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All drinking is not equal: How a social practice theory lens could enhance public health research on alcohol and other health behaviours

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Running head: Social practice theory – a helpful paradigm for public health research

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Abstract

Background: The social meanings, settings and habitual nature of health-related activities and their integration into our daily lives are often overlooked in quantitative public health research. This reflects an overly individualised approach to epidemiological surveillance and evaluations of public health interventions, based on models of behaviour that are rooted in social cognition and rational choice theories. This paper calls for a new approach to alcohol epidemiology and intervention research informed by theories of practice.

Argument: Practices are conceptualised as routinized types of human activity that are made up of, and can be recognised by, the coming together of several interwoven elements in the same situation (e.g. materials, meanings, skills, locations, timings). Different practices are interconnected – they can occur simultaneously (e.g. drinking and eating), hold each other in place (e.g. after-work drinks) or compete for time (e.g. parenting versus socialising). Applying these principles to alcohol research means shifting attention away from individuals and their behaviours and instead making drinking practices an important unit of analysis. Studying how drinking practices emerge, persist and decay over time, how they spread through populations and local or social networks, and how they relate to other activities of everyday life promises new insights into how, why, where, when and with whom drinking and getting drunk occur.

Conclusions: Theories of practice provide a framework for generating new explanations of stability and change in alcohol consumption and other health behaviours. This framework offers potential for novel insights into the persistence of health inequalities, unanticipated consequences of policies and interventions, and new interventions targets through understanding which elements of problematic practices are likely to be most modifiable.

SUMMARY STATEMENTS

Applying theories of practice principles to research on alcohol consumption would mean shifting our attention from average drinking volumes and frequencies to drinking practices as a core unit of analysis to gain insight into how, why, where, when and with whom we drink and get drunk.

We hope this will generate novel insights into the emergence and decay of drinking practices over time and into the geographical and socio-demographic patterning of drinking.

Theories of practice-informed research would consider how alcohol policies and population-level interventions might differentially affect different drinking practices.

Introduction

Public health intervention researchers increasingly seek to move beyond the simple question ‘what works?’ and, instead, ask questions about why interventions work, how and over which time periods effects emerge and decay, who they work for, in which settings and the range of outcomes affected including alertness to any unanticipated and unintended consequences [1-3].

In this paper, we seek to further develop the theoretical basis for these lines of investigation and point towards complementary quantitative approaches. Taking alcohol consumption as an example, our starting point is that quantitative public health science in general and intervention research in particular implicitly assumes that alcohol use is a single behaviour rather than a heterogeneous set of activities that are embedded in the routines of everyday life. These activities are likely to be influenced by interventions to different degrees, in different ways and with complex consequences. We suggest that this problem arises from an individualised approach to epidemiological surveillance and behaviour change rooted in social cognition and rational choice theories, before advancing an alternative approach rooted in theories of practice [4-6]. We then introduce theories of practice, which emphasise the subconscious and routinized nature of much human activity. We also draw attention to how situational characteristics play a critical role in producing that activity, its repetition and its change over time, rather than simply acting as its contextual backdrop that we can control for statistically [7]. The paper goes on to demonstrate how theories of practice could be applied to generate new insights by providing a framework for (1) increasing and systematising our knowledge of behaviours such as drinking, drug use, smoking or gambling and how and why they change over time; (2) explaining inconsistencies in intervention effects, and (3) developing better-targeted public health interventions.

Our focus on individuals and their behaviour has delivered only limited public health gains

Social epidemiologists and others subjecting the health sciences to critical analysis are increasingly concerned that efforts to improve public health are overly focused on decontextualized modifiable epidemiological risk factors [8, 9]. These efforts give little attention to how behaviours such as drinking alcohol are integrated within, give meaning to and are shaped by people’s daily lives. The large-scale household or health surveys that so often underpin our epidemiological and evaluation research rarely contain data on the location, purpose, paraphernalia, sociality, symbolism, skills and temporalities of alcohol use. As such they do not account for the role played by such elements in creating the unique, recognisable drinking practices that are evidenced by sociologists, anthropologists and our own everyday experiences (“big night out”, “quiet drink in my local”, “wine-

o'clock", "clubbing", "birthday celebration"). We argue that how individuals, groups and societies drink is not simply of descriptive interest. Health and social risk of harm from drinking and intervention effects are likely to vary substantially between practices, and so does the political and public discourse about different forms of drinking which either prompts or hinders policy change.

Current design and evaluation of public health interventions is heavily influenced by theories of behaviour change [10]. These have a shared conceptualisation of drinkers, smokers and overeaters as decision-makers with substantial autonomy over their attitudes and behaviours. Individuals are theorised to act in a predictable manner based on their values, goals, subjective norms, perceived utilities and benefits, capabilities, motivations and intentions. Such approaches reflect an underlying assumption that if researchers can accurately measure and model the determinants of behaviour, they will be able to explain behavioural variation and change over time and identify reliably effective interventions. Arguably, neither half of this proposition is strongly supported by evidence: Whilst meta-analyses of studies based on behaviour change theories do indeed find consistent relationships between individual states and behaviour, even taking all individual variables together often explains less than half of the variability in behavioural outcomes [see 11, 12, 13]. Similarly, many theory-based interventions struggle to bring about reliable, substantial and sustained changes in the individual states hypothesised to underlie behaviour [14, 15]. Further struggles have been seen in failures to replicate intervention effects [16], anticipate unintended consequences or consider the wide diffusion of effects across a range of outcomes [17, 18]. In addition to its limitations as a predictive model, the above conceptualisation of individual choices tends to blame ill-health on the suboptimal decision-making of individuals. In one of many examples, a 2016 scientific report on increasing gaps in UK life expectancy between rich and poor concludes: "Since chronic disease is often attributable to life choices such as smoking and diet, the blame for the widening [of inequalities] must be laid increasingly at the door of individual lifestyles rather than ambient risks and hazards" [19]. Such approaches retain their appeal because they align with relatively straightforward and inexpensive policy solutions supported by the public [20], including, for alcohol consumption, information campaigns emphasising personal responsibility, drinking guidelines and school-based educational programmes. According to rational choice theory, informed people would respond to such interventions to further their best interest. In reality, the beneficial effects of even well-designed information, education and social marketing interventions tend to be small, inconsistent and temporary [21, 22].

There have been recent efforts within public health to move away from this individualised model. The most notable example is the social determinants of health movement which emphasises the

influence of structural factors, such as inequalities, on health outcomes [23]. Other work has focused on micro-contexts and noted that behavioural outcomes differ depending on the context in which it takes place. This includes the literature on college student and parental drinking and recent ecological momentary assessment studies whereby participants report in real-time, via mobile phones, the context in which they are undertaking a particular behaviour [24-29]. However, while research looking beyond the individual is welcome, social, physical or political environments are often still conceptualised as moderating the effect of psychological states on decision-making or acting as additional independent predictors in terms of barriers or facilitators of change in behaviour or behavioural outcomes [30]. Injecting drug use (IDU) researchers have gone further by specifically highlighting the interplay between context and behaviour [31, 32], however, the focus tends to be on analysis of the context rather than articulating the interplay and how it may be altered to produce better health outcome [33]. Moreover, this IDU work is largely qualitative and, within this article, we are particularly arguing for new quantitative approaches.

Theories of social practice focus on the action, not the actor

An alternative way of looking at behaviour has been suggested by practice theorists. Whilst theories of practice take multiple forms [5], they all have in common that the focus of attention is deliberately shifted away from individual-level behaviour and explanatory variables such as attitudes or utilitarian reasoning. Instead, the focus is on practices, i.e. performances of routinized behaviours which are shared across groups of people [4]. Practices are argued to constitute and sustain the complex dynamic systems in which they are located and explain the remarkable stability and resistance to change in many everyday activities. Changes in systems happen if the practices that structure the routines and rhythms of our lives evolve.

An extended review by Nicolini [5] of practice theories currently employed by social scientists identifies six discrete bodies of theorising: a praxeological approach, which he associates with Bourdieu and Giddens; the 'communities of practice' tradition associated with Wenger; cultural historical activity theory (CHAT) deriving from Marxism and Vygotsky; ethnomethodology, which seeks to account for the practical accomplishment of everyday life; the ontological theory of the philosopher Schatzki, which draws on Heidegger and Wittgenstein; and theories of discourse deriving from the work of Foucault. While different in many ways, Nicolini suggests that these theorisations have similar implications for methodology and empirical investigation.

Theories of practice have recently grown in appeal because they promised to solve several fundamental problems about analysing action-in-context. First, they offer a new account of culture, locating it as external to the individual. This accords with new understandings of the relationship between mind and body deriving from philosophy and cognitive neuroscience which further weaken the formerly dominant structural-functionalist sociology which Vaisey [34] dubbed a Platonist conception of action. Second, revival of pragmatist philosophy within the social sciences led to renewed appreciation of the role of habit and practical sense in the conduct of human affairs. Third, they readily accommodate the novel accumulated insights of the Sociology of Scientific Knowledge (SSK) and Science and Technology Studies (STS) about knowledge and motivation, the steering effect on action of routine procedures, and the central role of objects, tools and infrastructures in the material arrangements making for the effective accomplishment of mundane tasks.

All these developments seriously challenge explanations which assume an autonomous, reflective, deliberating, calculating, decision-making individual as the basic unit of social scientific analysis. Instead, they emphasise routines and sequencing [35], dispositions, practical consciousness and embodiment [36], as well as the material components of consumption [7]. They emphasise also collective norms and institutions, which play a critical role in rendering activity collective and mutually comprehensible, and the chronic interdependence of activity and its environment. Put another way, these emphases direct attention to habit and routine, the repetitiveness and mindlessness of nevertheless purposeful human activity, the tacit knowledge involved in the application of skilled procedures in everyday activities, the role of tools and equipment, and the manner in which standards of acceptable practice and excellence are shared with fellow practitioners.

New developments in theories of practice facilitate quantitative enquiry

Practice theoretical approaches are now widely canvassed in various fields of behaviour and have proved especially successful in research on sustainable consumption, including food consumption, energy use and sustainable transport [7, 37, 38]. In the face of the benefits for climate change of limiting the use of oil, electricity, beef and milk, practice theorists argue that orthodox individually-oriented strategies for intervention to alter lifestyles have appeared largely ineffective [39]. Instead, many scholars, activists and policy wonks have turned to the insights of practice theory to discover new ways to change behaviours seen as socially harmful and environmentally damaging.

In such investigations a new development in practice theory proposed by Elizabeth Shove and colleagues, designed to understand everyday practices with a view to intervention, has been highly

influential [see especially 7]. Their account assumes that practices (e.g. cooking, showering, cycling, shopping) can be considered as entities and that an analytic separation can be made between the entity and the very many performances which are readily recognised as instances of the practice and whose recurrence constantly reproduces that practice. They adopt Schatzki's methodological injunction to treat practices (rather than individuals or societies) as the fundamental units of social scientific analysis [40]. They also endorse Schatzki's central core conception that practices are arrays of human activity which depend on shared skills or practical understandings [6: p2-3]. A more specific definition of a practice, drawn from Schatzki by Reckwitz [41: p249], is often quoted:

A "practice" is a routinised type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, "things" and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.

Shove et al suggest that practices are combinations of elements and that any specific practice depends on the existence and irreducible interconnectedness of these elements [41]. This aspect of Shove et al.'s account of practices has similarities to assemblages theory, which has been previously used in addiction science [33]; but it is distinguished by the broader emphases of theories of practice on routine and practical understanding of how to accomplish tasks. Acknowledged as a simplification, Shove et al.'s model distinguishes three types of elements: meanings, competencies and materials. Practices are operationalized as the bringing together of these types of elements which, when populated with alcohol specific examples, might look as follows:

- *Materials* (equipment/resources): e.g. alcoholic beverages, bars, glassware, televisions, dance-floors;
- *Symbolic meanings/shared understandings*: e.g. sophistication, relaxation, transgression, belonging, fellowship.
- *Competencies* (procedures/skills): e.g. keeping intoxication levels appropriate to the situation, awareness of culture-specific drinking rituals such as round buying, toasting, knowing how to open a champagne bottle

We draw on Southerton [42] to argue that the following should be added for its specific relevance to drinking practices:

- *Temporalities*: Drinking times/days, duration of a drinking occasion, temporal positioning of drinking relative to other practices such as work, eating, celebrating, socialising, relaxing.

Within these types of element, shared understandings of how to go about particular activities in a manner that is both effective and acceptable to our peers is crucial. It implies that our actions are adjusted to situations which involve other people (and this could be direct involvement or vicarious involvement such as sharing memories of a night out on social media), the availability of material objects, and the capacity to mobilise a learned repertoire of procedures to make behaviour fit specific circumstances. For example, the practice of round-buying in the UK combines elements such as an *on-trade venue*, a *social group*, *understanding of round-buying etiquette*, *financial resources*, *server policies that allow purchase of multiple drinks at a time*, and the *physical ability to carry several drinks*. Buying several cans of beer from a supermarket to share with friends before going out is recognisably different, despite sharing many elements. Therefore, theories of practice take special notice of environmental cues and the setting in which embedded social understandings of “how things are done” impact on different social groups.

A final consideration is that some practices are inaccessible to individuals because of the unequal distribution of financial and material resources or because the meaning of a practice entails that it is deemed in some way inappropriate for some members of society (e.g. drinking in private members’ clubs or on business trips, drinking half-pints). Practices can thus demarcate and reinforce social identities as well as produce and reproduce advantage and disadvantage [43].

Although the majority of research in this mode has used qualitative methods, Shove et al’s [7] schema of interwoven and mutually dependent practice elements facilitates quantitative measurement by suggesting that important insight can be gained through observation of clustering and covariations over time of the different types of elements that make up practices.

We should pay attention to what other practices people perform before, during and after drinking

In contrast to such conceptualisations, which seek to encompass the complexities of people’s doings, the typical epidemiological definition of alcohol consumption in terms of grams ethanol per day appears decidedly reductionist. A practice theory approach would instead encourage scientific accounts of the characteristics and relative importance of different drinking practices, and, importantly, would have a strong focus examination of the emergence, evolution and disappearance of practices by studying the shifting configurations of elements that comprise them.

However, it is not just the interplay between practice elements that is important, but also the interplay between different types of practices, which may occur at the same time, or have expected sequencing such as work and leisure. Some practices are heavily dependent on the organisation of

others. They may be effectively subordinated to others, or highly inter-dependent within larger configurations or fields (e.g. economic, material, temporal, spatial). In contrast to standard epidemiology where risk factors are commonly treated as independent in regression equations, alcohol use is in many instances combined with other activities, some of which also carry health risks. For example, alcohol may be consumed alongside cigarettes, during sedentary activity (e.g. watching TV) and/or while snacking. More importantly, alcohol may often not be a major focus of a practice in which it features such as travelling on a plane or catching up with friends [44].

Schatzki et al. argue for not looking at practices in isolation but instead to consider “bundles of practices” that are interwoven and held together by habitual temporal sequences which are similar across large sections of society [6]. The temporal positioning of drinking relative to other practices such as work, eating, celebrating, socialising or relaxing are critical elements of the activity. By emphasising practical knowledge and shared understandings of what it makes sense to do in a given situation, theories of practice point us towards the importance of examining what went on just before and just after the practice; thus giving an important role to the temporal connectedness of sequences of actions. Consider for example:

- The morning routine bundle: Waking, washing, dressing and eating;
- The evening bundle: Leaving work, travelling, cooking, eating, tidying/cleaning, watching TV, getting ready for bed, sleeping.

For many women with small children a typical weekday evening sequence of practices involves coming home from work, cooking dinner, bedtime routine, household chores, and then, from sometime between 8pm and 9pm, a bit of “me time” involving relaxation, a sense of freedom from parental responsibility, a glass of wine, chatting, snacks, TV and social media. Traditional epidemiological surveys might capture this as an extra 25 g ethanol, 10 g saturated fat, +5 g sodium, + 900 kcal and +1.5 hrs of sedentary behaviour going towards a self-reported estimate of average weekly behaviour. However, this practice, termed ‘wine-o-clock’ by popular media, is described in qualitative analysis of women’s drinking in mid-life as symbolising adulthood, independence and time-out from the preceding sequence of domestic and parental duties [45]. From the viewpoint of practice theory, wine-o-clock cannot simply be understood as a tally of behavioural sins but, instead, as intertwined with and held in place by other features of everyday life, something that is rarely considered within public health research despite its clear importance when assessing why behaviour is more resistant to change in some contexts than others.

A practice theory lens has a lot to offer to quantitative alcohol research

We have argued that considering alcohol consumption as embedded in diverse, context-specific social practices might deliver insights that individualist explanations have so far obscured. Below we describe four broad areas in which such a contribution might be realised.

Firstly, describing and explaining patterns and trends is a basic function of public health surveillance. By studying how drinking practices fit with practices in other domains such as work, family and leisure we can better understand processes of change and continuity. It may help us think about how disruptions in one practice may effect changes in seemingly unrelated practices. Examples include when practices compete for our time, leading one to diminish when the other expands (e.g. youth on-trade drinking vs. social media/gaming at home), or practices that persist because they are part of temporal sequences that structure everyday life (e.g. after-work drinks). Such analyses can allow us to consider effects of wider social change such as extended working hours, new technologies or new leisure practices. This may be particularly beneficial in lower and middle-income countries where trends experienced in high-income countries are being replicated in markedly different contexts.

Secondly, research on which elements that are deemed undesirable (e.g. drinking during lunch hour, drinking in front of children, inappropriate levels of intoxication for the situation) are also central and ingrained vs. peripheral to a practice may give us an indication of how resilient vs. amenable to change they may be. For example, to build on evidence about minimum pricing, we might study the degree to which cheap alcohol is critical to after-work relaxation, pre-loading, get-togethers with friends, or pub visits with friends in different social groups. Analysing such links might allow us to identify new opportunities for intervention, and more accurately estimate likely effects of interventions on different types of drinking and drinkers, as well as consider effects on activities other than drinking. It would also provide new opportunities to peer inside the black box of *why* interventions are (in)effective and thus whether they will continue to be (in)effective when implemented in different places and times - the central aim of the evidence-based policy movement.

Box 1. Hypothetical example 1: Wine-o-clock as a driver of increased consumption in middle-aged women

Studying how drinking occasions have evolved over the past 30 years, we might find that wine-o-clock occasions – post-work, post-childcare relaxation in the evening with a drink or three – are an

important driver of the recent consumption increases in middle aged women. We might further observe that wine-o-clock occasions are particularly prevalent in women who are parents, live with a partner and who work outside the home.

This might then lead us to further investigate contemporary changes in working conditions, gender roles, childcare provision and hypothesise the nature and direction of downstream effects of existing government interventions in any of these areas on working-age women's drinking, and how these might be different from effects on young men, older women and so forth.

In terms of new interventions, we could investigate whether stress-reducing interventions such as meditation, yoga, exercise programmes might reduce alcohol consumption or investigate bans on marketing messages that portray alcohol as a solution to stress. We might do a trial of whether GPs giving women specific brief advice about paying attention to their after-work home drinking/drinking to relax might be more effective than general advice to cut down consumption.

Thirdly, we can also see applications for practice theory in considering the consumption to harm relationship in ways that take us beyond risk functions where incremental differences in risk are calculated on the basis of grams ethanol consumed and, occasionally, frequencies of heavy drinking. Research is starting to point to the context-specificity of drinking outcomes [46, 47], highlighting that elements of drinking practices other than consumption volume (e.g. drinking location and venue, occasion type, companions, glassware, transportation and shared understandings of the appropriate drinking levels for different occasions) are likely to explain variations in both levels and types of harms (and benefits) experienced.

Finally, a practice lens may further our understanding of health inequalities. Consumption practices drive group-based social differentiation formed through shared socio-economic situations [43]. In alcohol research, we observe that lower socioeconomic groups experience more harm per alcohol unit consumed, the so-called alcohol harm paradox. There is evidence pointing to differential drinking patterns across the socioeconomic groups [48], but there is currently little understanding of how and why drinking practices differ across society, why these differences emerge, how they relate to wider inequalities in society and the processes by which inequalities in drinking practices are perpetuated. A practice lens may offer new insights into the processes producing and reproducing those inequalities by focusing on whether there are important differences in *how* and *why* different segments of the population drink and how drinking practices spread through society. For example, we do not currently understand which drinking practices underpin recent downward trends in youth consumption and if these practices are similarly prevalent in different population groups.

Box 2. Hypothetical example 2. Evaluation of a smoking ban in public places

Practice theory provides a basis for understanding how interventions may act upon practices by **changing particular elements** (e.g. using choice architecture paradigms), **disrupting linkages between elements**, or **changing the interplay between linked practices** or those which compete for time. For a worked example, let us consider how the ban on smoking in public places may have affected pub-drinking by both smokers and non-smokers. Did pub-drinking simply become less prevalent? Was this only for smokers or also for non-smoking drinking companions? Did the practice continue in a revised form which excluded cigarettes but eventually incorporated new elements, notably e-cigarettes? Was there a displacement to new locations, such that practices involving smoking and drinking moved to home contexts? If so, what do these new practices look like and what are the health and wellbeing implications (e.g. less socialising? More snacks? Sedentary behaviour?) Have other groups (e.g. families with children) started to go to the pub more now that pubs are smoke-free and what have smoke-free pubs meant for related practices such as eating, watching sport, or bar games that may also take place in this setting? The dynamic and diffuse processes expressed in these questions accords with evaluation approaches informed by complex systems theory [1, 3] and we see compatibilities between complex systems and practice theoretical approaches which merit exploration and development.

Data requirements

The overwhelming majority of datasets used for epidemiological and evaluation research in the alcohol field do not permit study of drinking as a heterogeneous activity as they record individual-level consumption data with little or no information on the circumstances. We particularly highlight two strategies for collecting quantitative data to permit practice-oriented alcohol research.

Event-level data: There has been increasing interest in event-level data in alcohol research, especially in the groups around Kuntsche and Engels [24, 25, 49, 50], and their results on drinking occasions and contexts confirm that such data are particularly relevant to our understanding of alcohol consumption. In our own work, we have utilised occasion-level market research data to characterise the drinking practices of the British population [51], using one-week drinking diaries containing contextual data for each of the respondents' drinking occasions. This allowed us to identify some of the elements which discriminate between different drinking practices including the location, types and quantity of alcohol consumed, the day and time, the people present and certain

types of motivation for the occasion. Other items that would have been useful in characterising practices were not available, such as social-network data or any simultaneous activities (e.g. eating) or activities preceding/following the drinking (e.g. working). Collecting such contextualised drinking events data would, alongside qualitative data capturing, for example, processes, lived experiences and biographical contexts, greatly advance our understanding of drinking practices.

Time use survey data: Many countries collect data on adult or adolescent time use and such data could be analysed to address questions about the temporal sequencing of drinking practices in relation to other social practices and about how temporal, spatial and sociodemographic variations in drinking practices reflect broader trends in time use (e.g. working hours, leisure, commuting, childcare) within relevant populations. Similar time use analyses for eating practices have yielded interesting insights, for example charting the social divisions in eating practices, a recent expansion of eating out, the degree to which this substitutes for other (eating) activities, and implication of changes in eating practices on the development of social relationships and temporal organisation of daily routines [52].

Conclusion

Moving away from the dominant epidemiological and behavioural paradigm which underpins most alcohol research, this paper proposes an explicitly social practice-focused quantitative approach to understanding recent societal trends in alcohol consumption and harm. We suggest a shift from individual drinkers to drinking practices as a key unit of analysis and from alcohol consumption to drinking occasions; specifically how, when, where, why and with whom drinking and getting drunk occur and vary across time, place and population. A practice-oriented public health strategy would seek to understand and influence the emergence, persistence or disappearance of the elements of those practices that involve or affect alcohol consumption. By doing so, our field might gain compelling new insights into the processes producing trends in alcohol-related activity, alcohol-related harm, and the effects of public health interventions aiming to address them.

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