

Drive-in theatres and audience rules of conduct: Before and during the COVID-19 pandemic

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Abstract:

Audience rules of conduct constitute an underexplored area of research for drive-in theatres. This research comprises two studies of drive-in theatres that remained open in 2019 and 2020, respectively. For drive-ins open during summer 2019 (i.e., before the COVID-19 pandemic) audience rules of conduct are often tied to enhancing the viewing experience and safety of moviegoers. These rules also improve the financial performance of drive-in theatres. For drive-in theatres open during summer 2020 there have been radical changes in how they operate in order to provide a safer experience for audience members in light of the COVID-19 pandemic.

Key words: audiences; cinema; COVID-19; drive-in theatres; pandemic; profitability; United States.

Introduction

Richard Hollingshead, Jr. invented the drive-in theatre during the Great Depression. Hollingshead's initial motivation was to create a viewing experience for his overweight mother, who found traditional indoor cinema seating uncomfortable. This led Hollingshead to experiment with his first improvised design – positioning his mother in a car, with a projector on the hood targeted at sheets that comprised a makeshift screen (Reid, 2008).

The drive-in theatre design that Hollingshead eventually patented was premised on his belief that – even in challenging economic times – people would be reluctant to give up automobiles, food, and movies (Segrave, 2006). Hollingshead believed that his invention would counter what he saw as the reasons that indoor theatres did not reach a wider audience, i.e., that drive-in theatres would providing patrons with more informality, a family

friendly environment, and have more comfortable seating for all: 'The mother says she's not dressed; the husband doesn't want to put on his shoes; the question is what to do with the kids; then how to find a baby sitter; parking the car is difficult or maybe they have to pay for parking; even the seats in the theatre may not be comfortable to contemplate' (Hollingshead, as cited in Segrave, 2006, p. 2).

The key issue that Hollingshead's design addressed was how to arrange parked cars so the patrons seated inside of them could see the screen without obstruction from other vehicles (Hollingshead, 1933). Hollingshead's design addressed this issue by incorporating a clamshell shaped lot, terraced parking rows, and ramps that tilted cars upward toward the screen (Hollingshead, 1933). Today, these elements remain the basis of drive-in design.

Until the mid-1940s there were fewer than 100 drive-in theatres in the United States. The number of drive-ins rapidly increased in the post-war years: by 1949 there were 983 drive-ins and by 1952 there were 4,151 drive-ins (Fox & Black, 2011). Initial growth of drive-ins was hampered by the Great Recession and, then, by World War II. That war led to tire and fuel rationing, building restrictions, and driving for recreational purposes being discouraged (Bell, 2003; Maxwell & Balcom, 1946).

The post-war growth in drive-ins occurred due to the lifting of rationing, greater availability and affordability of automobiles, and suburbanization (Austin, 1985). These factors led to a more mobile populace and to drive-in theatres being located in proximity to burgeoning suburbs. Further, with veterans returning, the post-war baby boom led to an increase in demand for family-friendly entertainment (Thompson, 1983). Hollingshead's patent for drive-in was also overturned on the basis that it was not really an invention, but instead was an obvious means of landscaping and arranging vehicles in relation to a screen (Segrave, 2006). Also, the Paramount Decrees of 1948 prohibited major movie studios from owning theatres that exhibited their own movies thereby providing drive-ins with greater access to first-run feature films (Luther, 1951). The relatively low cost of land made drive-ins an attractive business proposition, as did revenues from concession items – typically the most profitable area of drive-ins' operations (Durant, 1950). Luther (1951) observed that many drive-ins concession revenues were around four times as high as indoor theatres.

In the post-WWII years some geographic areas were more attractive for locating new drive-ins than others. Gil, Houde, and Takahashi (2015) examined the impact that existing drive-in theatres had on whether additional drive-ins would start-up in the same county. On the basis that drive-ins located in warmer climates would attract more patrons in a given year, market size was measured by the frequency of warm days. Looking at the period from 1945 to 1955, they found that 'market size increases the probability of entry at low and high market size levels, yet it decreases entry at intermediate levels of market size' (Gil, Houde, & Takahashi, 2015, p. 12). This was thought to be because both smaller and larger markets provide little uncertainty about future entrants: smaller markets tended to be unattractive to additional new entrants and larger markets tended to be attractive irrespective of the number of existing drive-in theatres. Expanding on this traditional narrative, Phillips (2019) views the growth of drive-in theatres after WWII as being due to various political-economic

dynamics. He demonstrates that suburban growth was driven by large numbers of returning veterans, as well as government policies that greatly increased builders' access to capital and fueled the development of large-scale home developers. Likewise, the affordability of land on the outskirts of cities also factored into this growth – as did government support of the highway system.

In the 1950s the number of drive-ins peaked at around 4,500 theatres in the United States (one-third of all cinemas) that accounted for one-quarter of all box-office revenues (Fox & Black, 2011). Today, only 300 or so drive-in theatres remain in the United States (National Association of Theatre Owners, 2020). Despite the small (and declining) number of remaining drive-ins they have still garnered research attention over recent decades. Several studies have contrasted the experience of attending drive-in cinemas to that of traditional, indoor cinemas (Fox, 2015; Fox & Black, 2011). These studies attribute the decline of drive-ins since the 1950s to various factors, including: changing cost structures; demographic changes (such as the land being used by drive-ins becoming increasingly desirable for subdivisions and shopping development); changing viewing preferences (with indoor multiplexes, television and other viewing and entertainment choices becoming widespread); and changes in Americans' relationship with automobiles.

With regard to drive-in audiences, Barefoot (2019) examines the origin and legitimacy of using the term 'passion pit' to describe drive-in theatres, particularly in the 1950s. He observes that sex was only one reason that people attended drive-ins, as were the family-friendly attractions that many drive-ins offered (such as dining, amusement parks, and laundry facilities) and, of course, actually wanting to watch the movies being shown. Several other studies have examined movies that were exhibited at drive-ins during various time periods (Clark, 2014; Downs, 2002; Herring, 2014).

The technology used by drive-in theatres has also received research attention. Drive-ins are an example of 'roadside architecture' – structures that are inspired by the automobile and are designed to attract the attention of passing motorists (Bell, 2003). The overall layout of drive-ins is intended not only to make viewing a movie appealing in terms of sightlines, but also to move large numbers of automobiles in and out of the venue in an effective manner (Bell, 2003). The layout devised by Hollingshead, that was mentioned earlier, is designed to achieve these outcomes.

Architecturally, the most prominent feature of drive-in theatres is the screen tower. Screens, along with the viewing experience itself, have changed considerably over the decades. Early screens were typically made out of canvas. This was not ideal as they caught the wind and would often get blown down (Lobban, 1996a). Subsequently, screens were positioned on steel towers using weatherproof panels that could resist high winds (Lobban, 1996a). The introduction of CinemaScope widescreen movies in the 1950s led to further innovations in screen tower design and appearance. In what was likely a response to increased competition from television, the cinema industry lauded a 'wider, curved, and angled screen to provide an undistorted film image' (Shiffer, 1990, p. 4).

Screen towers were often positioned so the back of the screen faced any nearby

highway thereby allowing the back of the screen to serve as a billboard for motorists (Shiffer, 1990). These billboards promoted drive-in theatres by featuring the name of the theatre, details on movies being exhibited, as well as promoting other attractions or facilities a drive-in may have (Lobban, 1996a).

Some drive-ins with multiple screens incorporated 'twin' construction as an economical construction effort – an hourglass layout with movies being projected onto both sides of the screen (Luther, 1951). It is worth noting that, although drive-in theatres typically have fewer screens than indoor cinemas, they are much more likely to exhibit double features, i.e., pairs of movies billed together for a single ticket price (Rhodes, 2011). In the depression years from 1929 to 1939 double (and sometimes triple) features were exhibited by drive-ins to encourage admission and to have patrons spend more time at the drive-in, thereby increasing concession sales (Bjork, 1989; Gomery, 1992). In the 1930s double features were so popular that this encouraged the production of rapidly produced, low quality 'B' movies (Schatz, 1999). In more recent decades drive-in theatres have typically exhibited the same first-run movies that are shown at indoor theatres (Fox, 2017). A 2015 study of movies being exhibited at 310 drive-ins found that 83% exhibited double features (Fox, 2017). Most double features were new releases (or were released within 30 days of exhibition) and the newest release was typically shown first (this was likely attributable to patrons being most interested in seeing that movie). Drive-ins also tend to pair movies with similar ratings together – with the likely objective of catering to a similar audience. However, when a movie with a higher rating was paired with a movie of a lower rating, the more 'adult' movie followed. This is likely an attempt to make the first offering more family friendly.

Historically, the development of drive-ins also led to innovations in outdoor projection technology. This proved challenging due to both the large screen size and the outdoor conditions (Bell, 2003; Corbin, 2014; Friedberg, 2002). Until relatively recently, drive-ins used 35mm projectors; however, given that film studios are now typically distributing films in a digital format, indoor and drive-in theatres alike have had to invest in digital projectors. The cost of these projectors created major issues for the financial viability of drive-in theatres. In this regard, Fox (2018) examined the reasons that 59 drive-ins closed during 2012 to 2016, and found that at least 34 of those closings were associated with the costs of transitioning to digital projection.

Sound at drive-in theatres has also evolved over the decades – from low-quality, mass projection technologies to more advanced in-car (or portable radio) systems that provided improved sound quality, comfort, and ease of use. Initially, speakers at drive-ins were located alongside the screen and blasted sound toward the audience. These speakers were similar to public address systems (Shiffer, 1990). Noise spillover from these speakers was an issue – a concern that was problematic when drive-ins were close to a neighborhood. Hollingshead sought the help of engineers from Radio Corporation of America (RCA) to address this issue, as well as to improve projection technology (Taylor, 1956). RCA then developed technologies that gained widespread use in drive-ins. Speakers were positioned

on in-ground grates to address the sound blast issue, however the sound quality was worse than the original speakers near the screen (Shiffer, 1990). Further, 'the accumulated volume of the hundreds of small speakers was almost as bad as one big blast' (Taylor, 1956, p. 102). Subsequently, drive-ins placed speakers on poles between cars. Nevertheless, these speakers suffered from lower volume and 'many patrons complaining that they still had to lean out of the window to hear the movie' (Lobban 1996a, p. 8).

In 1941, RCAs in-car speakers became commonplace. These speakers were still placed on posts, but they could be removed and hung from a semi-open car window. This meant that patrons could better enjoy the sound and attending the drive-in during inclement weather more attractive than it had previously been (Lobban, 1996a). Further, patrons were now able to control the volume of speakers to suit their individual preferences (Taylor, 1956). However, hanging speakers had their own problems – in particular, these speakers had to survive the elements and withstand customer abuse (Lobban, 1996b). In 1958 AM radio receivers in cars were tested at drive-ins and by the 1970s it was common for cars to use their radios to listen to drive-ins in FM stereo (Lobban, 1996b; Shiffer, 1990). This remains the case today, but patrons without car stereo systems (or that sit outside) can bring a portable radio to the drive-in to provide sound for the movie they are watching.

Taken as a whole, the experience of listening to sound at the movies has become less cumbersome and the sound quality has improved considerably from the blast speakers of the early years. Using car audio also makes for a more enjoyable drive-in experience as patrons can choose to roll up their windows to be more insulated from other patrons, and use air conditioning or heating as needed to be more comfortable.

Next, I discuss general trends over more recent decades in the numbers of drive-in theatres relative to indoor theatres and explore where drive-ins tend to be located today.

Drive-in theatres today

Appendix A shows the number of indoor theatres and the number of drive-in theatres in the United States (along with the number of screens) from 1995 to March 2020. During this time, the number of indoor cinemas declined from 7,151 to 5,477 – a drop of 23%. The number of drive-in theatres declined from 593 to 321 – a drop of 46%, which is much larger than the decline for indoor theatres. We also see that the average number of screens for indoor cinemas increased significantly – from 3.8 in 1995 to 7.4 in 2020. This indicates that, while there are fewer indoor theatres than in 1995, those that remain typically have more screens. We also see an increase in the number of screens for the typical drive-in theatre, from 1.4 in 1995 to 1.7 in 2020.

It is also worth examining where existing drive-in theatres are located within the United States and how many months a year drive-ins operate. **Table 1** shows the geographic locations of existing drive-ins and the average number of months per year that drive-ins in each region are typically open. In the summer of 2019, I derived this information from driveinmovie.com and from websites of the theatres themselves. The regions in Table 1 are the nine climatically consistent regions identified by the National Centers for Environmental

Information (2020), i.e., regions where weather patterns share key similarities. Weather influences the length of the operating season for drive-ins and ‘influence[s] how people feel

Table 1: Climatically consistent regions and drive-in season length for summer 2019

Climatic Region	Number of drive-ins	% of drive-ins	Average number of months open/year
Northwest	15	4.6	6.5
Northern Rockies and Plains (West North Central)	13	4.0	5.0
East North Central (Upper Midwest)	28	8.6	6.2
Northeast	79	24.2	6.1
Ohio Valley (Central)	88	27.0	6.9
West	18	5.5	10.7
Southwest	17	5.2	6.8
South	34	10.4	9.4
Southeast	34	10.4	10.0

about going to the show [and] dictates whether they will see anything when they get there’ (Downs, 1953, p. 157). From **Table 1** we can see that drive-in theatres located in warmer southern climates and in the West (which includes California and Nevada) tend to be open for more months per year. In contrast, drive-ins in the relatively cooler northern states and in the central United States tend to be open for fewer months. Given their seasonal schedule many drive-ins are able to avoid the sort of weather that would make the drive-in particularly uninviting – particularly, heavy snow and fog. Interestingly, a disproportionate number of drive-ins are located in two areas (the Northeast and Ohio Valley regions). Combined, these two regions account for over half of all drive-in theatres. Historically, the cost of land and proximity to highways were mentioned as determinants of drive-in theatres location decisions (Fox, 1995; Phillips, 2019; Segrave, 2006).

Now, we turn our attention to rules that drive-in theatres use to influence audience conduct.

Study one: Drive-in theatre policies regarding audience rules of conduct before COVID-19

One gap that remains in the drive-in theatre literature is a comprehensive investigation of drive-in owners’ attempts to encourage desirable behaviors in audience members through various rules of conduct or policies. For this research I examined the rules of conduct regarding audience conduct for drive-in theatres that were open in summer 2019. The focus was on the United States as this is where the vast majority of drive-ins remain. I examined the websites and Facebook pages of drive-in theatres to see if they had any policies governing audience conduct. Open drive-ins were identified in July 2019 using

driveinmovie.com (who describe themselves as ‘the oldest online directory of drive-in theatres on the internet’). As of July 2019 there were 326 drive-in theatres in operation. Of these, 219 (67 percent) had one or more policies regarding audience conduct. This does not mean that drive-in theatres without published policies on their website have no audience conduct policies. Those drive-ins may make their policies known to customers at the theatre locations themselves.

Generally speaking, this research falls within the realms of cultural economics, i.e., the intersection of cultural industries (such as cinema) and economics. The economics aspect of this research comes into play by examining policies by drive-ins that may influence patrons’ willingness to attend drive-ins. Also, I will demonstrate that some drive-in policies are intended to improve overall theatre profitability and reduce the risks associated with potential liability associated with adverse patron behaviors.

Next, I look at the most common audience rules of conduct and examine the rationale for these policies.

Rules about outside food, barbecuing, and alcohol

Movie studios charge high film rents to exhibitors (including drive-ins), thereby forcing drive-ins to disproportionately rely on concession sales for most of their profits (Fox, 2015). When giving advice to drive-in theatre operators, the United Drive-In Theatre Owners Association suggests that:

Because you may not always make a lot of money at the box office, you should concentrate on your snack bar/concession business. This is where the money is to be made! In fact, some drive-in owners will tell you that they are actually restaurant owners who play movies!

Of the 219 drive-in theatres used for this study, 136 theatres (62%) had policies on patrons bringing in outside food. Of these 136 theatres:

- 71 (52%) theatres prohibited all outside food and/or beverages.
- 28 (20.6%) theatres charged for permits that allowed patrons to bring in outside food and/or beverages. The cost of these permits ranged from \$5 to \$10, with an average price of \$6.48.
- 19 (14.0%) theatres were okay with patrons bringing in outside food or beverages.
- 18 (13.2%) theatres had language that discouraged patrons from bringing in outside food or beverages (for example, language stating that patrons were encouraged to purchase food from the drive-in snack concession stand, or that bringing in outside food was ‘not encouraged’).

Here are some illustrative policies:

- Food and/or beverages not purchased at our concession stands is considered to be ‘outside food and beverage’ and is subject to our Food Permit Policy. Customers who bring in outside food and/or beverages must purchase a \$5 Food Permit. The permit is valid for one vehicle only and one day only. Please patronize our concession stands! (Sundance Kid Drive-In, Oregon, Ohio)
- Vehicles inside the drive-in theatre with outside food/beverages without a permit will be charged double for a food/beverage permit (i.e. \$20) or ejected from the drive-in. Please be honest with the security guards at the entrance! (Tri-Way Drive-In, Plymouth, Indiana)
- Almost all drive-ins have a ‘NO outside food and drink’ policy. Due to the costs of movies, projections of the movies, upkeep of the grounds and facility, we have no choice but to join the other drive-ins. We rely on [concession] sales to make the business work. A large percentage of the ticket receipts go back to the movie companies.

However, for those who still wish to bring in outside food and drink, we offer an ‘Outside Food & Drink Permit’ which may be purchased at the ticket booth for \$10. Included in that permit is a \$5 coupon for the concession stand (valid on the date of purchase). Permits may not be shared between or among vehicles. This permit **MUST** be placed on the dashboard of your vehicle. If our staff observes outside food/drinks without a permit, you will be asked to purchase one or leave the theatre without a refund. (Bel-Air Drive-In, Versailles, Indiana)

Related to the issue of patrons bringing in outside food is whether patrons can barbeque at the drive-in. Of the 141 drive-in theatres with policies about BBQs and/or open flames, only six were okay with barbequing while the remainder banned BBQs and/or open flames such as fires. Aside from being an issue with bringing in outside food, barbequing and open flames is also a safety and liability issue for drive-ins.

With regards to alcohol, 111 drive-ins (i.e., 51% of those drive-ins with policies) had explicit policies. 94 drive-ins stated that no alcohol was permitted. An additional six drive-ins sold their own alcohol but did not allow outside alcohol. Five drive-ins allowed patrons to bring alcohol, but did so with caveats (e.g., patrons must be of legal drinking age). Six drive-ins discouraged patrons from bringing in alcohol, but unlike some policies regarding bringing in outside food, they did not fine patrons who did so.

Policies on pets

Prohibiting pets may help drive-ins minimize liability and insurance issues (for example, if the pets harmed another patron). Patrons with service animals were always okay with drive-in theatres, however, as prohibiting such animals would be discriminatory and fall short of

the requirements of the Americans with Disabilities Act. Of the drive-in theatres in this study, 91 drive-ins (42%) had policies governing pets: 39 prohibited dogs and 52 allowed dogs. Drive-ins that allowed dogs typically had some restrictions (for example, that dogs be kept on a leash; or that they not be allowed in concession areas, restrooms, or playgrounds). Some drive-ins explained the logic for their pet policies. For example:

- Pets are not allowed at the Delsea Drive-In. We love animals. We have a pet of our own, but the potential for patron disturbance or injury by an unruly pet or irresponsible owner is too high. Everyone knows pets have to relieve themselves at intervals as well. It is dark at the drive-in and a pet's waste products would be difficult to see and avoid. (Delsea Drive-In, Vineland, New Jersey)
- Can we bring our dog, cat, hamster, bird or turtle?
Yes, as long as you keep your pet inside your vehicle and it does not bother other people. The Showboat Drive-in is not responsible for any damage or injury to your pet, or any damage or injury that your pet may cause. (The Showboat Drive-In, Hockley, Texas)

Rain checks and refunds

Many drive-ins will open irrespective of rain, however theatres tend to cancel showings when weather is severe. Heavy rain can be a problem for drive-in theatres as flooding precludes them from opening until water drains. Some drive-ins have explicit policies that provide patrons refunds or rain checks to compensate for screenings that are cancelled due to inclement weather.

The term 'rain check' originates from major league baseball, where fans would be allowed to see a future game if the one they purchased tickets for was postponed or cut short by inclement weather (McNaim, 2017). Rain checks are now commonplace in businesses that sell physical goods when items are out of stock (Chen & Plambeck, 2008; Moinzadeh & Ingene, 1993). Rain checks are also common in some service industries, e.g., for airline flights and concerts.

Rain checks reduce consumer uncertainty as they can still buy the product or experience the event if it is not available as originally planned. Having said this, for drive-in theatres there is some element of awareness on the part of patrons of potentially bad weather, so they are also incurring some risk if they attend a drive-in when bad weather is forecasted. However, for drive-in theatres the term 'rain check' applies not only to inclement weather preventing or cutting short a show – it could also be due to power loss and/or projector or other technical problems. In this current study, 64 drive-ins (29%) had policies on rain checks: 27 of these said they would not give rain checks, while 37 would give rain checks.

Rather than giving a credit for a future performance, refunds are another way of handling a show that does not occur or complete. Of the 79 drive-ins with refund policies,

only 17 (21.5%) allowed for refunds, while the remaining 62 would explicitly not offer refunds.

Rules about vehicle speed and vehicle lights

14 drive-ins simply stated that patrons should drive 'slow' or at 'safe' speeds. An additional 89 drive-ins specified that patrons drive at a particular speed, with the upper speed specified being 10mph (14 drive-ins) and the lower speed being 3mph (7 drive-ins). 5mph was the most commonly specified speed limit (66 drive-ins).

59 drive-ins had policies about use of vehicle lights, which are policies largely intended for driver safety. The policies typically stated that patrons should use their parking lights when driving or parking in the drive-in, and that brake lights be turned off during the movie.

Other rules about vehicles and where patrons can sit

Rules about where vehicles could park and where patrons can sit were motivated by concerns about patron safety and ensuring all patrons had a good view of the screen. 129 drive-in theatres (i.e., 58.9% of those with a policy) required that larger vehicles such as SUVs or vans, park behind smaller vehicles or in spots that do not block the view of smaller vehicles. Also, 104 drive-ins had policies about vehicles not having open hatches, or restricting the height of any open hatches at the back of vehicles to roof level. With regard to where patrons could sit, 66 drive-ins stated that patrons could not sit on the roofs of their vehicles. Finally, 53 drive-ins prohibited saving seats or vehicle spaces for other patrons.

The implications of these pre-COVID-19 drive-in theatre rules will be discussed further in the conclusions to this paper.

We now turn our attention to a follow-up study that was conducted of drive-in theatre rules when they started showing movies again in summer 2020. As an aside, it is useful to note that before most drive-in theatres re-opened to exhibit movies, some theatres were used for church services, concerts, or high school graduations. These communal activities historically occurred at indoor venues – places that COVID-19 rendered unsafe during the pandemic.

Study two: COVID-19 policies of drive-in theatres

In May 2020 I conducted a second study that focused on drive-in theatres rules of conduct relating to COVID-19 precautions and what these rules expected of audience members. I visited the websites and Facebook pages of drive-in theatres within the United States that were listed as being 'open' by driveinmovie.com. The timing of data collection was from May 16 to May 31. I also noted the date on which drive-ins opened (or planned to open) to the public following the COVID-19 pandemic. The data collection period captures the time span when many drive-in theatres were re-opening throughout the United States. It also captures the policies of drive-ins that opened earlier than May 16. For drive-ins that did not

have any rules or opening information available when I first visited their website, I continued to visit their websites and Facebook pages each day, until May 31, in order to gather more COVID-19 rules as they were posted.

I deliberately limited the data collection period to the last two weeks of May as this captures drive-in theater COVID-19 policies as businesses were starting to re-open. Extending the study period beyond late May 2020 would likely yield different drive-in policies. These policies could be more restrictive or lead to businesses being ordered to stay closed (if, for example, there was an increase in COVID-19 rates) or they could be more lenient (if contagion and death rates from COVID-19 decline). I also elected to focus only on COVID-19 policies. I did not focus on what movies were being shown, whether or not these were single or double features, or ticket prices. Having said this, some general observations about such matters are made in the conclusions to this article.

When they were available, the specific COVID-19 rules of each drive-in theatre were entered into a spreadsheet. I categorized the rules into themes that included: sales of tickets; parking and seating expectations; rules about wearing masks; restroom operations; concession operations; services that were closed or not available for use by patrons; and any consequences that were mentioned for patrons who did not follow the rules.

On April 16, President Trump presented 'Guidelines for Opening Up America Again' (Whitehouse, 2020). These guidelines largely left decisions about when to open to state and local officials. President Trump also indicated that states could open before May 1 if they so wished. From the data I collected from driveinmove.com, it appears that as of May 31 2020:

- 9 drive-in theatres had remained open during the pandemic.
- 9 drive-in theatres opened between March 26 and April 16.
- 11 drive-ins with COVID-19 rules opened between April 17 and April 31.
- 194 drive-ins with COVID-19 rules opened in May. Another 27 drive-ins *without* rules opened in May.
- 49 drive-ins opened or intend to open in June or thereafter.
- It was unclear when 8 drive-ins re-opened.
- 11 drive-ins gave an explanation for not opening or for delaying a decision about opening.
- The status of 10 drive-ins was uncertain. These drive-ins were open in 2019, but gave no indication of their plans for the 2020 season.
- Overall, this puts the number of current drive-ins at somewhere between 318 and 328.

My challenge was to decide which drive-in theatres to focus on when examining their COVID-19 policies. I elected to concentrate on those drive-in theatres that had COVID-19 rules and opened after April 16 (when President Trump issued the 'Guidelines for Opening Up America Again') through to the end of May 2020. This comprises 205 drive-ins – the majority of those drive-ins that are still operating. As a proportion of all remaining drive-ins,

this is more than enough for us to gain a picture of COVID-19 policies for drive-in theatres in general.

Generally speaking, the COVID-19 policies of individual drive-in theatres are influenced by recommendations by the Center for Disease Control and Prevention (CDC), recommendations by the governors of the states where drive-ins operate, and by health authorities in the counties where drive-ins operate. It is not my intention to be critical of any individual drive-in theatre and their COVID-19 rules. Drive-ins are typically small, family-owned businesses with owners who genuinely care about their communities. Those drive-ins are also deeply embedded in the social and entertainment fabric of their communities. Moreover, drive-ins are an exemplar of simpler, less complicated, more family focused times. In these uncertain times, whether or not individual drive-in theatres decided to open or not – and if they did open, when they opened, and how extensive their COVID-19 policies were – must have been decisions that were been difficult for operators to make.

As with the general policies that were explored in Study One, above, it is likely that some drive-ins have policies on COVID-19 that are not posted on their websites; or, if they are on their websites, that these are supplemented by additional information at the drive-in itself. Nevertheless, the policies that are highlighted in this study by summarizing findings from drive-in theatre websites provides us with a useful overall picture of the approaches that drive-ins as a whole are taking as they re-opened to the public in summer 2020.

In the sections that follow, I discuss various COVID-19 policies of 205 drive-in theatres. As well as giving some idea of how common these policies are, examples of wording from individual drive-in's policies are provided. This helps illustrate how drive-ins are communicating these rules to patrons and it provides us with further insight into the logic behind their COVID-19 rules. The example policies also helps tell the story of the challenges drive-ins are facing as they re-opened during a pandemic.

Ticket sales

Prior to COVID-19 patrons would typically purchase their tickets at the box office (paying by cash or credit card) when they entered a drive-in theatre. Following COVID-19 this proved problematic as box offices provide a point of contact between customers and drive-in staff, thereby increasing the risk of virus transmission. One way that drive-ins sought to reduce this risk is to mandate or provide patrons with the option of purchasing tickets online through the drive-in website (which would often link to a service such as Eventbrite or Veeva Internet Ticketing). 31 drive-ins (15%) mandated buying tickets online and an additional 25 (12%) made this an option to complement in-person ticket sales. For tickets purchased online, patrons can save or download a virtual ticket (or print off a paper ticket) that could be quickly verified as they entered the drive-in. Drive-in theatres themselves verify tickets purchased online in various ways, all of which maintain some degree of social/physical distancing. For example:

- If tickets are pre-purchases online you can hold your phone or printed ticket

up to your window for us to scan. No contact needed. (Stone Drive-In, Mountain View, Arizona)

- Right now due to the current COVID-19 situation I would much rather sell online tickets because it is the safest. With an online ticket the box office employees don't touch your phone or your ticket. They scan it with a bar code scanner. If we don't sell out online, you can still purchase a ticket at the box office on site with cash or card. (Milford Drive-In, Milford, New Hampshire)
- We encourage online ticket purchases as this will cut down on contact at the Box Office. All you have to do is show our Box Office Attendant your confirmation email (either a print out or on your mobile device) we will scan that which will confirm your purchase with us. Tickets will not be given out unless requested. Box Office employees will wear masks. (Moonlite Drive-In, Terre Haute, Indiana)
- We have installed an online ticket option, go to our web page and select 'Order Tickets Online'. We encourage everyone to purchase your tickets on line. By doing so you will help avoid personal contact from credit cards and cash with our box office employees. They will have a scanner to validate your purchase on paper voucher or your smart phone. (Yes, we will still accept cards and cash at the box office) Further because we will be a 50% capacity you can find out if we are sold out before driving all the way to the theatre. If you plan to bring your own food, a food permit will be required, please purchase you permit on line with your tickets. (Black River Drive-In, Watertown, New York)

Drive-ins with in-person ticketing (the vast majority of drive-ins) often had rules that were intended to reduce the possible transmission of COVID-19. Here are some examples:

- Please bring the correct change if possible or a completed check so we can minimize money (and germ) exchange, and also speed up the admission process. Credit is available on an emergency basis but requires a \$1.00 service fee. (Comanche Drive-In, Buena Vista, Colorado)
- CASH ONLY, please bring exact change. (Fairlee Drive-In, Fairlee, Vermont)
- We strongly encourage credit card and contactless payment transactions with our gloved and masked staff at the ticket booth. (Malta Drive-In, Malta, New York)
- The driver of the vehicle must wear a mask when entering the drive in during the ticket purchasing procedure. You may remove your mask after you are settled in your space, however, anybody that leaves your space for any reason (driver or passenger) MUST wear a mask. We recommend that you stay in your vehicle to maintain social distancing. (Winter Drive-In,

Winterville, Ohio)

Drive-ins also encouraged some people not to attend their theatres, particularly those who may be more likely to have COVID-19, who may have come into contact with those who had, or who are in high-risk groups. 29 drive-ins (14%) had policies governing one or more of these categories. Illustrative policies include:

- If you are feeling sick or have been exposed to anyone who is, please stay home. We also advise those who are over 65 or are immunocompromised [sic] to stay home at this time. (Tibbs Drive-In, Indianapolis, Indiana)
- If you are sick, running a fever, or have been exposed to COVID-19, please stay at home. (Big Sky Drive-In, Midland, Texas)
- If you are experiencing any flu-like symptoms, please stay home. (WesMer Drive-In, Mercedes, Texas)

Parking and viewing policies

152 drive-ins (74% of drive-ins with policies) had specific rules regarding where patrons should park. These policies are designed to put more distance between vehicles and the patrons within these vehicles. Often, these rules tended to express parking requirements relative to speaker posts. Historically, each post would have held two radios (one for a vehicle parked on each side). Before COVID-19 this meant that two vehicles would park between any two poles. Today, even in drive-ins that do not use these posts to provide speakers, these posts often remain as markers for where to park. In summer 2020, only one vehicle would typically be permitted between posts, with rules such as: ‘one car between posts’ (Auburn Garrett Drive-In, Garrett, Indiana) or ‘Instead of 2 cars between each set of poles there will only be 1 car between a set of poles’ (Parkway Drive-In, Maryville, Tennessee). Alternatively, drive-ins with parking rules would express this as a required distance between vehicles, such as ‘Vehicles MUST park 6 feet distance apart’ (61 Drive-In Theatre, Delmar, Iowa), or ‘One vehicle every other space! No exceptions!’ (Starlight Drive-In, Butler, Pennsylvania). Whenever a specific distance between vehicles was mentioned as part of drive-in theatre rules this was never less than 6 feet. However, the distance between vehicles was typically greater than 6 feet, with an average distance between vehicles, when specified, being 8.5 feet. The overall effect of these policies is that the vehicle capacity of drive-ins was typically halved.

Traditionally, after patrons parked their vehicles they would be able to choose to whether to view the movie from with their vehicle or from outside. As an additional social distancing initiative, 68 drive-ins (33% of those with policies) indicated that patrons should *only* watch the movie from within their vehicle. Often such rules included being able to sit on the back of pickup trucks or in the back of an SUV with an open hatch.

Another 68 drive-ins (33%) said that patrons could sit outside their vehicles (for example, in lawn chairs or on a blanket). These rules were also formulated to encourage social distancing between patrons. For example:

- IF YOU WANT TO SIT OUTSIDE YOUR VEHICLE YOU MUST NOT BE WITHIN 6 FEET OF ANYONE NOT IN YOUR IMMEDIATE FAMILY. (Birdsong Drive-In, Camden, Tennessee)
- You must remain in your vehicle or directly in front of your vehicle. NO SOCIALIZING BETWEEN VEHICLES. (Family Drive-In, Stephens City, Virginia)
- If sitting outside, place chairs and blankets between your vehicle and the screen. (Skyway Twin Drive-In, Warren, Ohio)
- Park every other parking space and keep chairs/tables within your space to allow proper social distancing within the parking lots. (Stars and Stripes Drive-In, New Braunfels, Texas)

Another constraint that drive-ins placed on moviegoers was that 23% mentioned that their children's playground was closed.

Masks and social distancing

Masks and social distancing have become the most common forms of limiting the spread of COVID-19 in public spaces. In the United States, 'social distancing' refers to distancing, physically, at least six feet from others. Not surprisingly, drive-in policies also address these measures. 144 drive-ins (70%) had rules about social distancing and 130 (63%) had rules about wearing masks. Generally when drive-ins had these rules they specified that – when away from their vehicles – patrons had to social distance (stay at least 6 feet away from others) and to wear a mask of face covering.

Concession sales

Concession sales historically involved patrons going to a concession stand, ordering items (either inside the concession stand or through a window at the side), and paying by cash or credit card. If an order involved an item that required cooking, patrons would then have to wait until the item was cooked. This process involves multiple points of contact between employees and patrons and between patrons themselves. Aside from rules about masks and social distancing that we discussed earlier, drive-in theatres responded to these issues in various ways. Most drive-ins typically responded with multiple measures. A few drive-in theatres (13 or 6% of those that had policies) closed their concession stands completely. For concessions that remained open, the following are typical COVID-19 rules that drive-ins adopted:

- 47 drive-ins (23%) prohibited access to indoor areas – where patrons may

have previously ordered or dined – but still allowed for the sale of concessions (typically online or in-person). In order to reduce lines and waiting times, some drive-ins also organized so that they had separate ordering and pickup windows.

- 71 drive-ins (35%) limited the number of people who could make and/or pick-up orders.
- 29 drive-ins (14%) limited menu choices in order to reduce waiting times and length of lines or to eliminate food that involved cooking. For example, ‘Snack bar items will be limited to decrease wait times’ (Unadilla Drive-In, Undadilla, NY), and ‘Concessions will be limited for first weekend as we work through new systems to avoid lines’ (Long Drive-In, Long Prairie, Minnesota).
- 49 drive-ins (23%) allowed customers to make online or phone orders for concession items (often using an app called FanFood). This eliminates contact between employees and customers when making and paying for orders. Also, 13 (6%) of drive-ins offered a delivery service to patrons’ vehicles.

Owing to concerns about COVID-19 or because of how this affected concession operations, some drive-in theatres allowed patrons to bring in outside food. For example:

- Due to the limited menu, you may bring in outside food. (Auburn Garrett Drive-In, Garrett, Indiana)
- In order to provide the option of a contactless experience we will be temporarily allowing outside food and beverage to be brought in. Please remember the concessions help up remain in business. By allowing outside food and beverage we will be able to social distance and keep everyone safe. (Aut-O-Rama Twin Drive-In, North Ridgeville, Ohio)
- You are allowed to bring your own food so you can stay safely in your car. (Lynn Drive-In, Strasberg, Ohio)
- Customers may continue to bring in their own snacks if you feel that is the safest option for you, but we hope that you will continue to patronize our concession stand. (South Drive-In, Columbus, Ohio)

Related to the issue of how to manage concession operations during COVID-19 is the problem of what to do with trash resulting from patrons consuming food while at the drive-in. Litter and trash can provide additional points of contact between potentially infected patrons and staff who are pickup up litter or removing trash. 24 drive-ins (12%) reminded patrons not to litter and/or had policies stating that patrons should take their trash with them. For example, ‘place trash directly in the trash can or dumpster and not on the ground to help reduce exposure to our staff’ (South Drive-In, Columbus, Ohio) and ‘ZERO TRASH

EVENT - We are also committed to the 100% safety of our employees. Please plan to take your trash with you to minimize any potential exposure to our staff' (Tru-Vu Drive-In, Delta, Colorado).

Restroom policies

Aside from concession stands, the other location within drive-ins that patrons would be likely to visit is the restroom facilities. In responding to COVID-19, very few drive-ins (4 or 2%) closed their restrooms altogether. For drive-ins that had restrooms still available for use, they tended to adopt one or more of the following rules (these rules are in addition to the rules about social distancing and wearing masks that were mentioned earlier):

- 16 drive-ins (8%) encouraged patrons to limit use of restrooms to 'emergencies' or for 'urgent use'.
- 103 drive-ins (50%) limited the number of patrons in the restrooms and/or in lines. This typically took the following approaches: specifying a maximum number of people who could use the restroom at one time and/or be in line. These policies also indicated how children or family groups would be counted. For example: 'Only 1 person or family group is permitted at a time. Children must be accompanied by an adult' (Overlook Drive-In, Poughkeepsie, New York), or 'Only two people will be allowed in the restrooms at any given time. Exceptions can be made for parents with multiple children' (Evergreen Drive-In, Mount Pleasant, Pennsylvania).
- 65 drive-ins (32%) stated that staff would cleaning/sanitizing facilities on a more regular basis.
- 12 drive-ins (6%) mentioned that additional facilities/portable toilets were available, e.g., 'We have added 4 porta johns to help with the bathroom situation ...' (Hi-Way Drive-In, Carsonville, Michigan); 'Porta Toilets will also be on site to help with restroom lines and social distancing' (Aut-O-Rama Twin Drive-In, North Ridgeville, Ohio); and 'Additional portable restrooms are being permanently installed to avoid lines to bathroom and those will be cleaned every 30 minutes as per CDC guidelines' (Long Drive-In, Long Prairie, Minnesota).
- 16 drive-ins (8%) reminded patrons to wash/sanitize before and/or after using the restrooms.

Consequences

The consequences that drive-in theatre operators articulated to patrons for not following COVID-19 policies may influence compliance with those policies. On the other hand, having no specific consequences may lead to uncertainty about the effects of not complying, or this

may encourage the belief that there will be no real consequences. Of the 205 drive-ins theatres in this current study:

- 59 drive-ins (29%) asked that customers follow the rules in order to protect the 'safety' and/or 'health' of patrons and/or staff.
- 28 drive-ins (14%) asked that customers follow the rules so that drive-ins could remain open, i.e., that if rules were not followed there was a risk that drive-ins would have to close.
- 48 drive-ins (23%) stated that patrons would be asked to leave or would be ejected if they did not follow the rules.
- 106 drive-ins (52%) mentioned no specific consequences if patrons did not comply with COVID-19 policies.

As the above figures illustrate, some drive-ins had rules that attempted to appeal to moviegoers in multiple ways (such as community health, staying open, and/or asking those who were not in compliance to leave). Here are some examples of these policies:

- Social Distancing guidelines in order to maintain a safe environment for employees and customers are as follows: Failure to abide by these rules can result in the theater losing the ability to stay open. (Tiffin Drive-In, Tiffin, Ohio)
- Any guest that fails to comply with any of the conditions, at the discretion of management, will forfeit their right to remain on the premises and will be asked to leave without a refund. Please take into consideration that if we do not work together and everyone practice these social distancing measures that have been put in place we could be forced to close. (Hollywood Drive-In, Averill Park, New York)
- Management reserves the right to ask patrons to leave the theatre without refund at any time if these policies are not honored or the safety of others is deemed to be in jeopardy. (Hulls Drive-In, Lexington, Virginia)
- We don't want to sound like jerks, but to keep everybody safe we have to follow these rules and if you can't (or won't) we'll have to ask you to leave. So lets work together to have a great time, keep each other safe, and get out of the house a bit! (Tibbs Drive-In, Indianapolis, Indiana)

Whether or not patrons comply with drive-in COVID-19 policies is likely a function of various factors, including: how seriously patrons believe the pandemic is; how seriously they treat their own health; and the respect they have for others (including the operators of the drive-in). Emerging research indicates that political beliefs influence individual compliance with COVID-19 policies (Painter & Qiu, 2020). It also appears that the beliefs about how long COVID-19 policies will be in place influence compliance with policies (Briscese et al., 2020).

This has implications for any business that is re-opening as, if policies are not relaxed over time, customers may be less willing to comply. Interestingly, tight-knit communities (which is likely the case in regions where drive-ins are still operating) ‘may be better prepared and willing to change their behaviors to protect community members’ (Borgonovi & Andrieu, 2020, p. 87).

Conclusions

This research found several policies of drive-in theatres that are likely to contribute to customer safety and satisfaction at drive-in theatres. Under ‘normal’ (i.e., before COVID-19) operating conditions, rules that focused on customer safety and satisfaction included: limiting vehicle speeds; banning open fires; prohibiting alcohol; and encouraging patrons to not litter. Such policies also reduce legal liability for drive-ins from patrons who may be injured as a result of the actions of other patrons. Other policies – such as restricting outside food and beverages, or requiring that patrons pay for a permit to bring in outside food – can contribute positively to the profitability of drive-ins. This is particularly important for drive-ins as most of their profits are from concession sales. Finally, policies about rain checks for severe weather or equipment failures can reduce customer uncertainty about attending the drive-in and increase perceptions of value. If we consider these policies as a whole, it appears that many drive-ins are conscious about having rules of conduct for patrons that enhance not only the viewing experience (and safety) of patrons, but also contribute to the profitability of drive-in theatres.

Pre-Covid-19 rules at drive-ins became either redundant or less relevant as these theatres re-opened in the midst of a pandemic in 2020. In some cases, audience expectations that were not even commonly listed as rules were made redundant (for example the expectation that vehicles could park side by side). From a business point of view, opening drive-ins during a pandemic incurred several costs for the operators of these businesses. Some of these costs may be passed along to patrons. For example, COVID-19 has influenced how some drive-ins price their tickets:

- Admission prices have not changed: \$10 per adult (age 12 and older) \$5 per child (age 3-11). Purchase them at the ticket booth as usual. Some may question why we have not lowered the cost even though we may show a single feature. The simple answer is we are operating at half capacity and must hire more employees to facilitate the new health safety rules. If we lowered the cost we would not be able to stay in business. (Hathaway’s Drive-In, North Hoosick, New York)
- During the next two weeks we have changed our pricing format to ensure half capacity of cars previously it was two cars between poles we are now limiting to one car between poles. (Hi-Way Drive-In, Carsonville, Michigan)
- Due to us having limited spaces available, a surcharge fee of \$5 will be added to each vehicle in addition to your ticket purchases. A free surgical

mask will be included for each ticket purchased. The surcharge also helps us cover the increased cost of sanitizing, food costs, payroll, supplies, and outside food brought in. This fee is temporary until some of the social distancing guidelines are lifted. (US23 Drive-In, Flint, Michigan)

If drive-ins continue to operate at half capacity, this has implications for not only ticket revenues, but for concession sales (this is where drive-in theatres make most of their profits). Having said that, if some patrons are not able to attend on peak viewing nights – typically Friday and Saturdays – then they may be more likely to attend on another day of the week that has historically not been as busy.

For some drive-in theatres, their policies about restroom use influenced what movies were exhibited. Traditionally, many drive-ins exhibit double features, which necessitate patrons spending 3.5 hours or more viewing movies, plus intermission time between movies (Fox, 2017). To reduce the need for restroom use some drive-ins exhibited only a single movie or considered the implications of double feature lengths on restroom needs. For example:

- RESTROOMS WILL BE USED FOR EMERGENCY USE ONLY! WE WILL BE SHOWING SINGLE FEATURES ONLY TO HELP MINIMIZE RESTROOM BREAKS. (Birdsong Drive-In, Camden, Tennessee)
- Single & double features depending on length. This is being done to reduce the need for bathroom visits during longer shows. (Hathaway's Drive-In, North Hoosick, New York)
- Our restrooms will be closed. ... Also our main reason as to why we aren't doing double features again yet. (Globe Drive-In, Hutto, Texas)
- Restrooms available. Showing single features only to reduce need to use them. (Pride's Corner Drive-In, Maine)

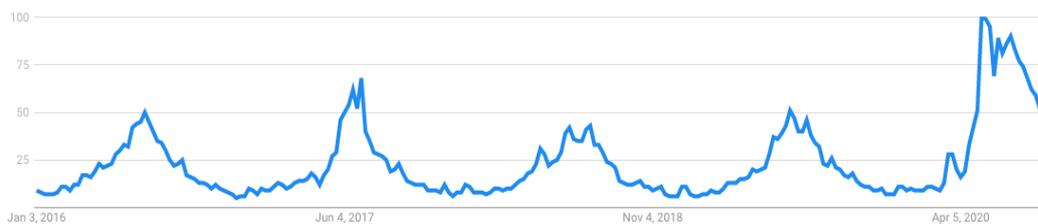
COVID-19 also disrupted planned releases of summer movies, many of which have been delayed until when the major indoor cinema chains planned to re-open. As a result, drive-ins were often replaying older movies that may not have been as popular as planned summer blockbusters. In some cases, drive-ins exhibited movies from Amazon. The movie *Vast is the Night*, produced by Amazon Studios was exhibited at some drive-ins on terms that drive-in theatre operators found financially appealing. For example, 'Amazon Studios has only asked for 50 cents per person. So for the release of this film, Tibbs Drive-In Theatre is able to charge people \$2 per car as opposed to \$11 per adult' (Jones, 2020). Producers of movies that often go direct to streaming services (such as productions by Amazon or Netflix) could provide an added source of movies to drive-ins theatres in the future. From the perspective of Amazon or Netflix, they get to generate added interest in their films, with the added cultural cache that drive-ins have.

The COVID-19 pandemic has generated widespread interest in drive-ins. This is likely partly due to the perceived safety of drive-ins relative to other forms of entertainment. It may also be due to feeling of nostalgia—wishing for simpler, less dangerous times. Linda Levitt (2016) observes that outdoor movies create an overall experience for audience members:

that is no longer possible, for the place and time of the drive-in or the movie palace and the cultural accoutrement [sic] that it calls to mind, for friendships from the past in which watching movies together was a common shared experience, and for films themselves that can create nostalgia for their place and time or for the familiar comfort of an oft-watched film. (p. 223)

In COVID-19 times, these elements of the drive-in theatre are both heightened and diminished. We may wish for a simpler time and for the sense of community that places such as drive-in theatres offer, but the self (or family) isolating experience that drive-ins offer further reinforces what we have lost.

Graph 1: Interest in the search term 'drive in theater', January 2016 to August 2020



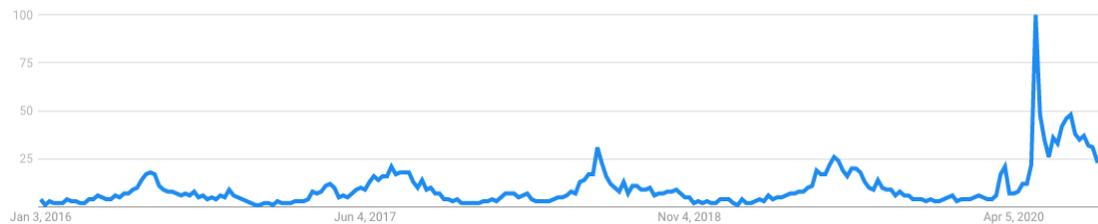
Source: Google Trends,

<https://trends.google.com/trends/explore?date=2016-01-01%202020-08-31&geo=US&q=drive%20in%20theater>

During the summer of 2020 there has been an increased general interest in drive-in theatres. The popularity of Google search terms provides some indication of interest in drive-in theatres as they re-opened. This is evident when we look at the popularity of Google search terms over time. Google Trends creates an index where '100' denotes peak interest in a search term. The search term 'drive in theater' gives some indication of general interest in drive-in movie theatres. Note that, I used the search term 'drive in theater' as it was more considerably more popular than variations such as 'drive-in theater' or 'drive-in theatre'. As we see in **Graph 1**, searches for 'drive in theater' were at the highest point for the last five years in June 2020, when it has around twice as much interest as in recent, past summers. Overall, we also see that there is more interest in drive-in theatres during summer months than in the winter. This is likely because in the summer, the weather is better, schools are out, and more drive-ins are open.

More specifically – and indicating a level of interest that more consumers may be willing to act on – if we look at the search term ‘drive in theaters near me’ there is also a significant peak in interest during summer 2020 – see **Graph 2**. That level of interest is around four times as high as the interest shown at the peak of more recent summers.

Graph 2: Interest in the search term ‘Drive in theater near me’, January 2016 to August 2020



Source: Google Trends,

<https://trends.google.com/trends/explore?date=2016-01-01%202020-08-31&geo=US&q=drive%20in%20theater%20near%20me>

Bruce Austin (1985) articulated the concept of what he refers to as ‘contextual layering’, i.e., that:

Moviegoing is embedded within such contexts as the physical ambience of the theater, the form of exhibition, the type of film being screened, the attendance unit, and so on. Moreover, these contexts are themselves both interactive and mutually dependent (i.e., there is contextual layering); the implication for audience research is that such contextual layering needs to be taken into account. (p. 75)

The experience of attending the drive-in during a pandemic radically alters these contextual layers. Motor vehicles become a means of safely insulating patrons from one another. Even attending the restroom or concession stand poses risks and added stress – if other patrons do not follow mask or distancing rules. Patrons themselves are also part of a new, shared experience that involves watching the same movie(s) together and doing so in an environment where rules should be followed to minimize the potential risk of COVID-19 transmission. And, there is the possibility that some patrons will not follow the rules (or view others who do so as misguided), thereby adding tension and the possibility for confrontations among patrons.

Based on research of a drive-in audience in Rochester, New York, Austin (1985) observes that patrons are ‘motivated by the low cost, the comfort and privacy afforded by one’s car, and the opportunity to socialize. For many, the motion picture being screened, it seems, serves merely as a backdrop and the drive-in lot a convenient meeting place’ (p. 87). One of the appeals of drive-ins during COVID-19 times is found in a key advantage that they have over indoor theatres, namely that patrons are naturally isolated within their vehicles,

or – if patrons are sitting outside, then they can still be distanced from others. However, isolating from others at the drive-in detracts from the social elements of attending the drive-in – such as mingling with friends before the movie or during intermission. It also takes away some of the fun for children who attend drive-ins as playgrounds at drive-ins will often be closed. Nevertheless, the current level of interest in drive-ins portends well for their future. They will be seen as a safe haven in a time of a pandemic and when COVID-19 restrictions are relaxed patrons are likely to value even more the elements of drive-ins that were constrained during the pandemic.

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Appendix A:

Number of United States movie sites and screens, 1995 to 2020

	Indoor sites	Indoor sites % change	Drive-in Sites	Drive-in sites % change	Indoor screens per site	Drive-in screens per site
1995	7,151		593		3.8	1.4
1996	7,215	0.9	583	-1.7	4.0	1.4
1997	6,903	-4.3	577	-1.0	4.5	1.4
1998	6,894	-0.1	524	-9.2	4.8	1.4
1999	7,031	2.0	446	14.9	5.2	1.5
2000	6,550	-6.8	442	-0.9	5.4	1.5
2001	5,813	-11.3	440	-0.5	6.0	1.6
2002	5,712	-1.7	432	-1.8	6.1	1.5
2003	5,700	-0.2	400	-7.4	6.1	1.6
2004	5,629	-1.2	402	0.5	6.4	1.6
2005	5,713	1.5	401	-0.2	6.5	1.6
2006	5,543	-3.0	396	-1.2	6.8	1.6
2007	5,545	0.0	383	-3.3	6.9	1.7
2008	5,403	-2.6	383	0.0	7.1	1.7
2009	5,561	2.9	381	-0.5	6.9	1.6
2010	5,399	-2.9	374	-1.8	7.2	1.7
2011	5,331	-1.3	366	-2.1	7.3	1.7
2012	5,317	-0.3	366	0.0	7.3	1.7
2013	5,326	0.2	393	7.4	7.4	1.7
2014	5,463	2.6	393	0.0	7.2	1.7
2015	5,484	0.4	349	11.2	7.2	1.7
2016	5,472	-0.2	349	0.0	7.3	1.7
2017	5,398	-1.4	349	0.0	7.3	1.7
2018	5,482	1.6	321	-8.0	7.4	1.6
2019	5,548	1.2	321	0.0	7.3	1.7
2020	5,477	-1.3	321	0.0	7.4	1.7

Source: National Association of Theatre Owners (2020)

Appendix B:

Sources of quotes from drive-in policies during the pre COVID-19 period

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