




How food companies use social media to influence policy debates: a framework of Australian ultra-processed food industry Twitter data

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Abstract

Objective: To understand if, and how, Australian ultra-processed food industry actors use Twitter to influence food and health policy debates and produce a conceptual framework to describe such influence.

Design: Twitter data of prominent industry actors were defined through purposive sampling and inductively coded to investigate possible influence on food and health policy debates. These are described using descriptive statistics and coded extracts.

Setting: Australia.

Participants: Twitter accounts of nine prominent ultra-processed food industry actors, including major trade associations.

Results: Ultra-processed food industry actors actively used Twitter to influence food and health policy debates. Seven overarching strategies were identified: co-opting public health narratives; opposing regulation; supporting voluntary, co- or self-regulation; engaging policy processes and decision-makers; linking regulatory environments to the need for ongoing profitability; affecting public perceptions and value judgements; and using ignorance claims to distort policy narratives. Each lobbying strategy is underpinned with tactics described throughout and captured in a framework.

Conclusions: The current study creates a framework to monitor how food industry actors can use social media to influence food and health policy debates. As such, social media appears to be not only an important commercial determinant of health for brand marketing, but also an extension of lobbying practices to reshape public perceptions of corporate conduct and policy-making.

Keywords

Policy
Commercial determinants of health
Corporate political activity
Private sector engagement
Ultra-processed food

It is well established that large food companies undertake lobbying of governments to advance their own interests^(1–3). This includes lobbying against regulations and policies designed to advance public health objectives, by attempting to block or delay legislation⁽¹⁾, establish voluntary or self-regulatory ‘pledges’ and ‘codes of conduct’⁽²⁾ and reframe diet-related diseases as failures of personal choice, rather than the outcome of commercial forces that prime those choices⁽⁴⁾. In Australia, certain large food companies also proactively build cross-government relationships with Federal Parliamentary stakeholders⁽⁵⁾ and register as clients of lobbying firms^(6,7). As such, like others globally, Australia’s food system is shaped by the ‘material’ powers of food industry lobbying parliamentary affairs, where

influence is exerted over political processes to create supply chains favourable to their interests⁽⁸⁾.

However, political influence is not confined to the corridors of legislative chambers. In addition to lobbying regulation, food companies also readily deploy ‘discursive’ powers to influence how populations perceive their foods and beverages⁽⁸⁾. Globally, this includes designing sophisticated messaging strategies to reframe media debates to suit their interests, such as presenting corporations as reputable voices on public health policy, and mediating concerns about their business practices⁽⁹⁾. Political theory dictates that discursive power is crucial in shaping how voters understand and respond to a policy proposal, creating an evolving set of social conditions that can enable or

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prevent policy change⁽¹⁰⁾. These powers are also central to nutrition policy-making in Australia, with public acceptability considered an important pre-requisite of policy change⁽¹¹⁾.

Globally, unhealthy commodity actors use the media to legitimise or discredit norms and discourses towards their brands and products⁽³⁾. This can shape what information is presented to the public, how it is done so and what is omitted^(12,13), and influence how people understand and react to the business practices of these actors. In particular, social media enables ultra-processed food companies to reach consumers including children and adolescents^(14–18), through sophisticated marketing strategies^(19–21) that establish brand associations and product preferences^(14,22) and increase intended⁽²³⁾ and actual food consumption^(24,25). Australian food companies also use digital media to promote their corporate social responsibility activities⁽²⁶⁾, echoing global tobacco industry efforts to co-opt socially desirable themes such as gender equity⁽²⁷⁾ and philanthropy⁽²⁸⁾ in an attempt to rebuild a positive public image.

One prominent social media platform readily used by Australian politicians is Twitter⁽²⁹⁾. Content disseminated through Twitter can affect sentiment⁽³⁰⁾ and trust⁽³¹⁾ in a brand, and construct social norms towards its products⁽³²⁾. However, this peer-to-peer sharing of food-related content can also disseminate inaccurate, incorrect or misleading information⁽³³⁾. Despite its prominence, understanding how food industry actors use Twitter appears comparatively under-researched relative to other sites such as Facebook^(14,19–21,34,35), YouTube^(20,24,36) and cross-platform reviews^(37–40).

To date, much social media analysis has focused on how unhealthy commodities are marketed^(14–25). However, the methodology is also valuable for investigating corporate influence on policy-making. In alcohol policy, Twitter has been used to measure public opinion towards policy debates⁽⁴¹⁾, monitor how industry-funded organisations undermine health information⁽⁴²⁾ and evaluate compliance with self-regulatory marketing codes^(43,44). In tobacco, two recent studies have gone a step further, finding companies actively use Facebook⁽⁴⁵⁾ and Twitter⁽⁴⁶⁾ to influence health policy debates. Notably, these studies explore how frequently policy issues were mentioned, rather than the underpinning strategies and tactics used to do so.

Important frameworks to map the influence of food companies on policy-making processes are recently emerging. These note that food companies deploy a range of strategies to build public support for the policy conditions that suit their interests and fragment opposition from public health advocates^(6,47,48). One notable framework to monitor corporate political activity draws on Twitter data as one of several data sets, noting the social media platform is an outlet for industry actors to deploy information and messaging strategies that depict them positively and promote narratives that favour their interests⁽⁶⁾.

Given the widespread use of social media to promote ultra-processed foods and beverages, the proactive use of these platforms by tobacco companies to influence policy debates, and the impact of discursive power on political decisions, the absence of a specific analysis of social media as a potential food industry lobbying tool is a research gap. To address this, the current study sought to understand if, and how, Australian ultra-processed food industry actors use social media to influence food or health policy debates and produce a conceptual framework to describe such influence.

Methodology

The current study undertook a social media analysis of the Twitter accounts of prominent ultra-processed food industry actors in Australia, to understand the extent to which content disseminated through their accounts may have been used to influence food or health policy debates. Ultra-processed food industry actors were defined by adapting McCambridge *et al.*'s⁽⁴⁹⁾ definition of alcoholic beverage industry actors, as those '*involved in the production, distribution and marketing [of ultra-processed foods and beverages] ... as well as trade organisations and social aspect organisations*'.

Ultra-processed foods and beverages were defined as containing at least one item characteristic of NOVA Group 4. The NOVA system was created to provide simple classifications of foods and beverages based on their degree of processing, with ultra-processing (group 4) designed to '*create branded, convenient (durable, ready to consume), attractive (hyper-palatable) and highly profitable (low-cost ingredients) food products designed to displace all other food groups ... [that are also] usually packaged attractively and marketed intensively*'⁽⁵⁰⁾. While food brands are not explicitly classified using NOVA, and some of these item characteristics are open to interpretation, the current study included actors that could be reasonably interpreted as meeting NOVA Group 4.

Additionally, social aspect organisations are those '*set up by ... industry to represent the industry in policy debate and in social and public discourse about the harm done by [the unhealthy commodity]*'⁽⁵¹⁾. The activities of these groups include: attempting to influence the policies of governments; becoming members of groups to broaden their policy influence and respectability; promoting scientific endeavours, and; preparing consensus statements and codes of practice⁽⁵¹⁾.

Twitter accounts were defined using purposive sampling that met four inclusion criteria. Firstly, in line with best practice for identifying food industry actors that have lobbied the Australian Government⁽⁴⁸⁾, Euromonitor International market share data were used to identify prominent ultra-processed food and non-alcoholic beverage industry actors. Major national trade associations



representing industry interests were also included, capturing another form of lobbying where corporations fund third-party groups to influence on their behalf⁽⁹⁾. Notably, while a significant contributor to adult energy intake, alcoholic beverage actors were excluded from analysis, following precedent in the commercial determinants of health literature separating the ultra-processed food and alcohol industries in research and conceptual frameworks⁽⁵²⁾. Secondly, accounts were only included for analysis if the actor had also submitted written evidence to the 45th Federal Parliament of Australia's Senate Select Committee into the Obesity Epidemic in Australia. This was used as a criterion to ensure the industry actors included had recently engaged in influencing the food and health policy activities of the Australian Parliament. Thirdly, actors were only included if they maintained an active Twitter account during this Parliament, which commenced on 30 August 2016 and dissolved on 04 April 2019. Fourthly, accounts were only included if their intended audience was the Australian population. This was to ensure data could be reasonably interpreted as seeking to influence policy debates that affect the Australian Government, rather than other jurisdictions. This was defined as any of: an Australian-focused Twitter account of a multinational corporation (e.g., @CocaColaAu), an Australian-focused industry association (e.g., @DairyAustralia) or an Australian-based company (e.g., @ArnottsBikkies).

Once actors that met the inclusion criteria were identified, their Twitter account tweets, retweets and message replies between 30 August 2016 and 04 April 2019 were downloaded using NCapture in August 2019. As per the second inclusion criteria, these dates align with the term of the 45th Federal Parliament of Australia. These data were then imported in NVivo 12 and subject to a two-step coding process: a preliminary inductive code to identify emerging themes and a revised codification to synthesise data into a framework of lobbying practices, undertaken between August 2019 and April 2020. All three forms of content were coded to capture the range of activities that could be used to influence policy debates.

Given only two studies^(45,46) have investigated how unhealthy commodity actors use social media exclusively to influence policy debates, both analysing the tobacco industry, no single framework exists against which to deductively code lobbying strategies deployed by industry actors on social media. Instead, analysis drew on precedent in these studies. In line with Watts *et al.*, data were first coded to exclude content not primarily intended to influence food and health policy debates, such as content concerning finances and governance, awards, career opportunities, consumer queries and public relations (PR). All remaining data interpreted as having a primary intention of influencing food or health policy debates were then coded inductively into a thematic framework of influencing strategies and tactics. In line with both studies, findings

are presented using descriptive statistics and coded extracts.

Two specific ethical considerations were made. Firstly, to minimise risk that highlighting a corporation's lobbying practices may unduly impact its economic standing, only data already in the public domain were used, and contextual information provided to avoid generalisations. Secondly, protecting the confidentiality of third-party Twitter users was necessary. As making ethical decisions using internet data is '*a deliberative process [through which] researchers should consult . . . published scholarship within one's discipline but also in other disciplines*'⁽⁵³⁾, the current study followed Association of Internet Researchers Working Committee guidance⁽⁵³⁾ and existing best practice⁽⁴⁶⁾, to anonymise interactions involving third parties.

Results

Nine ultra-processed food industry actors met the three inclusion criteria. These actors were either industry actors (n 6) or a major trade association (n 3) representing ultra-processed food and beverage product categories. These accounts published 4143 tweets, retweets and replies between 30 August 2016 and 04 April 2019.

Of these 4143 tweets, nine were not accessible due to having expired links, content behind a paywall or content not being published in English. As shown in Table 1, a further 2897 were identified as not having the primary purpose of influencing food or health policy debates. Most commonly, these were either user interactions unrelated to policy debates (n 964), brand, product or service advertising (n 726) or events and PR (n 358), while one multi-sector trade association also focused on influencing other policy debates such as construction and mining (n 279).

After discounting these non-food or health policy-related tweets, 1237 tweets with potential to influence food or health policy debates were identified, with each tweet possible to contain more than one influencing tactic. Table 2 shows a framework of the lobbying strategies and underpinning influencing arguments and tactics identified, with a full summary of these approaches presented in Table 3. A sample of coding is provided in online supplementary material, Supplemental Annex 2.

The most frequently tweeted lobbying strategy to shape perceptions of food and health policy debates was 'co-opting public health narratives' (n 483 instances). Most frequently, this strategy involved inputting into health advocate discussions on social media (n 196), publicising data or guidance from domestic and international health agencies, such as the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the UN Sustainable Development Goals and the WHO (n 126) and showcasing partnerships with Australian NGO and health groups (n 32). Certain actors also used Twitter to dispute the evidence base or rationale underpinning a policy



**Table 1** Non-food or health policy-related tweets, retweets and replies from included ultra-processed food industry actors

Nature of tweet*	Total occurrences	Arnott's biscuits	Australian Beverage Council	Australian Food and Grocery Council	Australian Industry Group	Coca-Cola Amatil	Coca-Cola Australia	Dairy Australia	KFC Australia	Nestle Australia
Non-policy related										
Brand, product or service advertising	726	3	15	6	20	106	93	217	168	98
Career opportunities, working culture, awards	321	0	0	2	11	160	9	7	0	132
Company strategy and results	155	0	2	1	4	100	3	43	0	2
Consumer inquiries/engagement	964	810	7	2	0	1	1	57	0	86
Events and PR	358	0	17	39	100	101	1	87	3	10
Media clarifications	6	1	0	0	0	5	0	0	0	0
Notable dates (e.g., public holidays)	53	0	1	0	0	10	2	12	9	19
Research and development	35	0	0	0	0	5	2	0	0	28
Policy debates not linked to food and health	279	0	0	0	279	0	0	0	0	0
Not accessible	0	0	0	0	0	0	0	0	0	0
Behind paywall	3	0	2	1	0	0	0	0	0	0
Link expired	5	0	1	0	0	3	0	0	1	0
Non-English language	1	0	0	0	0	1	0	0	0	0

*Definitions can be found in online supplementary material, Supplemental Annex 1.

proposal (*n* 73). Examples were also identified for inferring health advocates supporting fiscal measures on sugar-sweetened beverages (SSB) were misinformed or not credible (*n* 45), with one actor positioning them as 'our most elite health professionals...', 'fact-averse nanny statist...' and '... #lazy'.

@BeveragesCouncil, 19 September 2017, tactic of disputing evidence or rationale underpinning a policy proposal, and presenting fiscal measures as discriminatory or regressive:

'[@anonymised] Discriminatory taxes like a soft drink tax have had no discernible impact on public health ANYWHERE in the world. <https://t.co/qF3UasAYuG>'

After co-opting public health narratives, 'value judgements' were commonly deployed to affect public perceptions of an industry actor, in a manner that would likely favour policy responses to protect their existing business practices (*n* 344). These frames centred around corporate social responsibility campaigns (*n* 305), supporting the role of local business in the supply chain (*n* 30) and aligning with socially desirable characteristics, such as convenience and freshness (*n* 9).

@AusFoodGrocery, 30 August 2018, tactic of emphasising local supply chain characteristics and providing electorate-specific data:

'Food & grocery manufacturing in the federal electorate of Murray generates more than \$5bn in output per year and employs 8,600 people. #wearefromhere' <https://t.co/ydKxWtjsBz>

'Opposing regulatory policies' (*n* 59) most regularly manifested through disputing or rejecting regulatory policy proposals, most notably the introduction of fiscal measures on SSB. Examples were identified for existing policy environments either being sufficiently strict or inefficient, burdensome and complex, maintaining the status-quo or entrenching a paradigm of deregulation.

@BeveragesCouncil, 7 September 2018, tactic of positioning existing regulations as strict enough:

'Australia has some of the most stringent regs on energy drinks in the world. We recently revamped our energy drinks commitments, including responsible sale and promotion right across Australia. Check them out for yourself! <https://t.co/HpLW6MKUjS>'

**Table 2** Food or health policy-related tweets, retweets and replies from included ultra-processed food industry actors

Lobbying strategy (underpinned with influencing tactics)*	Total occurrences	Arnott's Biscuits	Australian Beverage Council	Australian Food and Grocery Council	Australian Industry Group	Coca-Cola Amatil	Coca-Cola Australia	Dairy Australia	KFC Australia	Nestle Australia
Co-opt public health narratives										
Message/input into health stakeholder conversations	196	2	188	3	0	0	0	0	0	3
Align messaging with global health institutions (e.g., WHO Sustainable Development Goals)	100	0	14	0	0	1	0	1	0	84
Critique evidence or rationale underpinning policy proposal	73	0	72	1	0	0	0	0	0	0
Depict health stakeholders as misinformed, radical or not credible	45	0	45	0	0	0	0	0	0	0
Align messaging with NGOs/health groups	32	0	0	1	1	12	9	0	0	9
Align messaging with national health institutions (e.g., CSIRO)	26	0	23	0	0	0	0	3	0	0
Acknowledge an overarching policy problem	11	0	8	0	0	1	0	2	0	0
Engage policy processes and decision-makers										
Tag or mention policy-maker/institution	62	0	37	6	13	5	0	0	1	0
Publicise government policy	32	0	6	1	17	4	0	3	0	1
Attend or host political events	16	0	1	2	7	4	0	0	0	2
Publicise tribunal or court decisions	14	0	0	0	14	0	0	0	0	0
Retweet policy-maker/institution	5	0	3	0	0	2	0	0	0	0
Create electorate-specific data	5	0	0	5	0	0	0	0	0	0
Reference historical political figures	2	0	1	0	0	1	0	0	0	0
Link policy environment to need for ongoing profitability										
Support trade liberalisation and global exports	28	0	0	4	16	5	0	2	0	1
Support 'business-friendly' policy reforms	27	0	0	0	18	8	0	1	0	0
Fiscal policies as discriminatory/regressive	24	0	24	0	0	0	0	0	0	0
Champion vitalness of sector to economy	17	0	1	14	1	0	0	1	0	0
Current economic climate difficult enough without policy intervention	14	0	0	2	5	2	0	5	0	0
Link policy environment to adverse employment implications	8	0	2	5	1	0	0	0	0	0
Link policy environment to adverse cost implications	4	0	4	0	0	0	0	0	0	0

**Table 2** *Continued*

Lobbying strategy (underpinned with influencing tactics)*	Total occurrences	Arnott's Biscuits	Australian Beverage Council	Australian Food and Grocery Council	Australian Industry Group	Coca-Cola Amatil	Coca-Cola Australia	Dairy Australia	KFC Australia	Nestle Australia
Emphasise tax revenue contributions	2	0	0	1	1	0	0	0	0	0
Oppose regulation										
Dispute or reject regulatory policy proposals	43	0	43	0	0	0	0	0	0	0
Existing regulations are burdensome, complex or inefficient	7	0	0	1	1	5	0	0	0	0
Existing regulations are strict enough	4	0	2	0	1	1	0	0	0	0
Regulatory stakeholders are authoritarian or 'nanny-statist'	4	0	4	0	0	0	0	0	0	0
Risk of regulatory creep	1	0	1	0	0	0	0	0	0	0
Shape public perceptions and value judgements										
Corporate social responsibility campaigns	305	0	0	0	0	44	9	1	0	251
Highlight local component of supply chains	30	0	0	12	0	17	0	0	0	1
Align with socially desirable characteristics	9	0	0	0	0	7	0	0	0	2
Support voluntary, self- or co-regulatory policies										
Industry recognises role to provide healthier alternatives	78	0	15	1	0	12	11	2	0	37
Advocate 'downstream' interventions (e.g., education)	67	0	7	0	0	0	0	0	0	60
Support self-/co-regulation with government	63	0	14	3	0	25	3	1	0	17
Advocate balanced diets, choice, exercise or personal/parental responsibility	61	0	22	1	0	5	3	0	0	30
Support delays to policy timelines	2	0	2	0	0	0	0	0	0	0
Use ignorance claims to distort policy narratives										
Complexity/ 'whataboutism' to contest single interventions	36	0	36	0	0	0	0	0	0	0
Mischaracterise policy outcomes (e.g., single interventions reducing BMI)	21	0	21	0	0	0	0	0	0	0
Publicising content of front-groups/astroturf organisations	8	0	8	0	0	0	0	0	0	0
Limited global uptake suggests policy ineffectual	2	0	2	0	0	0	0	0	0	0

*Strategy and tactic definitions can be found in online supplementary material, Supplemental Annex 1.

In contrast, industry actors demonstrated widespread support for voluntary, self- and co-regulatory policy interventions ($n = 271$) and were keen to recognise their role in offering healthier product portfolios. The benefits of

co-designed interventions were also conceptualised through narratives of downstream interventions, such as education or awareness raising, personal or parental responsibility, choice, balance and exercise.

Table 3 Influencing strategies and tactics deployed by Australian ultra-processed food industry actors to shape food and health policy narratives

Strategic theme	Examples of arguments and tactics
Co-opt public health narratives	<ul style="list-style-type: none"> Align messaging with health groups and NGOs (e.g., malnutrition, sustainability or food waste) Align messaging with national health governance (e.g., Department of Health) Align messaging with international health governance (e.g., WHO/UN Sustainable Development Goals) Challenge evidence of policy effectiveness Depict health advocates as radical or not credible Input into health stakeholder Twitter conversations Note a policy problem but reject evidence-based responses
Oppose regulation	<ul style="list-style-type: none"> Dispute or reject regulatory policy proposals (e.g., taxation or point-of-sale restrictions) Existing regulations are strict enough Existing regulations are burdensome, complex or inefficient Regulatory agencies are authoritarian or 'nanny-statist' Support neoliberal tax reform
Support voluntary, co- or self-regulation	<ul style="list-style-type: none"> Advocate 'downstream' interventions (e.g., education or targeted programs) Advocate balance, choice and/or personal responsibility Champion role to provide healthier alternative products Support industry self-regulation, or co-regulation with government Support delays to policy timelines
Engage policy processes and decision-makers	<ul style="list-style-type: none"> Attend or host political events Create electorate-specific content Publicise government policy Reference historical political figures Retweet policy-maker content Tag policy-makers Tweet policy-makers (both positively and negatively)
Link policy decisions to ongoing profitability	<ul style="list-style-type: none"> Champion vitality of sector to economy Deprioritise health externalities Emphasise industry tax revenue contributions Frame fiscal health policies as regressive Support 'business-friendly' regulation Support reforms to boost global exports and growth Link policy change to job losses or economic hardship Present business-as-usual as difficult, implying policy change could worsen operations
Affect public perceptions and value judgements of policy change	<ul style="list-style-type: none"> Align with socially desirable characteristics (e.g., being Australian-owned, consumer-conscious, attune to family and community values) Highlight local components of supply chains Run corporate social responsibility campaigns (e.g., philanthropy) Support small-to-medium enterprises
Use ignorance claims to distort policy narratives	<ul style="list-style-type: none"> Complexity and 'whataboutism' framings Limited policy uptake undermines evidence of policy effectiveness Mischaracterise a policy's intended outcomes (e.g., individual interventions failing to 'solve' obesity) Promote industry-funded front-group or 'astroturf' organisation content

@CocaColaAU, 7 July 2017, tactic of promoting industry self-regulation:

'We're continuing our commitment to reduce sugar across our range of drinks - Here are some actions we're taking: <https://t.co/CsW4nZq09m>' <https://t.co/IGAUE2BB0a>

As an extension of the deregulation paradigm, policy debates were linked to the need to sustain ongoing corporate profitability and business-friendly regulatory conditions (*n* 124). Tactics were deployed to infer that market intervention could be prohibitive or unviable, such as having adverse cost and employment implications, while supporting policy reforms to reduce corporation tax and increase opportunities for global export. One actor also dismissed fiscal measures on SSB as discriminatory and regressive.

@CocaColaAmatil retweet, 19 February 2018, tactic of supporting business-favourable policy reforms:

'We can't sit on our hands while our global competitors cut their company tax rates. Aussie businesses are making investment decisions today. We'll be left behind. <https://t.co/LkGjTBPz1Y>

Twitter was also used to engage directly with policy processes and decision-makers (*n* 136). As highlighted, this engagement was deployed through: mentioning policy-makers and institutions; tweeting and retweeting their accounts; publicising government policy, tribunal decisions or political events hosted or attended by industry; and retweeting content. As shown in the coded extract earlier, one account also produced content specific to Parliamentary electorates.



@AusFoodGrocery, 31 July 2017, tactic of tweeting or mentioning policy-makers/institutions:

'Big thanks to [@n 5 anonymised Parliamentarians] for attending west Sydney food manufacturing form' [sic]

Finally, a series of 'ignorance claims' were deployed to reframe policy narratives ($n = 67$). Ignorance claims were coded separately from co-opting public health narratives, as they focused on contesting a policy beyond questioning its underpinning evidence. These claims took four forms: mischaracterising a policy's intended outcomes to undermine its effectiveness (e.g., rejecting interventions where they do not 'solve' obesity); using 'whataboutism' and complexity to suggest interventions focus on other product categories; suggesting a low global uptake of a policy reflects its ineffectiveness; and promoting the content of front-groups or 'astroturf' organisations.

@BeveragesCouncil, 8 June 2017, tactic of 'mischaracterising a policy's intended outcomes':

'[@anonymised] So restricting certain drinks from sale in hospitals WILL solve the overweight/obesity problem?'

Discussion

To date, research exploring how ultra-processed food industry actors use social media has predominantly focused on how they promote their brands and products. This study finds these actors may also use Twitter to actively influence food and health policy debates, and identifies seven pervasive influencing strategies used to do so. Several of these strategies align with existing analyses of the political practices of ultra-processed food industry actors globally^(1,3) and in Australia^(6,47,48), that note sophisticated information and messaging strategies are a core component of industry lobbying.

Both the most frequently-tweeted lobbying strategy of 'co-opting public health narratives', and the strategy of deploying 'ignorance claims' that distort policy narratives, may serve to reshape how evidence and policies are perceived. The term '*ignorance claims*'⁽⁵⁴⁾ was first coined in 1993, and is used to describe how rhetorical assertions about scientific unknowns and uncertainties can be used to attack narratives that threaten the interests of an actor⁽⁵⁵⁾. For example, mischaracterising a policy's intended outcomes to infer that if single interventions did not 'solve' the complex problem of obesity they would be ineffective, is a frame that is deployed by unhealthy food and beverage actors globally in industry publications, trade press⁽¹²⁾ and media coverage of SSB tax debates⁽⁵⁶⁻⁵⁸⁾.

Co-opting public health narratives may also position ultra-processed industry actors as an engaged and reliable source of health information⁽⁹⁾. With research finding

alcohol industry actors significantly more likely to frame health information on Twitter as consumption behaviours, rather than consumption-related diseases⁽⁴²⁾, this has potentially concerning ramifications for how diet-related diseases are understood. Alternatively, it may present industry actors as arbiters of the evidence base, making continuous demands for more research to create a 'policy cacophony'⁽⁵⁹⁾ that undermines progress. Such co-option also aligns with international analyses of internal Coca-Cola documents and emails, finding senior executives encouraged a strategy of highlighting the limitations of academic evidence^(60,61), while manufacturing doubt is a tactic of the tobacco^(62,63) and alcohol^(9,64) industries. In reality, risk communication research notes that when uncertainty is created around evidence, it can make it harder for audiences to be certain about what information is correct⁽⁶⁵⁾.

Additionally, value judgements were another strategic theme that may serve to affect public perceptions towards policy change, in a manner that entrenches business-as-usual industry interests. Given our perceptions and judgements inform how we condone, or criticise, corporate conduct – and by extension, the policies that affect this conduct – industry information and messaging strategies are likely to affect public attitudes towards a policy change. For example, aligning with socially-desirable characteristics, such as the local contributions of supply chains, may garner support for the continuation of existing businesses practices. Alternatively, corporate social responsibility campaigns can serve as a means of demonstrating a company's ethical and dependable credentials, without the need for government intervention. Just as with co-opting public health narratives, deploying these value judgements may also fragment or destabilise opposition to industry interests, identified as an established lobbying practice of Australian food industry actors^(6,48), by positioning industry as dependable stakeholders in the policy-making process.

The ultra-processed food industry's well-established preferences for voluntary initiatives, self- and co-regulation instead of regulation, identified in research globally^(1,2), also featured in these findings. In addition to opposing regulatory policies and disputing their effectiveness, policy debates were tied to the need to sustain ongoing profitability. This trade-off between regulation and profitability risks entrenching the market failures of ultra-processed foods, where profits are privatised while disease and environmental costs are externalised to taxpayers and governments. The framing may also serve to deprioritise health externalities, such as the well-documented burden of diet-related ill-health on the Australian economy⁽⁶⁶⁾ and its productivity⁽⁶⁷⁾, below securing regulatory environments that increase the domestic and international consumption of ultra-processed food. Consistent with research on Australian^(68,69) and global⁽⁷⁰⁻⁷²⁾ food export policy-making, this implies health externalities may be an unproblematic outcome of trade liberalisation.

Such preferences for industry-led practices may have the intended effect of shifting policy debates away from population-level regulation, to less-effective and/or more inequitable alternatives. In examples that focus on education or awareness raising, this may also have the effect of recasting caloric overconsumption away from structural and commercial drivers, and onto the deficiencies of individuals⁽⁴⁾. For example, the role of fiscal measures to reduce SSB consumption was a common policy debate, which industry actors criticised as being ineffective while promoting an alternative voluntary sugar reduction 'pledge'⁽⁷³⁾. In addition to criticisms made elsewhere about this pledge, such as the backdating of baseline data⁽⁷⁴⁾, international research finds numerous problems with such industry-driven food policy alternatives, including:

- setting targets that are not independently monitored or require access to commercial data^(75–77);
- having 'woefully inadequate' mechanisms for delivery⁽⁷⁸⁾;
- enabling industry to claim progress not substantiated by academic scrutiny⁽⁷⁹⁾;
- entrenching corporate power imbalances by over-exposing industry interests relative to public health⁽⁸⁰⁾;
- not pushing companies to go beyond 'business-as-usual' activities⁽⁷⁷⁾;
- creating an image of public concern to ward off government action⁽²⁾; and
- having no evidence of effectiveness⁽¹⁾.

Alongside information and messaging strategies to shape pervasive narratives and prime a preferred approach to policy design, Twitter was also used directly by industry actors to engage policy processes and decision-makers. The purpose of this interaction is likely an attempt to establish or build relationships with political stakeholders. There may be several benefits of industry actors doing so, including potential to:

- open a direct communication channel with a political stakeholder, to share content and key messages with them at electorate, state and federal level, with the potential for this content to be shared more widely among the stakeholder's audience;
- engage with a stakeholder in 'real-time' where alternative forms of communication, such as sending correspondence to their office, are slower processes;
- monitor their positions on policy debates; and
- document interactions such as participating in parliamentary events and meetings.

Strengths and limitations

In analysing 4143 tweets from nine industry actors and trade associations, the volume of data used to construct this

framework is thoroughly relative to both existing studies exploring how the tobacco industry influences policy debates on social media. Of these, one analysed a month of Facebook posts (n 25) from one tobacco company⁽⁴⁵⁾, while the other analysed 4 years of tweets (n 3301) from the leading four tobacco companies⁽⁴⁶⁾.

By creating a framework of messaging strategies and arguments used on social media with a primary intention of influencing policy debates, a strength of this framework is that it can be used in several ways. Findings can help policy-makers to be aware of how food industry actors may attempt to lobby them, and help civil society actors to monitor these attempts. It also highlights novel examples of lobbying practices, such as the targeted use of electorate-specific data, that warrant further scrutiny. Additionally, this framework may be particularly useful for comparative analyses measuring the extent that food industry lobbying tactics are adopted in parliamentary discussions, documents and legislation, by drawing on data such as Hansard – the official report of proceedings of the Australian Parliament – ministerial consultation responses, and political party manifestos. This focus on specific arguments means that although being designed from social media data, the framework can also be used to monitor how industry actors attempt to frame food policy debates on other broadcast and non-broadcast media channels.

Notwithstanding, there are several limitations to the study. Firstly, this is a first iteration of applying a tobacco industry social media analysis methodology to monitor how ultra-processed food industry actors use social media to influence policy debates. It is unlikely to be comprehensive and will benefit from testing and refining across other food policy contexts. For example, while found in previous tobacco industry research⁽⁴⁶⁾, industry actors did not use Twitter to oppose marketing restrictions. This is likely because the Australian ultra-processed food industry has already established a self-regulatory advertising code of practice⁽⁸¹⁾ and may be hesitant to highlight other interventions. Similarly, food was not positioned as a legal product that should not be restricted, another tobacco industry argument⁽⁸²⁾.

Secondly, data were single-coded and pervasive influencing techniques are subject to interpretation. In any case, the current study attempts to describe the overall nature of industry lobbying strategies and tactics to frame food and health policies, rather than making relative comparisons of the influencing intentions of any one actor. Findings should be interpreted as such. For example, the current analysis does not distinguish between how Australian-owned companies and transnational companies producing Australian-specific content mobilised social media. Notwithstanding, a recent review has found comparative analyses of how different corporations are represented in media are 'particularly lacking'⁽⁸³⁾, and comparisons between food industry actors could explore if scale, product or market position affects their lobbying strategy.

Thirdly, industry actors frequently used Twitter to promote brand, product and PR content, which was coded



as non-policy related in line with existing precedent⁽⁴⁶⁾. However, as previously noted⁽¹¹⁾, public acceptability is a key variable in Australian nutrition policy change. As with corporate social responsibility, brand, product and PR content is likely to foster positive sentiment with consumers (and by extension, voters), that in turn affects their acceptance of corporate conduct. As such, this distinction is imperfect and an ongoing research challenge. Future analysis would benefit from exploring these nuances, to better understand the impact of content not necessarily designed to influence a specific policy debate, but to entrench an acceptance of business practices that future policy change could disrupt.

Finally, the current study considered Twitter as a passive platform from which industry data were gathered. In reality, social media's business model is underpinned by '... monetising attention through advertising'⁽⁸⁴⁾, with a commercial imperative to promote brands to segmented audiences. For example, in 2015 Twitter acquired Niche, a database of social media influencers that has matched SSB companies to influencers popular with their target audiences⁽⁸⁵⁾. Our analysis did not investigate if policy-related tweets had been amplified with paid-promotion, or what audiences they reached. Other important considerations include how Twitter actively lobbies the Australian Government, such as in a recent response to an Australian Competition & Consumer Commission inquiry into digital platforms⁽⁸⁶⁾, and facilitates 'bots' that disseminate political bias and propaganda^(87,88). As such, while the current study has focused on content disseminated on Twitter, closer understanding of the platform's commercial and political interests is warranted.

Conclusion

Ultra-processed food industry actors use social media to influence food and health policy debates, extending their lobbying practices beyond legislative corridors to the digital media landscape. Analysis of Australian ultra-processed food industry Twitter data has led to the creation of a framework, that describes and monitors a range of influencing strategies used. These include building relationships with decision-makers, opposing regulation, and entrenching favourable framings of their brands and products. Finally, I hope this framework can be useful for researchers and policy-makers, who are seeking to monitor industry influence on nutrition, supply chain and health policy-making in other food systems contexts.

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Supplementary material

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