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Bartlett, A. orcid.org/0000-0002-6927-0899 and McCambridge, J. (2024) Managing disruption: a case study of boundary work around alcohol industry–sponsored scientific interventions. Journal of Studies on Alcohol and Drugs, 85 (3). pp. 416-426. ISSN 1937-1888

https://doi.org/10.15288/jsad.22-00432

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Managing Disruption: A Case Study of Boundary Work Around Alcohol Industry-Sponsored Scientific **Interventions**

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ABSTRACT. Objective: Following recent work examining alcohol industry involvements in science, this is a case study that examines the ways in which the alcohol research community engages in "boundary work"—in which scientists define and defend the demarcation between their community of knowledge makers and others, justifying their claim to legitimacy and authority—in response to alcohol industry-sponsored interventions. The case here involves an economist who disputes the research consensus positions and policy recommendations of the field, having been funded by the key global alcohol industry political organization. Method: We examine the "functional" statements of both sides of this issue to show the ways in which the scientific and policy consensus of the field is disputed. Three examples of the responses of the alcohol research community, presenting different types of responses, are interrogated. Results: In late career and retirement, this economist published extensively in alcohol and health economics journals within the peerreviewed literature on two key topics in alcohol policy: pricing/taxation measures and advertising restrictions. These commentaries, reviews, and correspondence propose alternative policies favored by the alcohol industry, which are at odds with the alcohol public health evidence base. The three examples examined of boundary work performed by alcohol public health researchers illustrate the variety of ways in which the legitimacy of these interventions has been questioned: on technical grounds, on explicitly normative grounds, and as a body of work as a whole. Conclusions: Interventions in the scientific literature create important resources for alcohol industry actors to oppose alcohol policy measures globally. The alcohol research field may benefit from discussion about how to respond to these kinds of interventions. (J. Stud. Alcohol Drugs, 85, 416–426, 2024)

THERE IS A GROWING body of work on the way in I which the alcohol industry engages with, intervenes in, and uses alcohol science (Babor, 2009; Babor et al., 1996a; Chikritzhs, 2010; Golder et al., 2020; Golder & McCambridge, 2021; Jernigan, 2012; McCambridge & Mialon, 2018; McCambridge & Mitchell, 2022; Miller et al., 2009; Mitchell, 2022; Mitchell & McCambridge, 2022a, 2022c; Mitchell et al., 2020; Petticrew et al., 2018; Stenius & Babor, 2010). One key way in which major alcohol companies have been involved in science has been through the creation of social aspects organizations, which purport to fulfill corporate social responsibility functions. Although largely organized on a national basis, the International Alliance for Responsible Drinking (IARD), as was the case with its predecessor the International Center for Alcohol Policies (ICAP), has explicit scientific functions and operates at the global level on behalf of major alcohol companies. The activities of ICAP in funding research and using research to influence policy have aroused much longstanding concern in the alcohol public health research community (Jernigan, 2012; McCambridge et al., 2018). There are strong continuities in the stated pur-

Jernigan identified ICAP, founded in 1995, as countering or pre-empting World Health Organization (WHO) work

McCambridge, 2023).

poses and declared activities of ICAP and IARD (Lesch &

on alcohol, arranging conferences, publishing books, and providing briefing articles on "model national and global alcohol policies based on the least effective strategies" (Jernigan, 2012, p. 83). ICAP merged with the Global Alcohol Producers Group to form IARD in 2014 (Robaina & Babor, 2014). To date, IARD has not engaged in any major attempt to contest and reframe alcohol research in the way that ICAP did (Bartlett & McCambridge, 2023), although it has continued to intervene in various ways. One continuity is the use of consultants, often retired or former academics. One example is Professor Jon P. Nelson, an economist who worked at Pennsylvania State University.

This case study examines Nelson's publications after he was funded by ICAP/IARD and three examples of the ways in which the research community has responded. To understand the functions of Nelson's body of work, this article analyses the ways in which Nelson both constructs and disputes the consensus in alcohol research and policy. This analysis is not in itself to be read as a critique of Nelson's economic work or personal integrity, but it offers an attempt to advance understanding of the deliberate positioning of critiques by alcohol industry-sponsored academics vis-à-vis alcohol public health research.

We use a concept from the sociology of science to consider the "boundary work" (Gieryn, 1983) being performed

Received: December 21, 2022. Revision: July 19, 2023.

This research was supported by Wellcome Trust Investigator Award 200321/Z/15/Z (to Jim McCambridge).

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by the research community. This concept refers to the features of a particular scientific community that they themselves identify to distinguish their work from nonscientific analogues, or as Gieryn puts it, those "characteristics best achieve the demarcation in a way that justifies scientists' claims to authority or resources" (p. 781). These boundaries are not fixed features of a scientific community but are a product of the work of editors and reviewers, Ph.D. supervisors and hiring panels, funding agencies and so on, as well as myriad actions that shape the normative structures of any community.

Work by, for example, Babor (2009), Jernigan (2012), and McCambridge and Hartwell (2015), has identified the role of the alcohol industry in producing particular kinds of scientific work, and McCambridge and Mialon (2018) have reviewed the kind of normative positions taken with regard to alcohol funding. This kind of work, by researchers within the community of alcohol research, including an author of this article, is not just descriptive. It is also often prescriptive, whether explicitly or by implication, thus itself being a form of boundary work.

Method

As part of a wider research program on alcohol industry involvement in public health sciences and policy (Mc-Cambridge et al., 2023), we noted Nelson's work in policy debates. For example, his work was used in the Explanatory Memorandum of the Public Health (Minimum Price for Alcohol) (Wales) Bill (Welsh Government, 2018). We therefore decided to undertake a qualitative case study of the way in which the functions of Nelson's interventions are constructed and the way in which his interventions have been contested within the scientific literature (see Bartlett and McCambridge, 2022, for an example of apparently similar work published outside the scientific literature), and to examine the implications for policy making. This study was also informed by our previous study of alcohol industry interventions within scientific journals (Bartlett & McCambridge, 2021).

An analysis of the "functional" statements (Bartlett & McCambridge, 2022) in Nelson's articles can explore how far these contributions can be used to advance the shared interests of the major alcohol companies that formed ICAP and IARD. We situate this more recent peer-reviewed journal material within the larger context of Nelson's career, drawing on his institutional profile (Nelson, 2023b) and curriculum vitae (Nelson, 2020).

Using Google Scholar (Nelson, 2023a), all of Nelson's contributions to peer-reviewed journals were examined. Those that addressed questions of alcohol advertising, taxes, and prices were included in this study. These publications were inductively coded (Silverman, 2020) by the first author, with a sensitivity to implicit or explicit statements of func-

tion. These are often found in the introductions and discussion/conclusion sections of full articles, where the claims within the article are positioned with regard to the wider literature and policy debates, although note the extent of commentaries and similar intervention types. We identified two key themes running through Nelson's body of work on alcohol: contesting the scientific consensus and contesting the policy recommendations. These are often intertwined, as one way to contest the policy consensus in alcohol public health research is by bringing into doubt their scientific foundations.

To some extent this work can be considered an example of a controversy study (Bartlett, 2019; Sismondo, 2010). All fields of scientific research police their boundaries, often in ways in which the participants in these communities do not perceive of as boundary work. Controversies reveal the rules of these communities, acting to some degree as natural breaching experiments (Garfinkel, 1984). It is at moments of contest that boundary work is brought into view. On occasion, the legitimacy of Nelson's interventions is brought into question. This article selects three illustrative examples of different ways in which alcohol researchers have contested the legitimacy of Nelson's interventions. The texts that constitute these exchanges, including Nelson's replies, were examined with attention to how the scientific debate was constructed and contested.

Results

Alcohol work in career context

Nelson publishes widely on alcohol and related issues (Table 1). Most of these interventions elicit little direct response from alcohol researchers, although they are used by the alcohol industry as part of the evidence base to support their political actions (Stafford et al., 2022).

Nelson did not publish on alcohol until 1990 (Nelson, 1990), some 20 years after his first article. His early work was on the iron and steel (Nelson, 1970, 1971) and coal industries (Cohn et al., 1975; Neumann & Nelson, 1982), and, later, a continuing interest in the pricing effects of pollution (Nelson, 1978, 2004b). He has also written highly cited articles on methodological issues in economics (Nelson, 2015b; Nelson & Kennedy, 2009; Stanley et al., 2013), which provides him with the credibility to make claims about the quality of work in alcohol public health research. Google Scholar indicates that Nelson had a reasonably productive academic career until retirement in 2004, with little alcohol content among his most cited articles. As can be seen in Table 1, his interest in alcohol takes the form of roughly two phases—first on advertising in the decade leading to retirement and afterward, which dominated his output until 2013, and then later on taxation and prices.

The forms of Nelson's declarations of his association

TABLE 1. Nelson's alcohol and tobacco publications

| Year | Title | Journal | Co-authors | Citations* |
|------|--|--|-------------------------------------|------------|
| 1990 | State monopolies and alcoholic beverage consumption | Journal of Regulatory Economics | None | 85 |
| 1990 | Effect of Regulation on Alcoholic Beverage Consumption | Book: Drug and Alcohol Abuse Prevention | None | 8 |
| 1995 | Advertising and US alcoholic beverage demand: System-wide estimates | Applied Economics | John R. Moran | 114 |
| 1997 | Economic and demographic factors in US alcohol demand: A growth-accounting analysis | Empirical Economics | None | 74 |
| 1999 | Broadcast advertising and US demand for alcoholic beverages | Southern Economic Journal | None | 139 |
| 2001 | Advertising and Differentiated Products | Book (editor) | Michael R. Baye | 3 |
| 2001 | The Long-Run Demand for Alcoholic Beverages and the Advertising Debate: A Cointegration Analysis | Book: Advertising and Differentiated Products | Coulson N. Edward, John R. Moran | 47 |
| 2001 | Alcohol Advertising and Advertising Bans: A Survey of Research Methods, Results, and Policy Implications | Book: Advertising and Differentiated Products | None | 98 |
| 2001 | Do advertising bans work? An international comparison | International Journal of Advertising | Douglas J. Young | 102 |
| 2003 | Youth smoking prevalence in developing countries: Effect of advertising bans | Applied Economics Letters | None | 25 |
| 2003 | Cigarette demand, structural change, and advertising bans: International evidence, 1970–1995 | Contributions in Economic Analysis & Policy | None | 72 |
| 2003 | Advertising bans, monopoly, and alcohol demand: Testing for substitution effects using state panel data | Review of Industrial Organization | None | 131 |
| 2004 | Advertising Bans in the United States | EH.net Encyclopedia | None | 16 |
| 2005 | Advertising, alcohol, and youth | Regulation | None | 29 |
| 2005 | Beer advertising and marketing update: Structure, conduct, and social costs | Review of Industrial Organization | None | 66 |
| 2006 | Cigarette advertising regulation: A meta-analysis | International Review of Law and Economics | None | 60 |
| 2006 | Alcohol advertising in magazines: Do beer, wine, and spirits ads target youth? | Contemporary Economic Policy | None | 28 |
| 2007 | Distilled Spirits: Spirited Competition or Regulated Monopoly? | Book: Industry and Firm Studies | None | 5 |
| 2008 | Reply to Siegel et al.: Alcohol advertising in magazines and disproportionate exposure | Contemporary Economic Policy | None | 6 |
| 2008 | Effects of youth, price, and audience size on alcohol advertising in magazines | Health Economics | Douglas J. Young | 21 |
| 2008 | How similar are youth and adult alcohol behaviors? Panel results for excise taxes and outlet density | Atlantic Economic Journal | None | 29 |
| 2010 | Measurement problems in assessing adolescent exposure to alcohol advertising in magazines | Journal of Adolescent Health | None | 0 |
| 2010 | What is learned from longitudinal studies of advertising and youth drinking and smoking? A critical assessment | International Journal of Environmental Research and Public Health | None | 48 |
| 2010 | Alcohol advertising bans, consumption and control policies in seventeen OECD countries, 1975–2000 | Applied Economics | None | 82 |
| 2010 | Alcohol, unemployment rates and advertising bans: International panel evidence, 1975–2000 | Journal of Public Affairs: An International Journal | None | 11 |
| 2011 | Alcohol marketing, adolescent drinking and publication bias in longitudinal studies: A critical survey using meta analysis | Journal of Economic Surveys | None | 45 |

Table continued

Table 1. Continued

| Year | Title | Journal | Co-authors | Citations* |
|------|--|--|---------------|------------|
| 2012 | Alcohol marketing policy: The missing evidence | Addiction | None | 9 |
| 2013 | Cigarette Labelling Act | Book: Consumer Survival: An Encyclopedia of Consumer Rights, Safety, and Protection | None | 0 |
| 2013 | Robust demand elasticities for wine and distilled spirits: Meta-analysis with corrections for outliers and publication bias | Journal of Wine Economics | None | 24 |
| 2013 | Meta-analysis of alcohol price and income elasticities—with corrections for publication bias | Health Economics Review | None | 96 |
| 2013 | Does heavy drinking by adults respond to higher alcohol prices and taxes? A survey and assessment | Economic Analysis and Policy | None | 36 |
| 2013 | Not so fast! Evidence-informed alcohol policy requires a balanced review of advertising studies | Book: Advertising and Society: An Introduction | None | 0 |
| 2013 | National Minimum Drinking Age Act | Book: Consumer Survival: An Encyclopedia of Consumer Rights, Safety, and Protection | None | 0 |
| 2014 | Gender differences in alcohol demand: A systematic review of the role of prices and taxes | Health Economics | None | 38 |
| 2014 | Economic research studies on heavy drinking and alcohol prices: What do systematic reviews demonstrate? | Wine & Viticulture Journal | None | 0 |
| 2014 | Alcohol affordability and alcohol demand: Cross country trends and panel data estimates, 1975 to 2008 | Alcoholism: Clinical and Experimental Research | None | 25 |
| 2014 | Estimating the price elasticity of beer: Meta-analysis of data with heterogeneity, dependence, and publication bias | Journal of Health Economics | None | 65 |
| 2015 | Binge drinking and alcohol prices: A systematic review of age-related results from econometric studies, natural experiments and field studies | Health Economics Review | None | 36 |
| 2015 | Alcohol prices and mortality due to liver cirrhosis: Robust-regression results for the European Union, 2000–2010 | Sage Open | None | 3 |
| 2015 | Reply to a comment by Ludbrook, Holmes, and Stockwell: Gender differences in alcohol demand | Health Economics | None | 1 |
| 2016 | Reply to the critics on "binge drinking and alcohol prices" | Health Economics Review | None | 0 |
| 2016 | Economic evidence regarding alcohol price elasticities and price responses by heavy drinkers, binge drinkers, and alcohol-related harms: Summary of results for meta-analyses, systematic reviews, and natural experiments in alcohol policy | Public Health Open | None | 2 |
| 2016 | Alcohol prices, taxes, and alcohol-related harms: A critical review of natural experiments in alcohol policy for nine countries | Health Policy | Amy D. McNall | 67 |
| 2017 | What happens to drinking when alcohol policy changes? A review of five natural experiments for alcohol taxes, prices, and availability | European Journal of Health Economics | Amy D. McNall | 28 |
| 2020 | Effects of alcohol taxation on prices: A systematic review and meta-analysis of pass-through rates | BE Journal of Economic Analysis & Policy | John R. Moran | 20 |
| 2021 | Comments on Rossow: The alcohol advertising ban in Norway: Effects on recorded alcohol sales | Drug and Alcohol Review | None | 1 |
| 2021 | Pass-through rates for alcohol beverage excise taxes: Fixed-effect versus random-effects meta-analysis and meta-regressions | Advances in Economics and Business | None | 0 |

^{*}Source: Google Scholar (December 20, 2022). Table excludes conference articles and pre-prints.

with the alcohol industry have evolved over time and have been criticized by those within alcohol science (Stafford et al., 2022; Xuan et al., 2016). As Stafford et al. note, "disclosures are inconsistent across Nelson's body of work, and alcohol industry connections were not disclosed in most journal articles . . . [which serve] to cast doubt on effective alcohol policy levers" (Stafford et al., 2022, p. 1461). Earlier articles, if they declare any support at all, say that he had "consulted with a law firm that represents companies in the alcohol industry" (Nelson, 2005, 2006; Nelson & Young, 2008). In 2012, specific clients of the unnamed law firm were named as SABMiller and Anheuser-Busch (Nelson, 2012). By 2013, he was explicitly acknowledging the support of the ICAP (Nelson, 2013a), a declaration that switches seamlessly to the IARD in 2016 (Nelson & McNall, 2016).

Autobiographical vignettes that double as declarations of interest identify the origin of his research in alcohol, as follows: "This paper reflects research begun in 1985 when I testified before the Pennsylvania Liquor Control Board on its ban of beer price advertising" (Nelson, 2001), and "He has been studying alcohol advertising and marketing since 1985 when he testified in favor of lifting Pennsylvania's ban of price advertising of beer" (Nelson, 2004a). Nelson also served on National Institute on Alcohol Abuse and Alcoholism grant-awarding panels (1989-1991, 1994) and was the recipient of an ICAP research grant between 2012 and 2015 (Nelson, 2020). Between 2004 and 2022, as an emeritus professor, he published 42 articles, comments, book chapters, etc., 32 of which are concerned with alcohol. Two of the remaining contributions to the literature are concerned with tobacco and declare support from tobacco industry-funded law firms. That Nelson has consulted for industry is not in itself problematic in economics; indeed, working with and for industries is valued within that community. This provides an example of the fact that normative structures vary across different fields. The key observation here is that Nelson's career is marked by a clear re-orientation in trajectory of publications toward alcohol after retirement.

Statements of function

Nelson's contributions to the literature on alcohol, largely in the form of commentaries, reviews, and correspondence, have a function. This function is not hidden, but written explicitly into the texts, often in statements of direct policy relevance. Nelson's work thus constitutes a self-conscious counter-consensus intervention in the scientific literature. The themes identified—contesting the scientific consensus and contesting the policy recommendations—necessarily require that these articles set out the consensus being contested. A brief examination of the ways in which this is done clarifies the positioning vis-à-vis alcohol public health research.

Contesting the scientific consensus

The consensus against which Nelson positions his interventions is a population-level understanding of alcohol harm. As Nelson writes, "Much of present-day alcohol policy is based on a population-level model" (Nelson, 2015a, p. 9). The policy recommendations flow from this approach, with more or less specificity according to the strength of the evidence, rather than a focus on individual drinkers:

In recent years, there has been considerable interest in alcohol control through higher excise taxes for all beverages and higher minimum prices for low-priced brands [. . .] These policy proposals reflect a view that heavy or abusive use of alcohol can be reduced through control of aggregate consumption, which is referred to as the Ledermann or total consumption model. (Nelson, 2014a, p. 1167)

The use of higher excise taxes or prices to address issues of abusive drinking has attracted considerable attention among public health specialists and policymakers. For example, in their comprehensive review on alcohol research and policy options, Babor et al. (2010, p. 243) argue that "... of all the policy options, alcohol taxes is rated as one of the strongest." (Nelson, 2014b, p. 1271)

The comprehensive review cited is the second edition of *Alcohol: No Ordinary Commodity* (Babor et al., 2010), a consensus review of alcohol research by leading researchers that sets out the implications for public policies. Many of the "best practices"—the policies with the strongest evidence base—are those that are "universal," involving regulation of price, availability, and advertising (Babor et al., 2010). Nelson makes claims that the population-level consensus is prematurely and unscientifically settled.

This is an endemic problem in the public health literature, where null or negative results are simply ignored . . . to advance a policy agenda as if the underlying empirical issues are settled. (Nelson, 2008, p. 499)

The crux of Nelson's approach to public policy is captured in this line from a 2015 article in Sage Open:

policy statements are only as good or reliable as underlying empirical studies. When population-level studies are faulty or suspect, a conservative approach to public policy is in order. (Nelson, 2015a, p. 9)

Nelson thus claims that the dominant paradigm is the product of bad science, using strong language to attack it. He implies the possibility of more rigorous population-level research, although he denies the legitimacy of the existing field's work, and thus argues against any policy recommendations that may flow from it.

Contesting the policy recommendations

Because the scientific consensus underpinning the "best practice" policies has been brought into doubt with such claims-making, Nelson affords himself a position to make alternative policy prescriptions (sometimes using more qualified language about the evidence):

The available body of evidence thus suggests that higher alcohol taxes or prices are not a particularly effective means to address heavy drinking by older and younger adults. The results reported here do not support the use of excise taxes as a general policy to address abusive drinking and associated social costs. (Nelson, 2014b, p. 1271)

If abusive drinking and alcohol harms are not responsive or depend importantly on particular circumstances—as evidence reviewed here suggests—then more targeted approaches to alcohol control are to be preferred. (Nelson, 2016a, p. 38)

... policy makers in the alcohol area would be well advised to turn their attention to discussion of matters of importance for youthful drinking behaviors, rather than decisions made in the market for advertising space. (Nelson, 2006, p. 368)

These statements are not merely statements of function, they are constitutive of function. These work best to serve industry interests when the claims are easily understood and reproduced by those outside the technical domain; particularly by those who engage in the political domain. These explicit claims are easily portable, as evidenced by how they have been used in policy consultations (Stafford et al., 2022). Note that the alternative claims are advanced indirectly, with supporting evidence absent.

Three examples of "boundary work"

Nelson versus Ludbrook et al., 2014. In 2014, Nelson published an ICAP-sponsored systematic review of the effect of alcohol prices and taxes by gender in the journal Health Economics (Nelson, 2014b). Nelson's review had a specific message for policy makers: "The results reported here do not support the use of excise taxes as a general policy to address abusive drinking and associated social costs, at least for the countries and socioeconomic groups studied to date" (p. 1271).

Ludbrook et al. (2014) countered that, "Such strong conclusions cannot be supported by the review undertaken as only a small sample of the studies on alcohol demand elasticities were examined, namely those reporting gender-specific elasticities" (p. 1281). They critique Nelson for ignoring existing reviews and conclude:

The analysis of gender specific studies presented by Nelson clearly oversteps its self-imposed limits by offering general conclusions about the price responsiveness of heavy drinkers without relating these to either the non-gendered results in the studies reviewed or the conclusions made from other systematic reviews of the relevant literature. (p. 1282)

No mention is made of Nelson's industry links in this comment, with the critique engaging directly and only with the study. Nelson's reply casts Ludbrook et al. as uncritical proponents of an illegitimate consensus: "The basis for LHS's claims rests largely on their interpretation of other parts of the alcohol-price literature—the purported evidence base" (Nelson, 2014c, p. 1284). The weakness of the "purported evidence base" is that it "excludes numerous relevant studies in economics" (p. 1284), with Nelson citing several of his own articles. This maneuver turns Ludbrook et al.'s critique of the legitimacy of his claims on its head, moving the focus away from the original article.

Nelson versus Xuan et al., 2015–2016. In 2015, Nelson published "Binge Drinking and Alcohol Prices: A Systematic Review of Age-Related Results From Econometric Studies, Natural Experiments and Field Studies" in the journal Health Economics Review. Again, this ICAP-supported review article explicitly takes aim at a key WHO recommendation. As above, Nelson argues that the scientific basis of price-based policy measures is flawed.

This article prompted a reply (Xuan et al., 2016) from a group of established alcohol researchers, including Babor, who had been specifically named as a proponent of the consensus Nelson was disputing. Xuan et al. open with an unapologetic defense of the consensus on scientific grounds: "There is ample evidence on the effects of prices and taxes on heavy drinking" (p. 1) and that "To cast doubt on a nearconsensus in the alcohol literature using faulty reasoning and inappropriate review methods does a disservice to science as well as public health" (p. 2). However, they take issue not only with the technical content of Nelson's article, but also the legitimacy of Nelson's contribution as a scientist. They include in their reply a section headed "Conflict of interest." This states that Nelson has underplayed his connections with the alcohol industry, claiming that in using a standard declaration of support from ICAP, he in effect concealed both his role as a consultant for law firms representing the alcohol industry and that he was a member of the Research Advisory Board of ICAP.

This prompted a statement from Nelson that explicitly engages in discussion of the normative structure of the alcohol field. In so doing Nelson invokes an account of norms in his own discipline, economics:

Prior to addressing these issues, it is important to layout what has transpired in the addiction field as reflected in the editorial policies of the academic journal, *Addiction*, for which Professor Babor was Associate Editor-in-Chief. This provides context to faulty comments made by Xuan et al. [1]. Starting in 2009 or earlier, *Addiction* has engaged in a campaign against publication of any academic alcohol research that received industry support or sponsorship [3–6]. As stated by Stenius and Babor ([6], p. 191), ". . . all financial relationships with the alcoholic beverage industry are [best] avoided."

Censorship always begins with appeals to base emotions and feelings, so the campaign is surrounded with emotion-laden words that make for entertaining reading-such as "transparency," "vested interests," "gatekeepers," and of course "biased findings." Economists generally welcome open debate in the marketplace for ideas regardless of source, including contributions from researchers who rely heavily on "non-profit" financial support. For my own part, I acknowledged support received from the International Center for Alcohol Policies ([2], p. 11). All of my publications supported by ICAP contain the same declaration, and I see no reason to go beyond a simple, direct statement. Other related work that has been dormant for a decade is irrelevant and—as I work independently as well—did not result in research publications. That some of my conclusions do not coincide with those of Xuan et al. is to be expected in any area of scientific research. Scientific inquiry should be associated with a diversity of ideas, methods, and results, and not the monolithic approach advocated by Babor and associates. (Nelson, 2016b, p. 1)

The contestation here is not merely over technical questions of review methodology, but explicitly normative questions of what it is to do good science and who should be seen as legitimate contributors to the field. There is a clear conflict described in this account of the differing disciplinary norms, specifically to do with industry funding. Nelson's response is couched in the language of "censorship" and "open debate in the marketplace for ideas," thus arguing for the superiority of the norms of economics. This "moment" brings to the surface the fact that, for Nelson (and by extension his funders), it is the alcohol public health field as a community that is the object of his critique. This deeply flawed alcohol research community is counterposed to the norms that prevail in the disciplinary community of economics, on whose behalf Nelson claims to speak. This is played out again within a health econom-

To close his reply to his critics, Nelson is once again explicit in stating that he is seeking to disrupt what he sees as a faulty consensus, claiming his work "is important in light of the fact that a population-level approach to alcohol policy is favored by public health researchers, including my critics.

Binge drinking is not a trivial public health problem, nor did I suggest that it was, but the critics do a disservice to other researchers and policymakers by pretending to be informed authorities on all counts in their faulty set of comments" (Nelson, 2016b, pp. 2–3).

Guindon et al. versus Nelson, 2022. A systematic umbrella review in Addiction by Guindon and colleagues (2022) performed an act of literal "boundary work." Nelson's work was set aside from the rest of the literature and discussed in its own section (pp. 12–16), thereby segregated from the rest of the review. Early in the article, the authors commented on Nelson's industry links and suggested that this body of work should be treated with caution:

We identified eight reviews examining the associations between price/tax and alcohol use and related harm, seven of which met our inclusion criteria that were funded in part by the International Center for Alcohol Policies (ICAP), an organization funded by alcohol producers and authored by Jon Nelson, a researcher with links to the alcohol industry . . . There is ample evidence of an association between financial conflicts of interest, including commercial research sponsorship, with publication of research favourable to the sponsor. (Guindon et al., 2022, p. 3006)

As a consequence of including it, Nelson's work commands a table that spans three pages, which includes technical details of his studies. This literal setting to one side of his work is, in itself, a powerful rhetorical statement, as well as a technical device for protection against bias.

Guindon et al. also highlight major scientific issues and possible scientific misconduct with Nelson's reviews, writing, "Of the seven reviews, three had substantial overlap to be considered duplicate publications. Although fragmented publishing may be justified, it may also contaminate and skew the literature" (p. 3020). In such circumstances, the authors might have decided to exclude some of this material, but they decided to include it all. Guindon is a health economist with a history of work on tobacco control, and thus sits somewhat on the periphery of the community against which Nelson takes aim. Nelson did not respond in the year following this publication, which unlike the other two examples was not in a health economics journal.

Discussion

This study is a limited examination of boundary work; with a focus on a small number of cases in the peer-reviewed literature, it necessarily omits the types of boundary work that takes place backstage. We examine the claims Nelson makes about alcohol public health research, the origins of this work in career and industry sponsorship contexts, and various ways researchers have engaged in boundary work in response. Further work on editorial

practices, academic societies, etc., would shed more light on a wider range of boundary work practices, and further attention to the boundary work done by economics—and the potentially ambiguous position of health economics—would deepen analyses of this kind. The broad purposes of this study of boundary work were to aid thinking about how academic alcohol policy—relevant research may inform policy while being in competition with, and needing somehow to manage, alcohol industry influence in research, as well as in policy.

This article shows the ways in which Nelson's work on alcohol contests a scientific-policy consensus and makes alternative policy prescriptions. His work has focused on two key areas—advertising and pricing/taxes—in which government regulation has been resisted by the alcohol industry because it is understood as vital to their interests to do so (McCambridge et al., 2022). With Nelson's actions being similar to those of an agent of the alcohol industry, these interventions can be understood in terms of their functions, and the ways in which the alcohol research community—the producers of this consensus—can address interventions of this kind is a key question. From the point of view of the alcohol public health research community, Nelson can be seen as a "merchant of doubt," fulfilling a familiar function (Oreskes & Conway, 2011). There are other such actors, sponsored by the alcohol industry, who publish in peer-reviewed journals and whose interventions are used in policy making. Indeed former, emeritus, and retired academics have been identified to continue to play roles in controversial fields far beyond alcohol (Collins et al., 2017). The examples of boundary work discussed in this article call into question the legitimacy of interventions by this type of industry-sponsored actor in different ways. This article has used three illustrative examples in which the researchers addressed legitimacy on technical grounds, as an actor, and as a distinct body of work.

Boundary work involves appeals to ideas about the nature of science (Gieryn, 1983). In the example above, we see how Nelson draws on ideas of supposedly universal scientific norms (Merton, 1973; Mulkay, 1976) to claim that all that should matter is the knowledge claims that are being made and that anything else—ethical concerns regarding funding for research, for example—is inherently unscientific. Yet the boundaries of the sciences, and their subfields, are not a natural given; the practical accomplishment of demarcation is a social process. The norms at play in any particular research community are those that have developed to meet the specific needs of that community; we see that when Nelson makes an appeal to the norms of economics. In this regard, boundary work is double sided.

Furthermore, norms change over time. A striking example of this is the way in which many health journals have come to reject, even for review, submissions by any author funded by the tobacco industry (Godlee et al.,

2013). For example, the *British Medical Journal (BMJ)* at one point rejected calls for a ban, saying: "The *BMJ* is passionately antitobacco, but we are also passionately prodebate and proscience. A ban would be antiscience" (Tonks, 2003, quoted in Godlee et al., 2013). A decade later, the *BMJ* changed its position (Godlee et al., 2013). Although this was criticized as antiscience by the industry (Proctor, 2013), the *BMJ* saw a need for boundary work tailored to the threat posed by the tobacco industry (Godlee et al., 2013). Such considerations have been highly relevant to the alcohol field given that the alcohol industry has sought to learn from the tobacco industry in developing its approaches to science (Bartlett et al., 2023).

Similarly, regarding industry funding of alcohol science, Robin Room suggested that "Norms have shifted on this last question in the decades I have been working in the field. In the 1960s, at least in English-speaking countries, there was not much reputational damage from accepting funding from alcohol industry—related foundations. Now the alcohol field is becoming more like the tobacco field, in which a bright line splits the field between researchers who have accepted tobacco industry money and those who will not" (Room, 2016, p. 16). What is "norm-violating" in one field of research is not necessarily the same as that which is norm-violating in another, and the normative structures of research fields change over time.

The present study has been a collaboration between a sociologist of science working on alcohol research and a longstanding member of the alcohol research community, who himself has been a practitioner of boundary work within the community (Andreasson & McCambridge, 2016, 2017). Reflexivity thinking suggests that this combination provides both some critical distance and a deeper understanding of the community in question, and we have endeavored to make our analytic process as transparent as possible. Readers may judge if they find a hint of bias. We interpret the findings of this study to indicate that the alcohol field is at an early stage of doing the boundary work that is needed to face up to the challenge posed by the alcohol industry. This is notwithstanding the longstanding awareness of the various ways in which the alcohol industry uses and contests science to obstruct public health policies (Babor et al., 1996a, 1996b; Edwards et al., 1995; Wallack, 1992).

This raises questions of who does—and who will do—the boundary work, how, and where? The examples studied here are of the performance of boundary work by small groups of individual scientists in the published content of peerreviewed journals. But this is not the only place where the (social) work of science is done. As we have acknowledged, what cannot be seen here are the ways in which journal editors and reviewers deal with industry interventions of this kind, or others, or the ways in which academic societies, conference organizers, and other institutions of a research community routinely do boundary work.

Better understanding of alcohol industry scientific interventions, and of the reactions of the alcohol research community itself, will lead to better informed, collectively produced, and indeed more ethical boundary work. We suggest that a key implication of this study is that the boundary work needs to be made more transparent. This requires debate in the process of establishing stronger norms. We suggest that this is essential if the field is to be more robust to industry intrusions into the scientific literature that are motivated primarily by considerations in conflict with the goals of the research community. We invite journals, academic societies, and other key institutions in the alcohol field to promote research and discussions about the practices of the alcohol industry compared with other corporate sectors, and the approaches of other research communities to these kinds of interventions.

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