, advocacy groups, and corporations to adopt pink imagery and place their issues on the October calendar to capitalize on the sustained public attention directed toward women's health issues during that time (c.f., King 2008).

Disclosure Statement

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