

Draft 2

Defining Drinking Problems in the UK as a Corporation-induced Disorder: Theoretical and Public Health Implications

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ABSTRACT

This paper applies Jahiel's theory of corporation-induced disease to an analysis of alcohol-related problems in the United Kingdom. The theory posits an epidemiologic cascade starting with government-sanctioned corporate profit making and ending with individual-level health and social consequences. At Level 1, political factors such as industry lobbying for de-regulation of alcohol are assumed to structure the government policy environment of alcohol control policies. At Level 2, the actions initiated by corporate decision makers (e.g., new alcohol products, aggressive marketing to young consumers) are passed on to corporate conduits, such as social aspects organizations and trade associations. The resulting modifications in the policy environment are likely to include increased alcohol availability, the proliferation of high-volume drinking establishments; and lower alcohol prices. This in turn translates into increased sales, greater alcohol consumption and an increase in alcohol-related problems. To the extent that Jahiel's theory of corporation-induced disease meets minimal standards for a useful social theory (e.g., falsifiability, predictability, replication), the following public health implications are proposed: 1) tailor policies to address the source of the problems upstream (e.g., focus on availability, affordability, access, and promotion); 2) focus on the mid-level activities of the alcohol industry; and 3) improve access to effective individual-level interventions for dependence as well as hazardous and harmful drinking.

KEYWORDS: alcohol, policy, alcohol industry, corporation-induced disease, theory, alcohol-related problems.

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INTRODUCTION

The term epidemic is generally defined as the “occurrence in a community or region of cases of an illness ... or other health related events clearly in excess of normal expectancy” (A Dictionary of Epidemiology, 1988). The term is typically used to communicate health risks affecting large numbers of individuals throughout an area at the same time or to describe a health condition or social problem that is widely prevalent. This paper applies Jahiel’s theory of corporation-induced disease as a possible explanation for an epidemic of alcohol-related problems in the United Kingdom. The UK was selected as the basis for this case study because it has recently experienced a significant increase in alcohol-related problems following a general relaxation of alcohol control policies. In addition, a variety of qualitative and quantitative data are available, including a number of peer reviewed research articles. The theory posits an epidemiologic cascade starting with government-sanctioned corporate profit making and ending with individual-level health and social consequences (Jahiel, 2008). The theory has been applied to several industries known to affect morbidity and mortality because of the consumption of their products or exposure to toxic effects from the environment (Lillienthal, 1991; Brownell and Warner, 2009; Jahiel and Babor, 2007). In this article we first examine the key propositions of the theory. We then describe how its concepts can be measured and the kinds of data that can be used to test the propositions. Finally, we evaluate whether current scientific methods are capable of proving that the activities of corporations are responsible for the epidemic of alcohol problems in the UK, and the implications of the theory for policy if the theory could be confirmed.

Corporate activities and the epidemiologic cascade

Corporation-induced diseases is a generic concept applied to diseases and other health conditions attributed to consumption of hazardous industrial products such as tobacco, alcohol, food, guns, and gambling machines (Jahiel, 2008). Research over the past 20 years shows that public health efforts aimed at the prevention of noncommunicable diseases, including those linked to alcohol consumption; have been opposed by large corporations and organizations that share their interests (Wiist, 2010). An extensive inventory of corporate strategies to influence health policy has been compiled (Wiist, 2010; Jahiel and Babor, 2007). According to Jahiel (2008, 2010), the field of public health needs to extend the scope and content of the public health infrastructure to take into account corporate activities and their effects on the public’s health.

In our interpretation of how the concept corporation-induced disease applies to alcohol, we also include psychiatric disorders, physical disability and social harm as part of a more general “disease” concept. As illustrated in Figure 1, this new framework is based on a multilevel approach that posits an epidemiologic cascade starting with government-sanctioned corporate profit making and ending individual-level health and social consequences. The explained variable at one level is also the explanatory variable at the next lower level, establishing a causal chain that can be followed along the epidemiologic cascade from the site of societal power (e.g., government policies and corporate marketing activities) down to the host.

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As the main originators and enforcers of alcohol control policies, local and national governments (Level 1) are often subjected to political pressure to change the policy environment in ways intended to either reduce alcohol problems or increase consumer choices with regard to alcohol. At the corporate level, large producers of alcohol are charged by their shareholders to maximize profits, which often creates pressure to increase sales (Level 2). One way to do this is to advocate for policies that make alcohol products more attractive, affordable and accessible. This is sometimes accomplished through “conduits” (Level 3), which are defined here as individuals or organizations acting in the interests of corporations that carry on the actions initiated by the corporations’ decision makers. They do not usually engage in direct interaction with the hosts but their actions aim to modify the environment in specific ways, referred to as pressures on the environment (Level 4), to promote sales of the product, by making it more attractive to the consumer or otherwise facilitating and overcoming barriers to sales, such as neutralizing regulatory controls. The resulting modifications in the policy environment are likely to include increased alcohol availability, the proliferation of high-volume drinking establishments; and lower alcohol prices. This in turn translates into increased sales, greater alcohol consumption and an increase in alcohol-related problems (Levels 5 and 6).

Having outlined the theory, we now discuss the propositions associated with each level of analysis, and explore the conditions and the kinds of data that can be used to test the propositions.

Level 1- The Government

The unit of analysis at the first level is the government. This includes national and local laws controlling alcohol availability, price and drinking behavior; regulatory agencies that control marketing, price, availability; and budgetary decisions that fund treatment and prevention services. The explanatory variables at this level include public opinion, especially regarding alcohol and health issues; lobbying for greater controls of liberalization; industry-government partnerships; industry pressures for favorable policies and industry self-regulation. The explained variables are governmental policies and actions, such as lower or higher alcohol taxes, drink-driving laws; increased or decreased alcohol availability, drunk driving penalties; and regulated or unregulated marketing.

To what extent have government activities in the UK been conducive to the liberalization of alcohol control policies in ways that might explain increasing alcohol consumption in the UK in the last decade? Current UK governmental alcohol control strategies have been the subject of much criticism due to the lack of commitment to evidence-based harm reduction policies (Room, 2004; Babor, 2008; BMA Board, 2008). Because of de-regulation, alcohol sold in the UK today is more affordable, available, and more heavily marketed than at any time in the past 30 years. For example, between 1980 and 1997, the number of liquor licenses in Scotland increased by 25%, off-sales licenses increased by 31%, and relaxed zoning policies have led to the bunching of alcohol outlets in the late-night entertainment districts of cities into clusters of high volume “vertical” super-pubs (AFS and SHAAP, 2011). There is a significant amount of documentation for government actions that affect the regulatory environment in the form of government reports and legislative initiatives (e.g., UK Cabinet Office 2004; UK Ministry of Culture, Media &

Sport, 2004). How does one use these public laws and documents to establish an association between government actions and the alcohol policy environment of a country? In one analysis of the Alcohol Harm Reduction Strategy for England (Prime Minister's Strategy Unit, 2004), a government committee's policy recommendations were compared with the emerging consensus of what constitutes effective alcohol policy within a public health perspective. Based on an informal scoring of the PMSU's recommendations (Babor, 2004), almost 90% (36/41) of their recommendations pertained to untested or ineffective policy options. Research suggests that the more a country adopts effective, evidence-based policies, the lower their alcohol consumption and alcohol problem rates (Karlsson et al., 2007). By characterizing the likely effectiveness of a country's policy environment, it becomes possible to evaluate both existing and proposed policies and how policies change over time.

Level 2- Corporations

In the second level, the governmental policies and actions (explained variables above) become explanatory variables here. The unit of analysis is the corporation, which includes producers (brewers, distillers, vintners), wholesalers and retailers, and multinational corporations controlling beer and spirits industries (e.g., Diageo, AmBev/Anheuser Busch, Heineken); or its highest decision making level, including executives, their consultants, and board members (Jernigan, 2009). The explained variables are profit targets and the actions initiated by corporate decision makers to secure such targets.

Producers of branded alcoholic beverages, which account for approximately 38% of recorded alcohol consumption world-wide, tend to be large multi-national corporations reliant on marketing for their survival. Several observers (Hill, 2008; Jernigan, 2009; Babor et al., 2010) have described the increasing globalization of the alcohol industry, particularly in the beer and spirits sectors, which have become dominated by a few large corporations, some of which have their headquarters in the UK (e.g., Diageo).

To demonstrate a relationship between corporate activities and government policies conducive to an alcohol problem epidemic, it would be necessary to show that specific actions were instrumental in establishing the conditions for changing alcohol control policies. These actions could involve direct lobbying by industry representatives or the delegation of responsibility to the advertising industry or social aspect organizations, which are described in Level 3 as "conduits." The positions of the alcohol industry toward the most effective universal alcohol control policies, higher taxes and availability regulations, are stated in both internal communications and public information campaigns. Another area of industry policy interest is marketing controls. In view of concerns raised about the effect of the marketing activities of the industry, the House of Commons requested internal marketing documents relating to a number of campaigns from producers, their advertising agencies, Public Relations companies and new media companies. In an analysis of these documents, Hastings et al. (2010) identified major shortcomings in the current self-regulatory codes covering alcohol advertising. Specifically, the codes do not protect young people from alcohol advertising; prevent the promotion of excessive drinking, or the linking of alcohol with social and sexual success. The documents also suggest that sponsorship of sports and other entertainment activities is being systematically used to undermine rules prohibiting the linking of alcohol with youth culture and sporting prowess.

Other documents (Carter, 2005), obtained through the US Master Settlement agreement with the tobacco industry, have been subject to extensive interpretative research to analyze the motives and decisions of both the tobacco and the alcohol industries (Jernigan, 2012), suggesting a possible methodology to test the association between industry activities and the policy-making process at this level of analysis. Another source of information about the activities of the alcohol industry is public discourse on industry-government partnerships. In one case study of a partnership arrangement in the UK, Bonner and Gilmore (in press) describe how the UK Public Health Responsibility Deal set up by the Blair Government not been supported by expert health groups on the basis that the “pledges” the alcohol industry promised to implement are unlikely to be effective in reducing alcohol-related harm.

Level 3- Corporate conduits

At Level 3, the actions initiated by corporate decision makers (e.g., new alcohol products, aggressive marketing of alcohol to young consumers, opposition to marketing regulations) are passed on to corporate conduits, the next unit of analysis. Conduits are individuals or organizations, such as social aspects organizations, trade associations, and in some cases research scientists, acting in the interests of corporations that carry on the actions initiated by the corporations’ decision makers. They do not usually engage in direct interaction with the hosts but their actions aim to modify the environment in specific ways, referred to as pressures on the environment. This includes promoting sales of the product by making it more attractive to the consumer or otherwise facilitating and overcoming barriers to sales, such as neutralizing regulatory controls.

In addition to the alcohol producers, the industry’s interests have traditionally been promoted by trade associations that deal with commercial issues such as taxes, marketing and regulation. Hundreds of trade associations with a primary focus on alcohol have been established throughout the world, representing the interests of brewers, distillers, wine growers, bartenders, importers, wholesalers and the hospitality industry. There are more than 36 national trade associations devoted solely to beer, in addition to three international confederations (Worldwide Brewing Alliance, 2007).

Besides the industry’s trade associations, since 1980 there has been a steady increase in industry-funded “social aspects” and public relations organizations (SAPROs), which have been established to manage issues in areas that overlap with public health, such as alcohol control policies, medical research findings and underage drinking. Over 40 such organizations have been established in more than 27 countries, and several operate on the international level (Anderson, 2004; Babor et al., 2010). The activities of these organizations are typically framed in terms of Corporate Social Responsibility (CSR) activities.

Over the past 25 years, large alcohol companies have set up more than 30 ‘social aspects’ organisations, mostly in Europe and the emerging markets of Asia and Africa, to manage issues that may be detrimental to their business (Anderson 2004; International Center for Alcohol Policy, 2006). In the UK, the Portman Group was established in 1979 to focus on education, prevention and harm reduction (Drummond, 2004). These organizations often operate alongside

more traditional (and more explicitly named) trade organisations representing the wider industry. They typically promote a set of key messages that align with industry interests: that alcohol confers net benefits on society; that the ‘problem’ is the way some individuals drink rather than total consumption levels; that the cornerstone of policy should be to encourage responsible drinking; that marketing should be self-regulated by the industry itself and, in particular, that industry representatives should have an equal place at the policy table with other ‘stakeholders’ (Anderson 2004).

Level 4- Environment of the Host

At level 4, the units of analysis are the environments of the host such as pubs, supermarkets, restaurants, hotels, late-night entertainment districts and can also include drinking at home. Corporate pressures on the environment in the form of aggressive marketing and sales promotions, lower taxes, more retail outlets, industry efforts to promote health benefits of moderate drinking and CRS initiatives interact with the environment and the retailers, and these interactions result in a modified environment (explained variable) where there is increased availability, high-volume drinking establishments; football clubs, lower prices and new marketing campaigns and advertisements. According to Jahiel (2008), indicators to look for at this level include product availability, such as number of retail units (e.g., restaurants, bars), their location, and time of sales, product promotion in advertisements, and industry campaigns to present a favorable image of the corporation, and to promote people’s free choice to use their products. The sources of data for this level of analysis include marketing expenditures, media exposure to alcohol marketing, the number and density of alcohol outlets, and off-license sales data.

Expenditure by the alcohol industry on marketing and promotion in the UK is large and far more than expenditure on health promotion marketing and advertising. The total expenditure on alcoholic drinks advertising on television, the radio, in the press, outdoors, and in cinemas is about £200m. Total spending on marketing communications by the alcohol industry was estimated to be £600–800m (including sponsorships, product tie-ins and placements, contests and sweepstakes, and special promotions) by the Prime Minister’s strategy unit in 2003 (House of Commons, 2010). Almost half (49%) of alcoholic drinks advertising was spent on television advertising in 2006. Between 2004 and 2006, the number of commercial spots aired on television increased: 367,000 in 2004, 412,000 in 2005 and 442,000 in 2006. Lager products had the highest share of overall commercials for alcoholic drinks in both 2002 and 2006 (25% and 30% respectively), with cider/ perry making up the largest rise in share of the sector in 2006 (House of Commons, 2010).

The sponsorship of sport and cultural events, many with a specific appeal to youth, has become a key marketing vehicle for alcohol. Alcohol drinks companies were the second largest source of sponsorship funding from 2003 to 2006. An analysis of market data on sports sponsorship showed that 49 of the 71 UK sports sponsorship deals were paid for by the brewing industry, with the rest by other alcohol producers (House of Commons, 2010).

Regarding access to alcohol, in 1953 there were 61,000 on-licensed premises and 24,000 off-licensed premises in Great Britain. Less than 50 years later, the total number of on-licensed and

off licensed premises in England and Wales was estimated to be 110,000 and 44,700 (BMA, 2008). In addition, the Licensing Act of 2003 now permits 24-hour opening in England and Wales (BMA, 2008).

Another aspect of the drinking environment in the UK is the affordability of alcohol. Since 1997, excise duties on wine and beer in the UK have only increased in line with inflation while the duty on spirits has not increased. According to data assembled by Scottish Health Action on Alcohol Problems (AFS and SHAAP, 2011), alcohol sold in Britain has become more affordable because of special price promotions and discounts, and below-cost selling by retailers, especially by the large supermarket chains. Other aspects of the changing environment induced by de-regulation are the decline of the pub after the 2003 Licensing Law, and the concentration of drinking establishments in late night entertainment districts of most urban centers where new “superpubs” have been established to cater to young drinkers (Erickson, 2010).

Level 5- Host (General Population/ Youth Drinkers)

The modified environment, characterized by increased availability, lower prices and a general public perception that drinking is necessary and drunkenness is acceptable, becomes the explanatory variable at level 5. The explained variable is the consumption of alcohol by the general population. At this level two questions need to be answered: 1) To what extent has drinking increased in parallel with changes in the drinking environment? 2) Is there a causal link between the environmental changes, average volume consumed, and the frequency of heavy drinking?

In answer to the first question, per capita alcohol consumption in the UK has doubled since 1960 (SHAAP, 2007), rising 19% between 1980 and 2007, compared with a 13% decline for all 30 countries in the Organization for Economic Cooperation and Development (OECD) (Whalen, 2010). Purchases of alcohol bought for consumption within the home in the UK have increased since 1992, peaking in 2003/04 and fluctuating since. Cider and perry showed the largest increase in purchases (74%) between 1992 and 2009 compared to other types of drink. It should be noted however, that alcopops did not exist as an individual product line prior to 1997 (NHS, 2011). The UK is now among the heaviest alcohol consuming countries in Europe. Of particular concern is the pattern of drinking among adolescents, and the high level of binge drinking and heavy drinking among men and women in the 16 to 24 and 25 to 44 age groups. UK teenagers are among the most likely in Europe to report heavy consumption of alcohol, being intoxicated and experiencing adverse effects of drinking. For women, the binge drinking rate increased from 7% in 1998 to 16% in 2006. For men, it increased from 20% to 24%. Heavy drinking increased amongst men from 19% in 2005 to 24% in 2007 and increased from 8% to 15% for women (Alcohol Concern, 2011).

As the affordability of alcohol increased by 65% between 1980 and 2006, over the corresponding time period per capita alcohol consumption increased from 9.4 to 10.9 liters pure alcohol. These changes are consistent with a large body of econometric research (Cook, 2007; Wagenaar et al., 2010) demonstrating the close correlation between alcohol process and alcohol consumption.

Level 6- General Population

The level 6 unit of analysis is the general population of drinkers at risk of the disability, death and harm related to drinking. The explanatory variable is the exposure and consumption of alcohol. The explained variable is the prevalence of alcohol-related problems, included death, disability and social disorder. At this level it is necessary to establish a causal link between increased consumption and alcohol-related problems. Data in support of the relationship between alcohol consumption and alcohol-related problems has been assembled in a number of reports sponsored by the public health community, government committees and NGOs.

In a recent publication, the NHS Information Centre reported that in 2008, there were 6,769 deaths directly related to alcohol- an increase of 24% from 2001. Of these alcohol related deaths, the majority (4,400) died from alcoholic liver disease. Between 2001 and 2008 deaths from alcoholic liver disease increased by 36% (from 3,236 to 4,400) an average percentage increase of 4.5% a year (NHS Statistics on Alcohol, 2011).

The PMSU (2004) has estimated that 70% of all admissions at peak times are alcohol related. Recent years have seen a significant increase in the number of alcohol-related hospital admissions in the UK, with the most common cause for admission being mental and behavioral disorders due to alcohol consumption, followed by alcoholic liver disease and toxic effect of alcohol. The 2004 Alcohol Needs Assessment Research Project (ANARP) estimated that, for adults in England aged 16-64: 38% of men and 16% of women have an alcohol use disorder, corresponding to 8.2 million people. Between 2000 and 2007, there was a 24% increase in the number of dependent drinkers (Alcohol Concern, 2011).

These findings are consistent with a large body of international research demonstrating causal relationships between alcohol consumption and a variety of alcohol-related problems at both the individual level and at the level of populations (Babor et al., 2010).

Conclusion

This paper began with the aim of applying the concept of an epidemiologic cascade to explain how alcohol- related problems might be caused by the activities of corporations. Having described the major tenets of the theory and the types of evidence that might be assembled to support it, we now discuss the strengths and limitations of the theory of “corporation-induced disease” (Jahiel, 2010) as it applies to alcohol. A good theory is a plausible explanation that is logically constructed and fulfills at least three necessary conditions (Baldwin, 1967):

1. Predictability- A theory consists of logically interconnected and internally consistent propositions and makes predictions about what will happen if certain criteria are met. Do the statements, for example indicate that if and when A happens, B will follow? Although the growth and decline of alcohol problem epidemics has been little studied, the case of the UK suggests that corporate decisions and the activities of their conduit organizations were effective in changing a wide range of alcohol control policies in the UK. Indeed, a number of journal editors and alcohol experts (e.g., Room, 2004) predicted that these activities would lead to a dramatic increase in alcohol-related problems. Nevertheless, circular reasoning

could be a limitation of the theory, to the extent that it implies corporation-induced demand for alcohol. It might be argued that corporations are only meeting a spontaneous demand from the public and it is difficult to gauge the relative importance of each. Data from countries with government monopoly systems, however, suggests that demand is greater in countries and regions where alcohol is sold on the free market.

2. Falsifiable- While a theory is generally un-provable, it must be falsifiable in nature. This does not mean that the theory must be proved false, but that it must be specific and constructed in such a way that it can be refuted. An important question is the extent to which other explanatory variables not included in the theory are capable of accounting for the same changes in drinking at the population level. Alcohol consumption could easily be affected by government changes in tax policies that are totally independent of the actions of multi-national corporations, such as the promotion of de-regulation in the interests of promoting free enterprise. Because of the diverse nature of the alcohol industry and the organizations it supports, it cannot be assumed that all of these organizations act in concert with the same goals and intentions, particularly in matters pertaining to health and disease. Nevertheless, there are common corporate interests across the spectrum of industry organizations, which sometimes conflict with public health and medical priorities, but at other times, are compatible with them. We conclude that with further precision the theory of corporation-induced disease could be falsifiable.
3. Public Verifiability- A theory should be verifiable, that is, consistent with a body of known facts and available evidence. The indicators of each concept of the theory should be observable in nature and measurable according to a set of reliable and valid operations. A crucial aspect of the verifiability of a theory is clarity of the language, so that it is possible for anyone to follow. In many respects, the variables and units of analysis specified in several stages of the epidemiologic cascade for alcohol are difficult to operationalize in terms of discrete and quantifiable events, particularly at levels 1, 2 and 3, where the decisions of government and corporate leaders must be documented and their effects on alcohol policy inferred. Whereas qualitative research may be useful in documenting the verbal records of decision-makers, such records are difficult to access and are subject to sampling bias. And there is little precedent for translating qualitative records into quantitative measures that would permit any degree of statistical analysis. On the other hand, the data for the associations postulated at levels 5 and 6 (i.e., the associations between alcohol consumption and alcohol-related problems) are quite strong at both the individual and population levels (Babor et al., 2010).

Research is needed at all points along the epidemiologic cascade, but especially in the least investigated stages 2 through 4. Research methods need to fit the problem being investigated at each level of analysis. This means that in addition to experimental methods, observational studies and qualitative research methods (narrative analysis, case studies, ethnographic interviewing, focus group activities) are required to complement quantitative approaches and to fill explanatory gaps where quantitative approaches are inappropriate.

Within the theory of corporation-induced diseases, the epidemiological cascade describes some of the major factors in the causal chain that account for corporation-induced alcohol

epidemics. It identifies moderating and mediating variables, and suggests interventions that should be effective in controlling epidemics. Although its main focus is the influence of the modern corporation, it can also be useful in establishing the conditions that account for other types of alcohol epidemics, such as those induced directly by government policies affecting the affordability, availability or attractiveness of alcohol. It takes the maze of risk factors that have been identified at the population level (e.g., easy access, low prices, aggressive marketing) and organizes them in a meaningful way. Further, it suggests that there are benefits to shifting the emphasis from downstream, individually-oriented risk factors (e.g., genetics, temperament) to upstream factors that affect the whole population.

The theory encompasses a social-ecological model with its multiple levels of influence (individuals, organizations, public policies) and the idea that behaviors and decisions both shape the environment and are shaped by it. The value of theory is to provide explanation and a guide to action. The epidemiologic cascade points to areas of action that have generally been ignored by social science researchers and policymakers.

If alcohol dependence, harmful drinking and hazardous alcohol use were shown to be induced substantially by the activities of corporations and the larger alcohol industry, there are a number of public health implications that could be used to guide prevention, treatment and policy. At Levels 1-2 (government and industry), specific interventions might include increased transparency of corporate-government interaction, measures to preclude corporate influences on government (e.g. revolving door restrictions), and greater power of watch dog agencies. Under these circumstances, governments would have greater freedom to tailor policies to address the source of the problems upstream (e.g., focus on availability, affordability, access, and promotion). At Levels 3-4 (conduits and host environment), the focus on the mid-level activities of the alcohol industry such as regulating alcohol promotion, harm reduction programs (e.g. training programs for bar staff), and drink-driving countermeasures. At Levels 5-6 (host use and problems), the aim should be to improve access to effective individual-level interventions for dependence as well as hazardous and harmful drinking.

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Figure 1. Epidemiologic cascade applying Jahiel's corporation-induced disease theory to alcohol-related problems.

