"Everything is telling you to drink": Understanding the Functional Significance of Alcogenic Environments for Young Adult Drinkers

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Abstract

Background: Dominant approaches to understanding alcohol consumption and preventing misuse focus on cognitive antecedents of drinking behaviour. However, these approaches are not only limited, but ignore wider contextual factors. Adopting an ecological approach, this paper considers the functional significance of alcogenic environments from the perspectives of individual drinkers, based on the availability of alcohol-related affordances.

Method: Twelve undergraduate students aged 18-30, with a range of self-reported drinking behaviours virtually navigated a range of drinking environments during photoelicitation interviews. Participants individually described drinking contexts in terms of the form and function-based characteristics that they believed promoted and/or inhibited their alcohol consumption.

Results: Interpretative phenomenological analysis revealed the meaning drinking environments had for drinkers, based on their experiences. For participants, alcohol consumption was related to accessibility, communicating with others, consuming food, grasping items, furniture availability, watching or listening to entertainment, advertisement placement, premise décor and alternative action opportunities.

Conclusions: Focusing on the functional significance of drinking contexts may be more conducive to understanding contextual factors which may promote or prohibit alcohol consumption. The extent that alcohol-related affordances are linked with excessive

consumption and alcohol-related problems merits further study.

Keywords: Alcohol; affordances; photo-elicitation; interpretative phenomenological

analysis; health behaviour.

Word Count: 4,990

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1. Introduction

Alcohol misuse is a public health concern, particularly for young people who continue to drink to hazardous levels (Office for National Statistics, 2017). Alcohol consumption is typically understood in terms of psychological determinants, or preceding cognitive attributes. Much prevention work attempts to moderate drinking behaviour by warning individuals about health risks and harms of excessive consumption. Social cognitive models based on these notions, such as The Theory of Reasoned Action and Planned Behaviour (Fishbein & Ajzen, 1975), aim to alter attitudes, intentions or beliefs to prevent problematic consumption. Unfortunately, the limited effectiveness of prevention approaches based on these principles has been both striking and disappointing for prevention scientists (Babor et al., 2010; Hill, Pilling, & Foxcroft, 2017; Marteau, Ogilvie, Roland, Suhrcke, & Kelly, 2011; Sniehotta, Presseau, & Araújo-Soares, 2014; Webb & Sheeran, 2006).

Alcohol consumption is a complex behaviour both embodied by drinkers and embedded in material and social contexts. By ignoring the role of environmental or ecological factors, many prevention approaches do not consider what drinking contexts afford, or how they are imbued with meaning for drinkers. Existing research provides rich descriptions of meaning-making around alcohol and drinking cultures (de Visser & Smith, 2007; Griffin, Szmigin, Bengry-Howell, Hackley, & Mistral, 2012; Lyons, McCreanor, Goodwin, & Barnes, 2017; Nicholls, 2012; Room & Mäkelä, 2000). Many features of these so-called alcogenic environments, such as their geospatial distribution and other alcohol-related characteristics, have also been linked to hazardous alcohol consumption (e.g. Babor et al.,

2010; Huckle, Huakau, Sweetsur, Huisman, & Casswell, 2008; Kypri, Cronin, & Wright, 2005; Livingston, 2011; Toomey et al., 2012). It is important to consider these alternative drinking determinants because alcoholic drinking behaviour may be as much determined by environmental as it is psychological complexity.

Gibson's (1979) affordance construct provides a means of studying alcogenic environments, specifically the inter-connectedness of psychological and environmental determinants of alcohol use. For Gibson and other ecological psychologists, individuals directly pick up the function that objects and other individuals serve for action when navigating their environments. These opportunities for action (*affordances*) are available when specific characteristics of environments (*occurrences*) and the capabilities of individuals (*effectivities*) are sufficient for the action to be carried out (Turvey, Shaw, Reed, & Mace, 1981).

Affordances have been used to illustrate the functional significance of children's play environments, with important design implications (Heft, 1988, 2001). While limited work applies affordances to the social domain, canonical affordances, or the normative uses of objects within our environments, can be used to predict certain types of social behaviours (Costall, 2012; Lyons et al., 2017; Marsh, Richardson, & Schmidt, 2009; van Dijck, 2013). Despite limited use in the prevention field so far, understanding the relations between drinkers, drinking behaviour and drinking contexts could illustrate the functional significance of rich and complex alcogenic environments, while identifying features that may lead to increased, or problematic consumption.

Our previous research illustrates how the use of direct, non-participant observation and a functional coding framework highlights aspects of on-licensed premises which appear to extend or restrict consumption opportunities (Hill, 2014). Alcohol-related affordances promoting consumption included graspable features, such as limited small drinks containers, while playable features, such as games machines, appeared to inhibit it. While this work provides a useful taxonomy for analysing alcogenic contexts, non-participant observation does not provide an insight into the meaning of these environments for drinkers. The current study aimed to understand how a range of drinkers relate to and give meaning to the functional contexts where they consume alcohol, from their own perspectives.

2. Methods

This research had full approval from the Oxford Brookes Research Ethics Committee (No. 120660).

2.2 Sampling Approach

Twelve English-speaking Oxford Brookes undergraduate students, aged 18-30 years, 10 females and 2 males, were recruited through a Participant Panel. Before the study, participants were asked to self-report their drinking behaviour on an average night out, by selecting one or more of the following categories: light drinker (1-3 drinks), moderate drinker (4-7 drinks) and heavy drinker (8+ drinks). Participants were allowed to select more than one category if they felt this would better reflect their drinking

behaviour and were instructed that one drink referred to the equivalent of a pint of beer, or a glass of wine. The final sample included 3 light drinkers, 1 light-moderate, 5 moderate and 3 moderate-heavy drinkers.

2.3. Procedure and Interview

Fifty high-definition visual scenes were used to represent different areas of licensed premises. Written permission was obtained for the taking of these photographs from two public houses, three bars and two nightclubs. An independent assessor agreed the final set of photographs were unidentifiable and representative. Participants were initially shown an example of a public house dining area and given full instructions.

Semi-structured photo-elicitation interviews lasted approximately one hour. Each scene was displayed individually on a computer screen and navigated by participants using a computer mouse and zoom function. Participants were asked to think aloud, providing form-based descriptions, (e.g. "what can you *see*?"), followed by the function for their drinking behaviour (e.g. "what would you *do*?"). Other follow-up questions were based on participants' responses (e.g. "describe a time you did this?"). Participants were also asked if they wanted to add anything not represented by the photographs.

2.4 Analytic Approach

Interviews were recorded, transcribed and coded using Interpretative Phenomenological Analysis (IPA), which is a flexible, reflexive idiographic phenomenology (Smith, 1995; Smith, Jarman, & Osborn, 1999). As affordances are the necessary components of

immediate experience, ecological psychologists regard phenomenology a viable theoretical framework for investigating individual-environment relations (Good, 2007; Heft, 2003; Husserl, 1970; Merleau-Ponty, 1945). As well as providing the appropriate ontological and epistemological underpinnings for this work, IPA was suitable for the current study because it goes beyond alternative approaches, such as thematic analysis, by specifying a range of interpretive elements and analytic procedures. This provided a rich understanding of each drinker's individual and unique experience within their drinking environments, which moved beyond the functional descriptions identified by previous research.

Data collection and primary analyses were carried out by the principal investigator. During coding, areas of the scene discussed by participants (occurrences) were grouped in relation to their function for behaviour (alcohol-related affordance). An in-depth, idiographic process was then utilised, whereby the researcher initially interpreted similar affordances from one account, before connecting themes with other cases. This meant that accounts were understood in terms of inter-subjectivity, or perspectives of more than one participant. Recurrent affordances endorsed by different types of drinkers were extracted and clustered as main and subordinate themes. During this secondary analysis, similarities and differences were identified by the principal investigator and another analyst from the research team.

3. Results

The findings were compiled as a functional taxonomy of affordances and occurrences relevant to drinking behaviour. As illustrated in Table 1, main themes included: accessing alcohol; communicating with others; consuming food and drink; dancing to music; grasping objects; listening to sounds; playing, putting, sitting on and viewing objects. They are now described with illustrative quotes.

[Insert Table 1 here]

(a) Accessing Alcohol

 Bar Characteristics – Most participants described how bar-related occurrences, such as length, proximity, few waiting patrons, and multiple serving staff afforded "easy access to drinks".

Heavier drinkers appeared to actively monitor visual scenes for these types of occurrences:

"There's no one serving, so I wouldn't go up to the bar...I'd wait until it went down...unless I was in a club 'cos there's a queue all the time and you've just got to go up and do it". (Female, aged 18, moderate-heavy drinker)

Moderate drinkers appeared to selectively adapt their behaviour, as they "buy more than one round in order to not have to queue again", which led them to "drink the two in the same time they drink the one" (Female, aged 20, moderate drinker).

Light-moderate drinkers appeared to be unconcerned about alcohol access, not "feeling like I need to drink to have a good time" (Female, aged 19, light-moderate drinker), whereas light drinkers were "less inclined to go" (Female, aged 18, light drinker) to the bar area in busier premises.

Regardless of drinker type, most participants described engaging in pre-loading behaviour before entering crowded premises. While this appeared to increase heavier drinkers' overall consumption, lighter drinkers explained:

"If I knew I was going to a place like that it would be a case of pre-drinking at home and then going out and not buying anything". (Female, aged 24, light drinker)

2. Location – Participants all described "moving" between premises. Geographically separate premises, appeared to impair alcohol access, making it impossible to "start the night and move on" (Male, aged 30, moderate drinker).

The availability of alternative opportunities for social action in one area was also important, as one participant stated: "in my home town...the younger people don't really have much to do other than going out to clubs" (Female, aged 22, moderate-heavy drinker).

3. Regulations – Regulation occurrences, such as security, were viewed negatively as "preventing" alcohol access, rather than increasing patron safety. Additionally, participants described it was "easy" to enter premises intoxicated and purchase "large quantities of low cost" alcohol (Male, aged 30, moderate drinker).

'Drink Aware' logos and related messages, often provided by the alcohol industry as part of their corporate social responsibility, were not noticed by participants. Two participants suggested that these were "something you kind of become used to" (Female, aged 24, light drinker) and "wouldn't be paying much attention to" (Male, aged 30, moderate drinker). In contrast, two of the heaviest drinkers described how they prohibited consumption:

"It reminds you...of...being careful of your intake...you can get barred from places". (Male, aged 18, moderate-heavy drinker)

Two light drinkers suggested regulations might even increase alcohol intake. One explained how they "drink quite quickly" to join friends in alcohol prohibited smoking areas, then "come right back and buy another one...repeat the process" (Female, aged 24, light drinker). Another suggested that drinking warnings may endorse drinking opportunities, by reminding patrons "that they can drink" (Female, aged 18, light drinker).

4. Time – All participants suggested longer opening hours promoted alcohol access. Many moderate-heavy drinkers described actively seeking out these occurrences because it was "hard to find places...open that late" (Female, aged 21, moderate drinker). While premises "open during the daytime" extended drinking opportunities, social norms meant few participants drank in the daytime, due to the "after six pm rule" (Female, aged 21, moderate drinker), which suggests alcohol is normally only consumed after this time.

(b) Communicating with Others

1. Bar Staff: Communicating with bar staff appeared to restrain drinking choices at the point-of-sale, as one described:

"It's all about alcohol...having had previously asked for coke and these people being like 'What?!'...I'd feel a bit like embarrassed or uncomfortable [ordering a soft drink]". (Female, aged 21, moderate drinker)

Younger drinkers appeared to welcome these types of occurrences, even if it was for more alcohol than intended:

"Say you're like me yeah, eighteen, and you don't go to bars all the time, you don't know about the whole menu, you, I might ask them what there is, what's good, what's not good...you'll be more inclined to buy it if they suggested it". (Female, aged 18, light drinker)

In contrast, older participants were not influenced by these social interactions:

"If anything it would make me purposely not do what they wanted me to do...if they were like trying to supersize me, I think like uh then uh I'd be really annoyed".

(Female, aged 29, moderate drinker)

2. Other Patrons – All participants preferred environments affording "social interaction", or a shared sense of belonging, rather than "isolation", yet the mere presence of others appeared to restrict consumption opportunities. As one explained: "the more I talk…the less I'm drinking" (Female, aged 29, moderate drinker).

For participants, the existence of others created a "pressure to always have a drink", as they felt like an "outcast if you were the only one without a drink in your hand" (Female, aged 21, moderate drinker). Group opportunities to effect drinking were reinforced by rituals, as it is "socially acceptable to just get rounds in when people finish" (Female, aged 20, moderate drinker). Some even admitted to ordering soft drinks with the appearance of "a vodka and coke" (Female, aged 20, moderate drinker) and reinforcing the drinking norm by responding negatively to non-drinkers: "What! You don't drink?" (Female, aged 22, moderate-heavy drinker).

Interestingly, taking up these normative, group action opportunities did not always involve increased alcohol consumption, as adhering to the behaviour of the group was important:

"If they were all drinking like coke and being quiet then, of course you'd...copy them too". (Female, aged 21, moderate drinker)

In contrast, older participants tended not to be influenced by others:

"Friends of mine have done it in the past, sometimes on purpose, sometimes not...they are like um that insist on you having a drink...on you at all times, really p**** me off". (Female, aged 29, moderate drinker)

3. Patron Characteristics – Participants preferred to share their drinking experiences with similar others (i.e. gender, age and drinking type) and associated different drinking contexts with different patron types. One explained:

"Old pubs...older people so I would probably be less likely to drink...I would feel a bit out of place... clubs and quite modern places where I am more likely to have a drink 'cos the crowd are only young...I feel more in place". (Male, aged 18, moderate-heavy drinker)

(c) Consuming Food and Drink

1. Drinks Consumption and Availability: Only one participant consumed the same beverage in every premise, stating that "by the time I've got to the bar I've already decided what I want to drink" (Male, aged 18, moderate-heavy drinker).

For many moderate drinkers, the act of "having a drink in your hand" appeared more important than what was consumed. These participants described selecting drinks quickly from visual bar displays, explaining:

"If you're not ready for someone to come and ask you your order...you just go with what is in your eye line". (Female, aged 20, moderate drinker)

All participants preferred premises where it was "easy to see what's what" and "there's a lot of choice", as "you're not like too pressured to have alcohol". However, when carbonated or energy drinks were viewed, many explained that these were a "mixer, not a drink you'd have on its own" (Female, aged 22, moderate drinker).

Participants were surprised that stronger alcoholic drinks tended to be "in your face" (Female, aged 21, moderate drinker). In contrast, non-alcoholic drinks were limited or "tucked away, obviously emphasising the alcoholic ones" (Female, aged 20, moderate

drinker). This influenced behaviour, as one explained "you don't see any soft drinks and you're like...might as well just get an alcoholic drink" (Female, aged 19, moderate drinker).

2. Food Consumption and Availability: All participants viewed food consumption as a daytime behaviour, as "everybody would be drinking" in the evening. Approximately half of the sample described how, as another action opportunity, consuming food would "slow down" drinking behaviour, as it "occupies you" and makes consumption difficult (Female, aged 18, moderate-heavy drinker).

Some participants separated these behaviours, explaining that they "don't usually drink" when eating or would "change" the type of drink ordered (Female, aged 18, light drinker). One added:

"I'd be a bit annoyed that there were people just drinking around me, like I'd rather be in a separate eating area". (Female, aged 18, moderate-heavy drinker)

Other participants explained they would drink more "while waiting" for food, or described eating as a predecessor for excessive drinking. One explained: "you...need to line your stomach" with "hot food, starchy food, carbs" it will "help absorb the alcohol more...to drink more" (Female, aged 22, moderate-heavy drinker).

Table service was seen to inhibit consumption, as one participant explained: "if you got to go to the bar [to order food]...you're going to see all of the drinks and you're...more likely to buy them" (Female, aged 18, light drinker).

(d) Dancing to Music

1. Music: Participants always recognised sparsely furnished dancing areas. Many light-medium drinkers were happy to prioritise dancing over drinking, as: "you can't dance properly with a drink in your hand" (Female, aged 18, light drinker). One explained:

"You drink less because it's just a hassle sort of having a drink with people bumping into you and then often people get into fights about drinks being spilled over them". (Female, aged 20, moderate drinker)

Others suggested drinking and dancing "goes hand in hand" (Female, aged 21 moderate drinker), that they relied on drinking for hydration and "energy", or because they used alcohol to become "more confident about dancing" (Male, aged 30, moderate drinker). One participant explained that, while drinking would become more "sporadic", they would either "drink faster, so not to have a drink on the dance floor", or would have "less actual liquid but probably more alcohol…like shots" (Female, aged 29, moderate drinker).

(e) Grasping Objects (Grasp-able)

1. Drinks Containers: Participants recognised the "shapes" and "colours" of drinks grasped by patrons in the scenes. Participants explained that transparent containers "with measurements" helped to monitor consumption, allowing them to see they had "drunk all that". However, many acknowledged that "small, medium and large" drinks containers were rarely available in premises.

Participants all suggested they drank more quickly when grasping drinks, as one explained: "If you are holding it...you automatically drink without thinking" (Female, aged 29, moderate drinker). Many also felt obliged to "have to drink" the entire contents of their drink, even if they had purchased more alcohol than intended.

Many of the heaviest drinkers described purchasing larger, novel or uncommon drinks, so that their alcohol consumption was not interrupted:

"The buckets...they are quite novel...you can get a large drink with a lot of alcohol in it and take it away and not have to worry about queuing up at the bar again for a while". (Male, aged 18, moderate-heavy drinker)

In contrast, moderate drinkers explained why they often consumed these sharing drinks by themselves:

"People will often buy one for like themselves...you don't feel comfortable saying oh we'll share a pitcher, so people buy one for themselves and drink more". (Female, aged 20, moderate)

2. Food Utensils: Food accessories were viewed as providing "a potential to eat" and dictated normative behaviour. When these were available, many light-moderate drinkers explained that they would be on "restaurant mode" and not "rowdy". This would inhibit consumption, as:

"You're not immediately thinking of alcohol, you have to like actually request it...it's a lot more about the food as it is about the alcohol, alcohol comes second" (Female, aged 19, light-moderate drinker).

The influence of context on behaviour was also highlighted by another participant:

"In a restaurant where there are table settings and seating areas and knives and forks and place settings and stuff like that, you wouldn't necessarily get up on top of the table and start dancing 'cos it's not a normal thing to do in a restaurant, but you might, say if, in a club you, they do provide like podiums that you can jump up on and dance". (Female, aged 24, light drinker)

For many of the heaviest drinkers, alcohol consumption appeared to be a priority and non-canonical affordances were easily acted upon, by "using the food tables to sit at and drink" (Female, aged 21, moderate drinker). One participant explained:

"The tables are set up for eating. But not to the extent where you like... anyone can sit there even if you are there for a drink, it's just like in case food happens". (Female, aged 29, moderate drinker)

(f) Listening to Sounds

1. Music: Participants believed music "drew more people into the venue" (Male, aged 18, moderate-heavy drinker). Most participants "associated drinking with music" and explained "you'd probably drink more, because you wouldn't be talking". This did not appear to impede alcohol access as "the bar staff are quite used to listening to people shout orders" (Female, aged 21, moderate drinker).

(g) Playing on Objects

1. Games: As a distraction from drinking, many suggested games machines and pool tables inhibited consumption, particularly when requiring "skill" and "concentration". Only three moderate-heavy drinkers, one male and two female, described taking up these action opportunities. One explained:

"People get quite absorbed... I'd probably drink less...I'd be too focused on it...[but I would] stay for longer and try and win" (Female, aged 22, moderate-heavy drinker)

These participants used their "spare change from buying a drink...then the winnings from that to buy another" (Female, aged 18, moderate-heavy drinker). They also preferred games machines situated near the bar with drinks holders, so they could "get another drink without spoiling your game" (Male, aged 18, moderate-heavy drinker).

(h) Putting on Objects

1. Furniture: Participants preferred to have the opportunity to put down drinks on nearby flat surfaces. Many distinguished different surface characteristics, as one explained high tables were only for placing drinks:

"I just think you don't ever eat food on a... like a high table...not comfortably anyway." (Female, aged 21, moderate drinker)

When appropriate putting surfaces were unavailable, participants were "less likely" to purchase drinks, consumed them "quickly" or left them "with friends". For most, this was due to drinks being removed or spiking risks, as one explained "safety is a big thing for me" (Female, aged 19, light-moderate drinker) and another added: "you just don't know what might happen" (Female, aged 21, moderate drinker).

(i) Sitting on Objects

1. Furniture: All participants "would never stand if I could sit" (Female, aged 29, moderate drinker), as "it's not particularly comfortable to try and stand up [and drink]" (Female, aged 21, moderate drinker). Many preferred to effect sitting near the bar for "easy access to the alcohol" and contrasted "nice and comfortable" seats in public houses to "functional", "space saving" stools in bars and nightclubs.

In sparsely furnished environments "the people are kind of the organisation...they set up the room how they want", which left intoxicated individuals seeking alternative sitting opportunities, such as "lying in the middle, of like, on the floor" (Female, aged 21, moderate drinker). Many participants also described how they tended to "associate standing up drinking with drinking quite quickly...whereas if you can sit, you might drink quite a bit slower" (Female, aged 24, light drinker).

(j) Viewing Objects

1. Advertisements and Promotions: Most participants contrasted "colourful" and appealing visual alcohol displays, to "bland" soft drink displays. Additionally, many were surprised to see that "everywhere you look there's promotion of um alcoholic drinks, not any soft drinks" (Female, aged 20, moderate drinker) and that promotions were often for "high percentage alcohol beverages such as shots and spirits" (Male, aged 30,

moderate drinker). As young adults, many participants described how they "don't have as much money", which influenced what they purchased. One explained:

"Whatever they see is on offer they'll buy, whether they're really like keen on it or not". (Female, aged 20, moderate drinker)

"Happy hour" promotions were noticed by all participants. These time-specific displays promoting opportunities for "very cheap" and excessive consumption were often taken up "quickly" before they "ran out". In contrast, when promotions were available all night, this would:

"Slow people down a bit 'cos it's like, there's no rush...we don't need to hurry up and get it". (Female, aged 21, moderate drinker)

Many moderate-heavy drinkers noticed promotions and were "intrigued to try" novel drinks, even if they "haven't a clue what's in it" (Female, aged 18, moderate-heavy drinker). Younger participants also sought out these alcohol displays because they were "unsure what to purchase" or did not "wanna ask how much things are" (Female, aged 18, moderate-heavy drinker). This increased consumption, as promotions were often for larger drinks and "no one goes to a place and sets out to buy a fishbowl until you see an advert!" (Male, aged 18, moderate-heavy drinker). Point-of-sale promotions were effective, as another added:

"They're right in the way of the bar...you can't help but view them." (Male, aged 18, moderate-heavy drinker)

2. Entertainment Features: Many participants described "avoiding" televised sports or films, but others associated it with increased consumption, as they are "absorbed by what was on the TV" and "distractedly just sip on their drinks" (Female, aged 18, light drinker). One explained:

"When the sports are on, people tend to um be there longer, drink more...get caught up in the sport and action...it encourages drinking". (Male, aged 30, moderate drinker)

- 3. Lighting: Participants often contrasted "dimly lit" drinking premises with "well-lit" and "easy to find" bar areas. For many participants, lighting gave the "illusion that its night time", providing a "nightclub feel" and suggesting it is "acceptable to drink" (Female, aged 19, light-moderate drinker). Many described their preference for effecting drinking in dark, "anonymous" settings, where "people can't see you".
- 4. Premise Décor: Participants were surprised at the quantity of "alcohol-related décor" in the scenes, such as vodka bottle-shaped lampshades, bottle-patterned wallpaper and beer-casket bar stools. One explained:

"Everything is telling you to drink, even the wallpaper...subliminal messaging or something...they want you to drink!" (Female, aged 21, moderate drinker)

These aspects may be more noticeable when congruent with drinks preference, as one explained:

"Jack Daniels...jumps out at me straightaway...because JDs my favourite drink".

(Male, aged 30, moderate drinker)

Many participants were "inclined to drink something that's specific to the place you're at" (Male, aged 18, moderate-heavy drinker). For example, many associated "beer" with public houses, describing premises as "rustic", "wood", "old fashioned", "relaxed", "safe" and like "someone's house". These contexts led participants to act "how I would behave at home", as the décor depicted risky behaviour would not be tolerated.

In contrast, "sophisticated", "exclusive", "modern" bars and "tacky", "dingy", "functional" nightclubs were described as somewhere to "get drunk". Although participants preferred and regularly frequented these premise types, they were referred to as "crowded", with poor levels of cleanliness.

4. Discussion

Phenomenology is a viable approach for understanding how drinkers make sense of their lived drinking experiences (Good, 2007; Heft, 2003). Coding narratives in terms of affordances (Gibson, 1979), occurrences and effectivities (Turvey et al., 1981) highlights the function of alcogenic environments for drinking behaviour. Alcohol consumption was related to accessibility, communicating with others, consuming food, grasping items, furniture availability, watching or listening to entertainment, advertisement placement, premise décor and alternative action opportunities. This corroborates with observed alcohol-related affordances from our previous work (Hill, 2014), whilst providing additional support for contextual features which have previously been related, with mixed results, to hazardous alcohol consumption (e.g. Babor et al., 2010; Huckle et al., 2008; Kypri et al., 2005; Livingston, 2011; Toomey et

al., 2012) and existing work on meaning making around alcohol and drinking cultures (de Visser & Smith, 2007; Griffin et al., 2012; Lyons et al., 2017; Nicholls, 2012; Room & Mäkelä, 2000).

Findings illustrate the meaning that drinking contexts have for participants and their strong perceptions of what should be done within them, based on the situated, shared social knowing of object functions. This further suggests behaviour is regulated in relation to canonical affordances and that affordances have value for the social domain (Costall, 2012; Lyons et al., 2017; Marsh et al., 2009; yan Dijck, 2013). For example, many felt unable to consume alcohol on tables with food utensils, or drink heavily around people eating. The mere presence of others also influenced alcohol consumption, for example, by providing opportunities to converse, or by determining the normative group consumption rate. This supports existing quantitative research which suggests group contexts increase alcohol consumption, as well as risk taking behaviour (Beck et al., 2008; Erskine-Shaw, Monk, Qureshi, & Heim). Importantly, younger and inexperienced drinkers relied on these interactions with peers or bar staff when making their drinks choices, which is likely to increase their risk of hazardous drinking and related harms (Thompson & Huynh, 2017).

Participants found the study interesting and had not considered these environments in this way before, insisting they would avoid these influences in the future. While this suggests drinking contexts may influence behaviour without drinkers' knowledge and that highlighting occurrences might reduce problematic consumption, it is unlikely to be permanent. Instead, a focus should be on addressing these functional aspects through

licensing regulations, patron-centred staff training, providing alternative action opportunities and monitoring point-of-sale promotions. While proprietor uptake, cost implications and addressing off-premise factors such as 'pre-loading' remains challenging, such changes could reduce problematic consumption. Additionally, this research suggests frequently seen health messages and regulation signs go unnoticed, whereas eye-catching alcohol-related promotions are actively sought by drinkers. This aligns with a growing literature which suggests that responsible drinking messages do not have the desired effect on consumption and are often not attended to (Kersbergen & Field, 2017; Monk, Westwood, Heim, & Qureshi, 2017).

There are limitations to this work, for example, the use of a Participant Panel led to the predominantly female sample. While this provides only one perspective on the identified alcohol-related affordances, young women's increasing alcohol consumption is a public health concern (Burns, 2010; Iwamoto, Corbin, Takamatsu, & Castellanos, 2018; Keyes, Grant, & Hasin, 2008). In addition to this, the current study focused exclusively on the experiences of young student drinkers, but it is possible that identified affordances may be different for older drinkers and for non-students. Participants also perceived photographic representations, which required reflection rather than interpretations of first-hand experiences. However, Gibson (1954) suggests that, "a faithful picture is a...surface processed in such a way that it reflects or transmits a sheaf of light-rays to a given point which is the same as would the sheaf of rays from the original to that point" (p.14). Therefore, if the physical and psychological worlds are mutually connected, as Gibson (1966) and other ecological psychologists suggest

(Good, 2007), accessing subjectivity in this way is both current and immediate, as

participants made sense of their lived drinking experiences during the interview setting.

5. Conclusions

Taking a first-person, phenomenological approach reveals how individual drinkers

make sense of the functional properties of their alcogenic environments, in relation to

their own drinking behaviour. Identified alcohol-related affordances and occurrences

which appear to restrict or promote alcohol consumption opportunities could be used to

prevent problematic consumption and merit further study.

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References

- Babor, T. F., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., . . . Rossow, I. (2010). *Alcohol: No ordinary commodity: Research and Public Policy* (2 ed.). Oxford: Oxford University Press.
- Beck, K. H., Arria, A. M., Caldeira, K. M., Vincent, K. B., O'Grady, K. E., & Wish, E. D. (2008). Social Context of Drinking and Alcohol Problems Among College Students.

 *American journal of health behavior, 32(4), 420-430. doi: 10.5555/ajhb.2008.32.4.420
- Burns, L. (2010). Editorial–Drinking and women's health: Time for action. *Addiction Research & Theory*, 18(2), 119-121. doi: 10.3109/16066350903569656
- Costall, A. (2012). Canonical Affordances in Context. Avant, 3(2), 85-93.
- de Visser, R. O., & Smith, J. A. (2007). Alcohol consumption and masculine identity among young men. *Psychology & Health*, 22(5), 595-614. doi: 10.1080/14768320600941772
- Erskine-Shaw, M., Monk, R. L., Qureshi, A. W., & Heim, D. The influence of groups and alcohol consumption on individual risk-taking. *Drug & Alcohol Dependence*, 179, 341-346. doi: 10.1016/j.drugalcdep.2017.07.032
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

- Gibson, J. J. (1954). A Theory of Pictorial Perception. *Audio Visual Communication*Review, 1, 3-23.
- Gibson, J. J. (1966). The senses considered as perceptual systems. Boston: Houghton Mifflin.
- Gibson, J. J. (1979). *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin.
- Good, J. M. M. (2007). The Affordances for Social Psychology of the Ecological Approach to Social Knowing. *Theory & Psychology*, 17(2), 265-295. doi: 10.1177/0959354307075046
- Griffin, C., Szmigin, I., Bengry-Howell, A., Hackley, C., & Mistral, W. (2012). Inhabiting the contradictions: Hypersexual femininity and the culture of intoxication among young women in the UK. *Feminism & Psychology*, 23(2), 184-206. doi: 10.1177/0959353512468860
- Heft, H. (1988). Affordances of children's environments: A functional approach to environmental description. *Children's Environments Quarterly*, 5(3), 29-37.
- Heft, H. (2001). Ecological psychology in context: James Gibson, Roger Barker, and the legacy of William James's radical empiricism. Lawrence Erlbaum Associates, Inc.: Mahwah, NJ.

- Heft, H. (2003). Affordances, Dynamic Experience and the Challenge of Reification. *Ecological Psychology, 15*, 149-180. doi: 10.1207/S15326969ECO1502 4.
- Hill, K. M. (2014). *Understanding Drinking Behaviour: Affordances and an Ecological Approach to Cognition*. (Doctor of Philosophy), Oxford Brookes University, [Unpublished Doctoral Thesis].
- Hill, K. M., Pilling, M., & Foxcroft, D. R. (2017). Alcohol-related affordances and group subjectivities: A Q-Methodology study. *Drugs: Education, prevention and Policy*, 1-10. doi: 10.1080/09687637.2017.1284762
- Huckle, T., Huakau, J., Sweetsur, P., Huisman, O., & Casswell, S. (2008). Density of alcohol outlets and teenage drinking: living in an alcogenic environment is associated with higher consumption in a metropolitan setting. *Addiction*, 103(10), 1614-1621. doi: 10.1111/j.1360-0443.2008.02318.x
- Husserl, E. (1970). *The idea of phenemenology* (W. Alston & G. Nakhnikan, Trans.). The Hague, The Netherlands: Nijhoff.
- Iwamoto, D. K., Corbin, W., Takamatsu, S., & Castellanos, J. (2018). The association between multidimensional feminine norms, binge drinking and alcohol-related problems among young adult college women. *Addict Behav*, 76, 243-249. doi: http://dx.doi.org/10.1016/j.addbeh.2017.08.016

- Kersbergen, I., & Field, M. (2017). Visual attention to alcohol cues and responsible drinking statements within alcohol advertisements and public health campaigns: Relationships with drinking intentions and alcohol consumption in the laboratory. *Psychology of Addictive Behaviors*, 31(4), 435-446. doi: 10.1037/adb0000284
- Keyes, K. M., Grant, B. F., & Hasin, D. S. (2008). Evidence for a closing gender gap in alcohol use, abuse, and dependence in the United States population. *Drug and Alcohol Dependence*, 93(1), 21-29. doi: http://dx.doi.org/10.1016/j.drugalcdep.2007.08.017
- Kypri, K. Y. P., Cronin, M., & Wright, C. S. (2005). Do university students drink more hazardously than their non-student peers? *Addiction*, *100*(5), 713-714. doi: 10.1111/j.1360-0443.2005.01116.x
- Livingston, M. (2011). Alcohol outlet density and harm: comparing the impacts on violence and chronic harms. *Drug and Alcohol Review*, 30(5), 515-523.
- Lyons, A. C., McCreanor, T., Goodwin, I., & Barnes, H. M. (2017). *Youth Drinking Cultures in a Digital World: Alcohol, Social Media and Cultures of Intoxication*. Abingdon: Routledge: Taylor and Francis Group.
- Marsh, K. L., Richardson, M. J., & Schmidt, R. C. (2009). Social Connection Through Joint Action and Interpersonal Coordination. *Topics in Cognitive Science*, 1(2), 320-339. doi: 10.1111/j.1756-8765.2009.01022.x

- Marteau, T. M., Ogilvie, D., Roland, M., Suhrcke, M., & Kelly, M. P. (2011). Judging nudging: Can nudging improve population health? *British Medical Journal*, 342(d228), 263-265.
- Merleau-Ponty, M. (1945). *Phenomenology of Perception* (C. Smith, Trans.). London and New York: Routledge Classics.
- Monk, R. L., Westwood, J., Heim, D., & Qureshi, A. W. (2017). The effect of pictorial content on attention levels and alcohol-related beliefs: An eye-tracking study. *Journal of Applied Social Psychology*, 47(3), 158-164. doi: 10.1111/jasp.12432
- Nicholls, J. (2012). Time for reform? Alcohol policy and cultural change in England since 2000. *British Politics*, 7(3), 250-271. doi: 10.1057/bp.2012.7
- Office for National Statistics. (2017). Statistics on Alcohol, England, 2017.
- Room, R., & Mäkelä, K. (2000). Typologies of the cultural position of drinking. *Journal of Studies on Alcohol*, 61(3), 475-483. doi: 10.15288/jsa.2000.61.475
- Smith, J. A. (1995). Semi-structured interviewing and qualitative analysis. In J. A. Smith, R. Harre, & L. v. Langenhove (Eds.), *Rethinking methods in psychology*. London: Sage.
- Smith, J. A., Jarman, M., & Osborn, M. (1999). Doing interpretative phenomenological analysis. In M. Murray & K. Chamberlain (Eds.), *Qualitative Health Psychology:*Theories and Methods (pp. 218-240). London: Sage Publications.

- Sniehotta, F., Presseau, J., & Araújo-Soares, V. (2014). Time to retire the theory of planned behaviour. *Health Psychology Review*, 8(1), 1-7.
- Thompson, K. M., & Huynh, C. (2017). Alone and at risk: A statistical profile of alcohol-related college student deaths. *Journal of Substance Use*, 1-6. doi: 10.1080/14659891.2016.1271032
- Toomey, T. L., Erickson, D. J., Carlin, B. P., Lenk, K. M., Quick, H. S., Jones, A. M., & Harwood, E. M. (2012). The Association Between Density of Alcohol Establishments and Violent Crime Within Urban Neighbourhoods. *Alcoholism: Clinical and Experimental Research*, 36(8), 1468-1473.
- Turvey, M. T., Shaw, R. E., Reed, E. S., & Mace, W. M. (1981). Ecological laws of perceiving and acting: In reply to Fodor and Pylyshyn. *Cognition*, *9*, 237-304.
- van Dijck, J. (2013). *The Culture of Connectivity: A Critical History of Social Media*.

 Oxford: Oxford Unviersity Press.
- Webb, T. L., & Sheeran, P. (2006). Does changing behavioural intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, 132, 249-268.

Appendices

Table 1: A Functional Taxonomy of Alcogenic Environments

Theme	Sub-Theme	Definition
(canonical		
affordance)		
(a) Accessing Alcohol	1. Bar	Features of the bar area.
(access-able).	Characteristics.	
	2. Location.	Geographical spread of
		premises.
	3. Regulations.	Visual regulation signs
		and enforcers.
	4. Time.	The time of day.
		The opportunity to
		access alcohol.
(b) Communicating	1. Bar Staff.	Communicating with bar
with Others		staff.
(Communicate-	2. Other Patrons.	Communicating with
with-able).		other patrons.
	3. Patron	Characteristics of other
	Characteristics.	patrons.
		The opportunity to
		The opportunity to

			communicate with
			others.
(c) Consuming Food	1.	Drinks	Availability of drink to
and Drink		Consumption and	consume.
(Consume-able).		Availability.	Availability of food to
	2.	Food	consume.
		Consumption and	The opportunity to
		Availability.	consume items.
(d) Dancing to Music	1.	Music.	The opportunity to dance
(Dance-to-able).			to music.
(e) Grasping Objects	1.	Drinks	Grasping drinks utensils.
(Grasp-able).		Containers.	Grasping food utensils.
	2.	Food Utensils.	The opportunity to grasp
			objects.
(f) Listening to Sounds	1.	Music.	The opportunity to listen
(Listen-to-able).			to sounds.
(g) Playing on	1.	Games.	The opportunity to play
Objects			on objects.
(Play-on-able).			
(h) Putting on Objects	1.	Furniture.	The opportunity to put
(Put-on-able).			objects.

1. Ad		objects.
1. Ad		
	vertisements	Adverts and promotions.
and	Promotions.	
2. Ent	ertainment	Visual entertainment
Fea	tures.	features.
3. Lig	hting.	Premise lighting.
4. Pre	mise Décor.	Premise décor and
		cleanliness.
		The opportunity to view
		objects.
	2. EntFea3. Lig	and Promotions.2. Entertainment Features.3. Lighting.4. Premise Décor.