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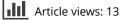
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# Late night environments: Bar "morphing" increases risky alcohol sales in on-premise outlets

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# Abstract

Niche theory proposes that in areas of high alcohol availability, alcohol sales outlets will compete for patrons by diversifying their operating characteristics to provide a diversity of drinking contexts. We aimed to characterize features of outlet operations that contribute to increased risk of alcohol problems across communities. We conducted ethnographic observations in 97 on-premise outlets across six California cities and interviewed staff and patrons in a subsample of these. We observed outlet managers deliberately altering the environments in 17.5% of establishments. These modifications aimed to increase bar/nightclub effects, enabling venues to "morph" (i.e. alter operating conditions from restaurant to bar, or from bar to club) and display environmental characteristics associated with over-service and alcohol-related problems (e.g. more young male patrons, crowding and dancing). Late night morphing was observed in some outlets in most cities and included outlets operating with restaurant licences. Staff and patrons identified morphing as a strategy to increase alcohol sales in late night hours. Competition for late night customers may encourage business practices that increase the number of alcohol sales establishments operating under risky circumstances. Community alcohol policies and practices should attend to the potential expansion of risky alcohol sales niches in night-time economies.

# Introduction

The purchase and consumption of alcoholic beverages in bars and restaurants are common features of drinking behaviour in most US communities. Alcohol use in social settings may promote conviviality and lower social inhibition (Fairbairn & Sayette, 2014; Monahan & Lannutti, 2000), enhance perceived opportunities to socialize and "unwind" (Bot, Engels, & Knibbe, 2005) and facilitate opportunities for those seeking romantic and/or sexual partners (Cavan, 1966; Purcell & Graham, 2005). In addition to providing such social experiences for bar and restaurant patrons, alcohol service generates considerable profit to owners and investors in these establishments.

Although data on alcohol sales revenue are not publically accessible in the United States, the profitable nature of alcohol sales is clear (Treno, Nephew, Ponicki, & Gruenewald, 1993). Alcoholic beverages are easy to mass produce and to ship and store in bulk, resulting in cost savings throughout the supply chain (Babor et al., 2003; Chaloupka, Grossman, & Saffer, 1998). Price markups in bars and restaurants can also be high, estimated at 300% for wine,

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Night-time economy, social ecology, regulatory policy, business licence

#### History

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500% for mixed drinks and 600% for draft beer (Lenart, 2015). Thus, there are substantial incentives for bar and restaurant owners to promote alcoholic beverage service to customers. Servers in the United States are also incentivized to sell more alcohol, since they derive most of their income through tips calculated as a proportion of the bill.

Business practices that are conducive to profit, however, frequently conflict with public health and safety goals. Increased alcohol consumption contributes to increased risk of alcohol related harms among individuals, including automobile crashes (Taylor et al., 2010), physical assault (Macdonald et al., 2005), sexual assault (Abbey, Ross, & McDuffie, 1994), homicide (Rossow, 2001) and intimate partner violence (Jewkes, 2002). Bars may also attract people at increased risk of these problems independent of alcohol consumption. People who drink in bars tend to be younger, male, single (Treno, Alaniz, & Gruenewald, 2000; Wells, Graham, Speechley, & Koval, 2005), take greater risks (Parks & Quigley, 2001) and exhibit higher impulsivity than the general drinking population (Gruenewald, Remer, & LaScala, 2014); this is also the sector of the population most associated with violent assaults (Scott, Schafer, & Greenfield, 1999) and drink-driving (Zador, Krawchuk, & Voas, 2000). The aggregation of higher-risk patrons in on-premise alcohol outlets, combined with excessive drinking, may increase the likelihood of public health and safety problems.

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The spatial distribution of alcohol outlets is also associated with alcohol-related problems. Higher concentration of onpremise outlets is related to greater incidence of intimate partner violence (Cunradi, Mair, Ponicki, & Remer, 2012; Livingston, 2011), child maltreatment (Freisthler, Needell, & Gruenewald, 2005; Morton, Simmel, & Peterson, 2014) and drunk driving (Campbell et al., 2009; Gruenewald, Johnson, & Treno, 2002) which may occur far from the premises, as well as death and injuries from assaults that occur in closer proximity to on-premise outlets (Livingston, 2008; Morrison, Mair, Lee, & Gruenewald, 2015).

In their exegeses of availability theory, Gruenewald (2007) and Stockwell and Gruenewald (2004) suggest that competition among bars in high-density areas leads them to cater to customers at diverse risks of alcohol problems. Niche marketing among these outlets will lead some to become "problem outlets," places where more problems associated with alcohol use will arise. Researchers have identified characteristics of barroom appearance, layout and operation all aspects of the barroom "servicescape" (Bitner, 1992) that may contribute to alcohol-related problems such as aggression. Operational factors include overcrowding, staff attitudes, lack of staff monitoring, serving intoxicated patrons and price discounts (Coomber et al., 2016; Graham, 2009; Graham, Bernards, Osgood, & Wells, 2006; McFadden, Young, & Markham, 2015). Physical barroom factors include having a dance floor, floor plans that promote crowding, having fewer chairs, dim lighting, noise and loud music (Andrade, Homel, & Mazerolle, in press; Carlini et al., 2014; Graham, Bernards, Osgood, & Wells, 2012; Hughes et al., 2011; Ouigley, Leonard, & Collins, 2003).

In the United States, barroom business practices are regulated through federal, state, tribal and/or municipal alcoholic beverage codes. In California, the state Alcoholic Beverage Control Department (ABC) licences the operator of the retail alcohol outlet while relying on local jurisdictions (cities, counties) to regulate the setting (land use and facility types) for the address where privileges of the licence are exercised. State licencing and local zoning codes nominally aim to reduce and prevent alcohol-related harms resulting from the sale of alcoholic beverages and are enforced by both the ABC and local law enforcement (CA Dept. of Alcoholic Beverage Control, 2016b). Public officials also rely heavily on business owners to regulate themselves (Satterlund, Lee, Moore, & Antin, 2009) and rely primarily on complaints from operators, customers and/or neighbours as the basis for enforcement (Wittman, 2016a).

Barroom business practices are also regulated informally by "house policies," which aim to maximize profit and inform staff on compliance with alcoholic beverage code and other codes (e.g., employment, civil rights or health codes). House policies may be codified in written form, but are more typically conveyed to staff orally and through practice (Gehan, Toomey, Jones-Webb, Rothstein, & Wagenaar, 1999). Such unwritten codes are difficult to investigate using archival or survey data, but can be elicited using ethnographic methods.

In this paper, we present ethnographic data on one such house policy: "bar morphing," a niche marketing strategy in which drinking establishments deliberately alter their physical environments at specific times of day or night in order to attract patrons who are more likely to drink heavily (Wittman, 2012). We report findings from observations of bars and restaurants in both high- and low-density areas, along with patron and staff interview data from these establishments. We examine business practices and marketing strategies related to bar morphing, then discuss the implications of bar morphing for state and local alcohol control.

# Methods

Data were collected within a multimethods project (2011–2014) focussed on the social ecology of establishments licenced for on-premise consumption of alcoholic beverages (i.e. bars and restaurants). All research activities were approved by our Institutional Review Board.

# Sample 1: Observations

Our sample came from a larger sample of 50 mid-sized cities across California (Gruenewald et al., 2014). In six cities located within 60 miles of our research centre, stratified by alcohol outlet density, we identified 165 outlets with either a bar licence or a restaurant licence and a separate bar area and selected all outlets from the highest and lowest tertiles of outlet density within each city for an initial sample of 112 outlets. Because we aimed to observe the social, physical and economic environments of establishments, we excluded 15 outlets in which fewer than five patrons were present at the time of our observations, for a final sample of 97 outlets in which we conducted naturalistic observations.

# Sample 2: Interviews

We used our observational data to create scales rating the social, physical and economic environments of outlets (Morrison, Lee, Gruenewald, & Mair, 2016). One such scale-rated social disorder within each outlet (measures included patron aggression, rowdiness, derogatory speech, profanity and yelling). For our ethnographic interview sample, we selected the two outlets with the lowest scores for social disorder in each city, and the two outlets with the highest scores in each city.

From each of these outlets, we purposively recruited one long-time staff member (typically a bartender but also servers and owner-managers), for a confidential in-person interview. Although owner/managers might be expected to present a biased view of their establishment, they are also best situated to serve as key informants on details of outlet business interests, history, and house policies. To triangulate staff/ manager perspectives, we also recruited one long-time patron or "regular" (Katovich & Reese, 1987) for a confidential inperson interview. "Regular" patron interviewees were identified either by the recruiter based on observation (e.g. apparent familiarity with staff and setting, as described in Satterlund, Antin, Lee, and Moore (2009), or by staff interviewees following their interviews. While we did not systematically track these two methods of recruiting regulars, interviewers reported generally obtaining referrals from bar staff as being more practical. Although this recruitment strategy also risks a biased viewpoint, in our experience the

risks of such bias can be reduced by the confidential nature of the interviews and are offset by the rich information on the social life of bars that can best be conveyed by longtime patrons. We conducted 56 interviews with staff and patrons of 27 outlets (we oversampled chain outlets as these are understudied in the literature). For the analyses presented in this paper, we further subsampled 17 outlets from the 27 based on observers' documentation of late-night "morphing".

#### Data sources and analyses

# Ethnographic observations

Pairs of observers conducted at least two observations per outlet. Observations were conducted on weekend nights, near closing time (approximately 10 pm to 2 am).

Each observer recorded field notes into a semistructured form organized into topic domains, with prompts for details, drawn from previous studies of bar environments and sociability, for example, (Fox & Sobol, 2000; Graham, West, & Wells, 2000; Gusfield, 1981; Harford & Gaines, 1981; Hunt & Satterlee, 1986; Satterlund et al., 2009). Initially, the topic domains were: Physical Space (e.g., What is the basic layout of the bar?); Environment (e.g., What was the atmosphere, the feel of the place, this night? What went on this night besides drinking?); Staff (e.g., Describe the staff (ages, ethnicities, etc.); How were staff members interacting with each other; with patrons?); Patrons (e.g., Describe the bar patrons (ages, ethnicities etc.); Were there regulars? (How do you know?); and Drinking (e.g., Describe the types of drinking you saw (e.g., intensity of drinking, drinking games, rounds, etc.); give details.); as well as details of any observed indications of supports for or restraints on violence, aggression, or drunken driving. Field staff labelled each set of field notes with a unique outlet ID code and date-time stamp and uploaded them to a database in ATLAS.ti (Muhr, 2013). A qualitative analyst used the software's autocode feature to apply a priori codes (Ryan & Bernard, 2003), derived from the field note form, to relevant sections of text.

The scientific staff debriefed with the field observation staff weekly to ensure protocol fidelity and improve data reliability. During initial debriefs, the field staff reported observing later-night (after 10 p.m.) changes in some outlets. Consequently, we added the topic domain "Transition" to the field note form and codebook. This code was later refined to "Morphing" following further review of the literature (Wittman, 2012). In analyses conducted for this article, the authors retrieved and reviewed all texts coded for "morphing" and conducted cross-case content analyses.

# Ethnographic interviews

Two professional anthropologists recruited for and conducted the interviews, using a semi-structured interview guide with questions about outlet environments and operations. Interviews were digitally recorded, professionally transcribed, reviewed and cleaned for accuracy and uploaded to our ATLAS.ti database. Interview files were uploaded separately from the observation field notes, but were linked by case number (i.e., outlet ID code). For this stage of analysis, we expanded the code book as new themes emerged from our review of transcripts (Boyatzis, 1998). A qualitative analyst manually coded relevant sections of the transcribed interviews within ATLAS.ti. We then conducted cross-case content analyses of outlets identified as "morphing," focussing on interviewees' descriptions of deliberate environmental alterations and effects on the social-economic environment and alcohol-related outcomes.

#### Archival and mapping data

Finally, we consulted archives of violent events occurring in and around the selected bars during our study period. Specifically, we conducted internet searches using the terms "bar," "nightclub," "restaurant" in combination with the names of each of the six cities in our study area; selected any news articles or other print media (excluding advertisements and reviews) within the time of our study or up to five years prior; and analysed these for thematic content related to our study aims. We also conducted geospatial analyses to identify social ecological characteristics (e.g. outlet density) of selected bars and surrounding areas.

# Results

#### Late night transitions

From field note analysis, we identified two types of late night transitions: (1) influx or more patrons and patrons who were younger and (for restaurants) without children; and (2) deliberate alterations to the physical environment of the outlet by the staff. Deliberate alterations enhanced "party" or nightclub effects, and included dimmed lights; "disco" lights; increased music volume; added security guards; removed tables and chairs; added live entertainment (typically, DJ and/or band; also karaoke, or bingo); changed music genre (e.g. from jazz/slow rock to hip-hop/hard rock); and glassware traded for plastic cups. We identified these outlets as "morphing."

For the purposes of this report, then, morphing bars are those establishments where our field staff documented activities indicating the high likelihood of a house policy of altering the physical environment to invite a different type of patron, or more patrons and/or encourage different activities within the establishment, in late night hours. We discounted establishments where our field observers simply documented in increase in patron numbers or change in patron activity in the late night hours without concomitant environmental alterations. Although these establishments may also have been attempting to attract more or different late night custom (e.g. by offering drinks specials, or advertising late night hours in mass or social media) such attempts would be less readily apparent to the field observers.

# Social ecology of morphing outlets

We compared morphing outlets by licence type, disorder score and social ecology (i.e. location within city and relative alcohol outlet density). Of the 17 morphing outlets, 9 were operating under restaurant licences, including one-chain restaurant. Morphing outlets were observed in all but one of the six cities in our sample. Cities 1, 2 and 3 had more

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morphing outlets; these were the cities sampled for high outlet density.

Morphing outlets occurred in areas of both high and low bar density. Of the 45 bars located in high-density areas, seven (15.6%) morphed, while of the 52 bars in low-density areas, 10 (19.2%) morphed. A chi-square test of independence showed no significant difference in these proportions (p = 0.836).

# Morphing patterns

Based on analysis of the field note and interview data, we identified two morphing patterns: (1) Intensification: Outlets with restaurant licences became more bar-like, and outlets that functioned primarily as bars became more nightclub-like; and (2) Failure: Outlets tried to become more bar- or nightclub-like but failed.

(1) Intensification: Restaurants became more bar-like, and bars became more nightclub-like.

In the late night hours, some morphing outlets exhibited enhanced bar/club effects together with more patrons, younger patrons, more social interaction and higher-risk drinking. Observations from field staff, below, provide some examples of this pattern:

Around 10 pm, the place transitioned to more of a dance club, as the DJ began to spin, and the lighting effects were turned on, and the volume of the music increased significantly. The environment became more of a dance party, where it had been more of a restaurant. The circulation in the bar increased. Also at this time the bar upstairs opened for business. Drinking intensity seemed to ramp up, and some patrons began to dance where there had been tables and chair beforehand. [fieldnotes 005.6]

When the karaoke started the number of patrons tripled. When patrons were dancing and singing more drinks left the bar. [fieldnotes 503.1]

Staff and patron interviews confirmed deliberate house policies for achieving this bar/nightclub effect:

We put the music up super loud, dim the lights, try to create more like... we call it Club [X]. I believe they do it to create an atmosphere so that people drink more. The music is up and people kind of loosen up a little bit, and they create a real bar atmosphere. [The music is] pretty freaking loud. Usually it's like house music or the hits that are current. [staff interview 251]

Weekends, you get a DJ. That's when you get your out-oftowners and a much younger crowd, which tends to be a little more rowdy, big drinkers. All of the kids that just will get fucked up basically.... On the weekends these kids just want to drink, get drunk. They [staff] move the pool tables to the side, and that foyer becomes a dance floor. It gets really loud on the weekends. [staff interview 295]

(2) Failure: Outlets tried to become more bar- or nightclublike but failed.

In some outlets, staff were observed to alter the physical environment to enhance party/bar effects, but with no changes, or negative changes, in the social-economic environment.

One staff interviewee described how the chain restaurant where she worked tried and failed to enter the late night bar market:

We used to have that here; we had a black light party. They would turn off all the regular lights and put some black lights in there. And the girls were able to wear little tiny bras. I never had to work that. I would refuse; like, that's not the type of person I am. We did it for roughly about a year, and it's a family restaurant and bar, so people would just walk in and out, and it really would bring it a different type of crowd, so—not good. [staff interview 472]

Notably, this venue was part of the same chain operation as another bar in our study which attempted and maintained the late night transition.

#### Reported outcomes associated with morphing

As noted earlier, establishments risked alienating their primary customer base and losing business. Other negative impacts included fights resulting in suspension or even revocation of alcoholic beverage licence. One morphing bar (no. 436) had its liquor licence suspended after the state alcoholic beverage control received approximately 50 individual reports from the city's police department regarding incidents at the bar in a two-year period during our study. Calls were made in response to on-site assaults, stabbings and a robbery.

More dire consequences were reported by management of another outlet (no. 483), which attempted to morph into a nightclub on weekend late nights. The outlet contracted a nightclub promoter to bring in music acts and promotional activities to attract a late night crowd. When a fight erupted in front of the venue one night, one of the stage performers pulled out a gun and fired at the involved parties. A bullet ricocheted and killed a bouncer standing nearby. The outlet closed several months later.

Other reported effects were less problematic for management, but more problematic for the patrons and community, as with this chain restaurant which was known locally for generating intoxicated drivers in the late night hours:

Weekend nights, we're notorious for getting DUIs. Cops always park right there. We just watch [departing patrons] getting picked off like flies. [staff interview 251]

# Discussion

A substantial number of venues in our study evinced a distinct transition aimed at creating a livelier and potentially disordered bar environment in the late night hours. Staff in 17 of 97 sampled outlets (17.5%) were observed to "morph," or deliberately alter, the physical environment in an attempt to attract late night patrons and increase alcohol sales (although not always successfully). These morphing outlets included establishments operating under restaurant licences, and were observed in nearly all cities in our study.

Previous discussions of niche theory have described how a high density of on-premise alcohol outlets in a community can support the specialization of a few outlets as spaces where risky drinkers can congregate, which may contribute to overall increased risks for community alcohol problems including drink-driving and alcohol-related violence (Gruenewald, 2007). Our study adds to this literature in further identifying the risk that, in late night hours, more risky niches may be observed than are apparent in day time or early evening hours. Market research identifies the late-night time period as a "daypart" (Muller, 1999) for food service venues to exploit, with emphasis on alcohol sales:

By increasing bar sales, casual dining restaurants have an opportunity to realize a tremendous increase in profit... More casual dining restaurants are extending their hours of operations until midnight or later, which helps chains increase sales, particularly in alcoholic beverages. Many chains are reporting higher-margin alcohol sales as the result of capitalizing on the late night drinking crowd (Buxton, 2013).

Our study found that outlets licenced as restaurants may continue to serve alcohol after normal dinner service hours, exploiting the late night "daypart" to maximize profit by converting into bars and clubs. Indeed, market researchers for a large-chain coffeehouse have identified the same potential, announcing plans to serve alcohol in the evening hours when far fewer patrons typically consume coffee (Horovitz, 2014). Fast food franchises are also beginning to apply for alcoholic beverage service licences (Horovitz, 2011).

In the California ABC Code, key features distinguishing bars from restaurants are that minors (i.e. people under age 21) are permitted in restaurants (type 41 and type 47 licences) but not in bars (type 40, 42 and 48 licences), and restaurants must provide food service (CA Dept. of Alcoholic Beverage Control, 2016a). In practice, these 50-year-old state regulations have almost no power to prevent a "restaurant" from morphing into a "bar/nightclub" late at night. Therefore, it is not surprising that actual operating conditions at the establishments may not correspond to their nominal licence type. A survey of 151 on-sale establishments in California found that in 15% of venues the actual operating conditions differed from those specified by their licences, with more restaurants operating as bars (i.e. without food service) (Ponicki, Gruenewald, Remer, Martin, & Treno, 2014). Further, all on-sales licence types prohibit service to obviously intoxicated patrons. However, with approximately 200 ABC sworn staff to monitor more than 74,000 retail outlets (45,000 of them on-sales establishments) across the state of California, the burdens of ABC law enforcement fall heavily on local jurisdictions and self-supervision by licensees.

Prior studies have found that bar density contributes to alcohol-related community problems (Campbell et al., 2009). We hypothesized that bar morphing may contribute to a social mechanism through which higher concentration of bars in an area leads to increased problems. Our analyses showed, however, that managers of alcohol outlets in both high- and low-density areas attempted to morph their establishments, with no significant association between bar morphing and outlet density. Our small sample may have limited our ability to identify statistically significant associations.

A further limitation of our study is that we may have undercounted the number of on-premise outlets in our study area which practiced morphing. "Late night transition" was an emergent finding of the ethnographic observers, rather than an *a priori* outcome we had previously hypothesized. We therefore neither documented late night transitions in all observations, nor did we operationalize morphing in a manner that allowed us to measure the phenomenon systematically. Moreover, we used a fairly conservative means to identify morphing bars, based on a specific set of observable actions, and may have missed some outlets which were attempting to capture late night custom in less apparent ways. We deliberately sought to reduce temporal effects by not scheduling observations during holidays, but it may be that a morphing outlet's success in increasing sales fluctuates over time due to such effects, or for other reasons. The current study design did not allow us to assess such variability. Nevertheless, morphing as a house policy in many venues was confirmed by interview respondents. As such, our study provides a set of items by which measures and scales for bar morphing may be constructed for further research.

While our findings are limited to the sampled outlets in our six-city study, Wittman (2012) found similar issues in several other California cities. City officials and community zoning boards often issue use-permits for "restaurants" expecting that they will develop as benign business opportunities and generate tax revenue without becoming problematic bars/ nightclubs. If fact, type 47 full-service (beer/wine/spirits) restaurant licences that morph into late-night bar/nightclubs generate a greater number of late-night police events than do type 48 full-service bar licences in all California cities studied by Wittman. In part, this is because California type 47 outlets (bar/restaurants) have greatly increased in numbers as type 48 outlets (standalone bars) have reduced. In 2014, California had five times as many bar-restaurant licences as stand-alone bar licences statewide (13,960 compared to 2763). In 1967, shortly after the ABC Act was written, the numbers were equal: about 5903 bar/restaurants and 4990 bars. Note also that the State of California does not licence nightclubs; nightclubs operate under local land-use permits with either bar/restaurant or bar licences (Wittman, 2012).

Alcohol control policies that clearly define bar operating conditions and restrict outlet density may reduce the burden of alcohol-related problems on communities. In California, at this writing in practical terms this means "local control": Taking action at the city or county level through planning and land-use ordinances to establish conditional-use permit requirements. Local controls restrict outlet density and locations near sensitive use areas, and set limits on physical design and management operations. These actions occur as a precursor to issuance of an ABC licence. The ABC Act recognizes this local authority (S. 23790), and ABC officials welcome local action (F. Wittman, 2016a, 2016b; Wittman, 2012).

Several under-utilized regulatory technologies may help local authorities and the ABC prevent problems related to morphing (F. Wittman, 2016a, 2016b). Foremost is responsible beverage service (RBS) training to raise community awareness of problems related to over-service of alcohol and to provide outlet staff and managers with examples of house policies to reduce problem service. RBS is currently not mandated for alcohol sales licencing in California but can be required by local jurisdictions. Wittman and colleagues are currently exploring "Community RBS" training that combines training of owner/operators with strong community oversight of the training programme by key municipal agencies (Rogers et al., 2014).

Even in United States where strong municipal regulation of alcohol sales is pre-empted by state law, cities may still leverage their land-use planning and zoning capacities to exert more local control over the conditions of alcoholic beverage sales (Mosher, 1999). Another strategy, utilized in parts of the United Kingdom, is to impose a late-night levy to fund additional police and other city services (Hadfield & Measham, 2015). A successful multipronged prevention strategy should reflect the local social ecologies of onpremise outlets and include a complaint-driven system to respond to problems around outlets; a mechanism for communities and responsible business partners to jointly address problems around outlets; and community regulations on establishment operations, including business hours and beverage server training.

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#### **Declaration of interest**

Authors have no conflicts of interest to declare.

#### References

- Abbey, A., Ross, L.T., & McDuffie, D. (1994). Alcohol's role in sexual assault. In R.R. Watson (Ed.), Addictive behaviors in women (pp. 97–123). Totowa, NJ: Humana Press.
- Andrade, D.D., Homel, R., & Mazerolle, L. (in press). Boozy nights and violent fights. *Journal of Interpersonal Violence*. doi: 10.1177/ 0886260516657910.
- Babor, T.F., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., ... Rossow, I. (2003). Alcohol: No ordinary commodity: Research and public policy. New York: Oxford University Press.
- Bitner, M.J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *The Journal of Marketing*, 56, 57–71. doi: 10.2307/1252042.
- Bot, S.M., Engels, R.C.M.E., & Knibbe, R.A. (2005). The effects of alcohol expectancies on drinking behaviour in peer groups: observations in a naturalistic setting. *Addiction*, 100, 1270–1279. doi: 10.1111/j.1360-0443.2005.01152.x.
- Boyatzis, R.E. (1998). Transforming qualitative information: Thematic analysis and code development. Thousand Oaks, CA: SAGE.
- Buxton. (2013). Casual restaurants use daypart customer analytics to regain market share. Retrieved from http://www.buxtonco.com/news/ news-detail/casual-restaurants-use-daypart-customer-analytics-toregain-market-share/.
- CA Dept. of Alcoholic Beverage Control. (2016a). Common ABC license types and their basic privileges. Retrieved from https://www.abc.ca.gov/forms/abc616.pdf.

- CA Dept. of Alcoholic Beverage Control. (2016b). List of License Types. Retrieved from http://www.abc.ca.gov/permits/licensetypes.html.
- Campbell, C.A., Hahn, R.A., Elder, R., Brewer, R., Chattopadhyay, S., Fielding, J., ... Middleton, J.C. (2009). The effectiveness of limiting alcohol outlet density as a means of reducing excessive alcohol consumption and alcohol-related harms. *American Journal of Preventive Medicine*, 37, 556–569. doi: 10.1016/j.amepre.2009. 09.028.
- Carlini, C., Andreoni, S., Martins, S.S., Benjamin, M., Sanudo, A., & Sanchez, Z.M. (2014). Environmental characteristics associated with alcohol intoxication among patrons in Brazilian nightclubs. *Drug and Alcohol Review*, 33, 358–366. doi: 10.1111/dar.12155.
- Cavan, S. (1966). *Liquor license*. Chicago: Aldine Publishing Company. Chaloupka, F.J., Grossman, M., & Saffer, H. (1998) The effects of price
- on the consequences of alcohol use and abuse. In M. Galanter (Series Ed.), *Recent developments in alcoholism: Vol. 14. The Consequences of Alcoholism* (pp. 331–346). New York: Kluwer Academic Publishers.
- Coomber, K., Pennay, A., Droste, N., Mayshak, R., Martino, F., Bowe, S.J., & Miller, P.G. (2016). Observable characteristics associated with alcohol intoxication within licensed entertainment venues in Australia. *International Journal of Drug Policy*, 36, 8–14. doi: http://doi.org/ 10.1016/j.drugpo.2016.06.012.
- Cunradi, C.B., Mair, C., Ponicki, W., & Remer, L. (2012). Alcohol outlet density and intimate partner violence-related emergency department visits. *Alcoholism: Clinical and Experimental Research*, *36*, 847–853. doi: 10.1111/j.1530-0277.2011.01683.x.
- Fairbairn, C.E., & Sayette, M.A. (2014). A social-attributional analysis of alcohol response. *Psychological Bulletin*, 140, 1361–1382. doi: 10.1037/a0037563.
- Fox, J.G., & Sobol, J.J. (2000). Drinking patterns, social interaction, and barroom behavior: A routine activities approach. *Deviant Behavior*, 21, 429–450. doi: 10.1080/01639620050085834.
- Freisthler, B., Needell, B., & Gruenewald, P.J. (2005). Is the physical availability of alcohol and illicit drugs related to neighborhood rates of child maltreatment?. *Child Abuse & Neglect*, 29, 1049–1060. doi: http://dx.doi.org/10.1016/j.chiabu.2004.12.014.
- Gehan, J.P., Toomey, T.L., Jones-Webb, R., Rothstein, C., & Wagenaar, A.C. (1999). Alcohol outlet workers and managers: Focus groups on responsible service practices. *Journal of Alcohol and Drug Education*, 44, 60–67.
- Graham, K. (2009). They fight because we let them! Applying a situational crime prevention model to barroom violence. *Drug and Alcohol Review*, 28, 103–109. doi: 10.1111/j.1465-3362. 2008.00038.x.
- Graham, K., Bernards, S., Osgood, D.W., & Wells, S. (2006). Bad nights or bad bars? Multi-level analysis of environmental predictors of aggression in late-night large-capacity bars and clubs. *Addiction*, 101, 1569–1580. doi: 10.1111/j.1360-0443.2006.01608.x.
- Graham, K., Bernards, S., Osgood, D.W., & Wells, S. (2012). 'Hotspots' for aggression in licensed drinking venues. *Drug and Alcohol Review*, 31, 377–384. doi: 10.1111/j.1465-3362.2011.00377.x.
- Graham, K., West, P., & Wells, S. (2000). Evaluating theories of alcoholrelated aggression using observations of young adults in bars. *Addiction*, 95, 847–863. doi: 10.1046/j.1360-0443.2000.9568473.x.
- Gruenewald, P.J. (2007). The spatial ecology of alcohol problems: Niche theory and assortative drinking. *Addiction*, *103*, 870–878. doi: 10.1111/j.1360-0443.2007.01856.x.
- Gruenewald, P.J., Johnson, F.W., & Treno, A.J. (2002). Outlets, drinking and driving: A multilevel analysis of availability. *Journal of Studies on Alcohol*, 63, 460–468.
- Gruenewald, P.J., Remer, L.G., & LaScala, E.A. (2014). Testing a social ecological model of alcohol use: the California 50-city study. *Addiction*, 109, 736–745. doi: 10.1111/add.12438.
- Gusfield, J.R. (1981). Managing competence: An ethnographic study of drinking-driving and the context of bars. In T.C. Harford & L.S. Gaines (Eds.), *Social drinking contexts* (pp. 155–172). Washington D.C.: DHHS.
- Hadfield, P., & Measham, F. (2015). The outsourcing of control: Alcohol law enforcement, private-sector governance and the evening and night-time economy. *Urban Studies*, 52, 517–537. doi: 10.1177/ 0042098014554540.
- Harford, T.C., & Gaines, L.S. (1981). Social drinking contexts: An introduction. In T.C. Harford & L.S. Gaines (Eds.), *Social drinking contexts*. Washington D.C.: DHHS.

- Horovitz, B. (2011). Sonic, Burger King, other fast-food chains selling alcohol. USA Today, Retrieved from http://usatoday30.usatoday.com/ money/industries/food/2011-06-30-fast-food-restaurants-offeringalcohol\_n.htm.
- Horovitz, B. (2014). Starbucks serving alcohol at more locations. USA Today, Retrieved from http://www.usatoday.com/story/money/ business/2014/03/20/starbucks-coffee-shop-alcoholic-beverages-winebeer/6658379/.
- Hughes, K., Quigg, Z., Eckley, L., Bellis, M., Jones, L., Calafat, A., ... van Hasselt, N. (2011). Environmental factors in drinking venues and alcohol-related harm: the evidence base for European intervention. *Addiction*, 106, 37–46. doi: 10.1111/j.1360-0443.2010.03316.x.
- Hunt, G.P., & Satterlee, S. (1986). Cohesion and division: Drinking in an English village. *Man*, *21*, 521–537. doi: 10.2307/2803100.
- Jewkes, R. (2002). Intimate partner violence: causes and prevention. *The Lancet*, 359, 1423–1429. doi: http://dx.doi.org/10.1016/S0140-6736(02)08357-5.
- Katovich, M.A., & Reese, W.A. (1987). The regular Full-time identities and memberships in an urban bar. *Journal of Contemporary Ethnography*, 16, 308–343. doi: 10.1177/0891241687163005.
- Lenart, J. (2015, March 19). Why your glass of wine costs so much-or does it? *Crain's Chicago Business*, Retrieved from http://www.chica gobusiness.com/article/20150319/BLOGS09/150319719/why-yourglass-of-wine-costs-so-much-or-does-it.
- Livingston, M. (2008). A longitudinal analysis of alcohol outlet density and assault. Alcoholism: Clinical and Experimental Research, 32, 1074–1079. doi: 10.1111/j.1530-0277.2008.00669.x.
- Livingston, M. (2011). A longitudinal analysis of alcohol outlet density and domestic violence. *Addiction*, 106, 919–925. doi: 10.1111/j.1360-0443.2010.03333.x.
- Macdonald, S., Cherpitel, C.J., Borges, G., DeSouza, A., Giesbrecht, N., & Stockwell, T. (2005). The criteria for causation of alcohol in violent injuries based on emergency room data from six countries. *Addictive Behaviors*, 30, 103–113. doi: http://dx.doi.org/10.1016/j.addbeh. 2004.04.016.
- McFadden, A.J., Young, M., & Markham, F. (2015). Venue-level predictors of alcohol-related violence: An exploratory study in Melbourne, Australia. *International Journal of Mental Health and Addiction*, 13, 506–519. doi: 10.1007/s11469-015-9552-3.
- Monahan, J.L., & Lannutti, P.J. (2000). Alcohol as social lubricant. *Human Communication Research*, 26, 175–202. doi: 10.1111/j.1468-2958.2000.tb00755.x.
- Morrison, C., Lee, J.P., Gruenewald, P.J., & Mair, C. (2016). The reliability of naturalistic observations of social, physical and economic environments of bars. *Addiction Research & Theory*, 24, 330–340. doi: 10.3109/16066359.2016.1145674.
- Morrison, C., Mair, C.F., Lee, J.P., & Gruenewald, P.J. (2015). Are barroom and neighborhood characteristics independently related to local-area assaults?. *Alcoholism: Clinical and Experimental Research*, 39, 2463–2470. doi: 10.1111/acer.12910.
- Morton, C.M., Simmel, C., & Peterson, N.A. (2014). Neighborhood alcohol outlet density and rates of child abuse and neglect: Moderating effects of access to substance abuse services. *Child Abuse & Neglect*, 38, 952–961. doi: http://dx.doi.org/10.1016/ j.chiabu.2014.01.002.
- Mosher, J. (1999). *Liquor liability law*. New York: Matthew Bender & Co.
- Muhr, T. (2013). ATLAS.ti Scientific Software. Berlin, Germany: ATLAS.ti Scientific Software Development GmbH.
- Muller, C.C. (1999). A simple measure of restaurant efficiency. Cornell Hotel and Restaurant Administration Quarterly, 40, 31–37. doi: 10.1016/S0010-8804(99)80035-4.
- Parks, K.A., & Quigley, B.M. (2001). Riskier lifestyle, aggression and public drinking. In M. Martinez (Ed.), *Prevention and control of* aggression and the impact on its victims (pp. 267–274). New York: Springer.
- Ponicki, W.R., Gruenewald, P.J., Remer, L.G., Martin, S.E., & Treno, A.J. (2014). Assessing the validity of on-premise alcohol license data in six communities in California: Operating characteristics and outlet

densities. Substance Use & Misuse, 49, 51-58. doi: 10.3109/10826084.2013.817429.

- Purcell, J., & Graham, K. (2005). A typology of Toronto nightclubs at the turn of the millennium. *Contemporary Drug Problems*, 32, 131–167. doi: 10.1177/009145090503200109.
- Quigley, B.M., Leonard, K.E., & Collins, R.L. (2003). Characteristics of violent bars and bar patrons. *Journal of Studies on Alcohol*, 64, 765–772. doi: 10.15288/jsa.2003.64.765.
- Rogers, P., Griffin, M., Kendrick, K., Bloch, S., Hanour, G., & Wittman, F. (2014). *Responsible Beverage Service Training as a Community Prevention Resource*. Paper presented at the Substance Use Disorders Statewide Conference, Costa Mesa, CA.
- Rossow, I. (2001). Alcohol and homicide: a cross-cultural comparison of the relationship in 14 European countries. *Addiction*, 96, 77–92. doi: 10.1046/j.1360-0443.96.1s1.7.x.
- Ryan, G.W., & Bernard, H.R. (2003). Techniques to identify themes. *Field Methods*, 15, 85–109. doi: 10.1177/1525822x02239569.
- Satterlund, T., Antin, T.M.J., Lee, J.P., & Moore, R.S. (2009). Cultural factors related to smoking in San Francisco's Irish bars. *Journal of Drug Education*, 39, 181–193. doi: 10.2190/DE.39.2.e.
- Satterlund, T., Lee, J.P., Moore, R.S., & Antin, T.M.J. (2009). Challenges to implementing and enforcing California's smoke-free workplace act in bars. *Drugs (Abingdon Engl)*, 16, 422–435.
- Scott, K.D., Schafer, J., & Greenfield, T.K. (1999). The role of alcohol in physical assault perpetration and victimization. *Journal of Studies on Alcohol*, 60, 528–536. doi: 10.15288/jsa.1999.60.528.
- Stockwell, T., & Gruenewald, P.J. (2004). Controls on the physical availability of alcohol. In N. Heather & T. Stockwell (Eds.), *The essential handbook of treatment and prevention of alcohol problems* (pp. 213–234). West Sussex, England: John Wiley & Sons, Ltd.
- Taylor, B., Irving, H.M., Kanteres, F., Room, R., Borges, G., Cherpitel, C., ... Rehm, J. (2010). The more you drink, the harder you fall: A systematic review and meta-analysis of how acute alcohol consumption and injury or collision risk increase together. *Drug and Alcohol Dependence*, 110, 108–116. doi: http://dx.doi.org/10.1016/ j.drugalcdep.2010.02.011.
- Treno, A.J., Alaniz, M.L., & Gruenewald, P.J. (2000). The use of drinking places by gender, age and ethnic groups: An analysis of routine drinking activities. *Addiction*, 95, 537–551. doi: 10.1046/ j.1360-0443.2000.9545376.x.
- Treno, A.J., Nephew, T.M., Ponicki, W.R., & Gruenewald, P.J. (1993). Alcohol beverage price spectra: Opportunities for substitution. *Alcoholism: Clinical and Experimental Research*, 17, 675–680. doi: 10.1111/j.1530-0277.1993.tb00818.x.
- Wells, S., Graham, K., Speechley, M., & Koval, J.J. (2005). Drinking patterns, drinking contexts and alcohol-related aggression among late adolescent and young adult drinkers. *Addiction*, 100, 933–944. doi: 10.1111/j.1360-0443.2005.001121.x.
- Wittman, F. (2016a). Halfway there The evolution of local alcohol control in California. Part I: The system as it has developed. *International Journal of Alcohol and Drug Research*, 5, 101–107. doi: 10.7895/ijadr.v5i3.228.
- Wittman, F. (2016b). Halfway there The evolution of local alcohol control in California. Part II: Stages and factors in development, 1980–2015. *The International Journal of Alcohol And Drug Research*, 5, 109–116. doi: 10.7895/ijadr.v5i3.235.
- Wittman, F.D. (2012). Restaurants that "Morph" into Bars and Nightclubs in California Communities: What's the Problem and What Can Be Done About It? Retrieved from http://www.ca-cpi. org/docs/Publications/Policy\_Briefs/RestaurantsThatMorph\_2012Oct\_ PolicyBrief.pdf Retrieved from http://www.ca-cpi.org/docs/ Publications/Policy\_Briefs/RestaurantsThatMorph\_2012Oct\_Policy Brief.pdf.
- Zador, P.L., Krawchuk, S.A., & Voas, R.B. (2000). Alcohol-related relative risk of driver fatalities and driver involvement in fatal crashes in relation to driver age and gender: an update using 1996 data. *Journal of Studies on Alcohol*, 61, 387–395. doi: 10.15288/ jsa.2000.61.387.