Communication & Language at Work (2020) Vol. 7(1), 15-27

COMMUNICATION &LANGUAGE at work

Health-related nudging: A critical multimodal approach using Foucault and Habermas

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Abstract

The aim of this paper is to present a methodological approach that provides analytical, critical and normative purchase on nudges' bypassing of reflection, using a combination of multimodal analysis, Foucauldian theory, and Habermas's (1996) concept of deliberative democracy. The approach is demonstrated using an example of a health-related nudge from the Danish context: healthy product placement in a supermaket. Multimodal analysis highlights how various modes (colour, symbol, front and back, positioning and discourse) contribute meanings to the nudge. A Foucauldian perspective provides critical perspectives on nudges as shaping practices, as short of epistemic content and thus potentially difficult to resist, and as representing a politicisation of public space. Nudges' lack of transparency is discussed in relation to Habermas's normative framework of deliberative democracy where recognising public perspectives and ensuring consensus are key. Limitations of the article include a smaller data set; however, the data are used to illustrate the methodological approach. On the basis of the findings, I argue for the importance of furthering critical public discourse on nudging. That way, nudgees may be better positioned to spot nudges, and the implications of policymakers using this technique of governance can be more effectively scrutinised.

Keywords

Nudging, multimodal analysis, biopower, governmentality, power/space, deliberative democracy

1 Introduction

As information-based campaigns are often expensive and largely ineffective in producing healthier behaviours amongst the general public (WHO Regional Committee for Europe, 2008; Kelly & Barker, 2016; Marteau, Ogilvie, Roland, Suhrcke, & Kelly, 2011), alternative techniques such as nudging have been explored in health-promoting interventions (John et al., 2011; Ploug, Holm, & Brodersen, 2012; Thaler & Sunstein, 2008). Nudging relies primarily on System 1

cognition, which is quick and non-reflective, as opposed to System 2, which is slow and deliberative (Kahneman, 2011). An example of a System 1 cognition could be deciding what to grab from the fridge if one is hungry; an example of System 2 cognition could be weighing up the pros and cons when deciding on one's future career. System 1 cognition is prone to many forms of bias, such as availability bias (over-relying on information we have just received) and default bias (our tendency to accept what is presented) and other mental shortcuts we may take when making quick, sub-conscious decisions. The rather simplistic dualism between System 1 and System 2 is not challenged in nudging theory, but is used to explain that nudging relies mainly relies on System 1.

Nudging typically involves making alterations to the contexts in which decisions take place, also called choice architecture (Thaler & Sunstein, 2008), in order to affect people's unreflective System 1 "decisions" in predictable ways. In line with the emphasis on immediate context, nudging typically takes place in public spaces such as shops, cafeterias, airports, and homes for the elderly. An oft-cited nudge that stems from Thaler and Sunstein's (2008) seminal work involves item positioning in a cafeteria, where healthier options are made more accessible to customers than less healthy ones. While nudging has the advantage of moving beyond the cognitivist decision-making theory of economic rationalism where decisions are understood as relying on and reflecting the decision-maker's rationality (Scott, 2000), nudging theory still represents a "thin" understanding of decision-making as it disregards the role that individual and social factors such as shared, institutional meanings (Thornton, 2004) and symbolic capital (Lunnay et al., 2011) play in decision-making.

Nudging has been studied in relation to a number of ethical problems (Busch et al., in press). These include paternalism (Verweij & van den Hoven, 2012) as nudging authorities determine and structure choices to promote optimal behaviours, manipulation (Wilkinson, 2013) as individuals may not be aware that they are being nudged, and restricted autonomy (Woloshin, Schwartz, Black, & Kramer, 2012) as individuals' ability to take autonomous decisions may be directly affected by nudges. Many of these ethical issues are traceable to the ideology that underpins nudging, called libertarian paternalism (Thaler & Sunstein, 2008). With libertarian paternalism, individuals are putatively *free* (hence the word "libertarian") to do as they please; using the cafeteria example just mentioned, customers can choose not to buy a prominently placed apple, for example, and instead reach beyond it for a doughnut. However, the apples are positioned deliberately and *paternalistically* within easy reach so that they are more accessible than less healthy products such as doughnuts.

Nudging theory has also provoked concern as it abandons the idea that individuals' good behaviours should be based on their own thinking, knowledge and volition (John et al., 2011). Indeed, nudging theory is predicated on the idea that individuals tend to make poor or irrational decisions and thus need to be steered towards making good ones (Thaler & Sunstein, 2008). This downplaying of individual self-determination can again be traced to nudge's underlying ideology, libertarian paternalism. Paternalism assumes that "pater" (e.g. the state or other nudging authority) *knows best* and is thus legitimated to influence individuals' decisions, even quotidian ones such as what snack to buy. However, the assumption that nudgers' knowledge is superior to nudgees' threatens to infantilise and potentially alienate citizens, as well as jeopardise what are considered cornerstones of good democratic governance – transparency in state governance, and public participation (Jarosz, 2015). Instead, nudging theory rests on a radically different conceptualisation of government that privileges nudgers' knowledge and perspectives, as the context for decision-making is managed so as to promote nudgers' priorities, while purporting to leave space for individual decision-taking. In so doing, nudging implicitly abandons the notion of civic enlightenment, which until recently was ostensibly both the practice and the ideal of public health communication, evident, for example, in public health's emphasis on health promotion and health education as forms of empowerment (Green, Tones, Cross, & Woodall, 2015). An emphasis on knowledge or enlightenment is evident in public health campaigns that typically raise awareness of an issue through information provision and some persuasive elements (Faden & Faden, 1982; Marteau et al., 2011; Rossi & Yudell, 2012). Conversely, with health-related nudges, information is not necessarily provided: nudging interventions can influence people's behaviour through the backdoor of their subconsciousness.

Nudging therefore seems particularly problematic in the field of public health which is cognisant of its previous transgressions of the norms of transparency, such as the infamous Tuskegee syphilis study where 399 African-Americans in Alabama who had contracted syphilis were told there were being treated for the disease, but were not – they were actually part of an experiment to see how unchecked syphilis developed (Vaughn, 2010). Thus, the field of public health strives to communicate openly and emphasise individual autonomy and empowerment. Perhaps due to disquiet about nudging's lack of transparency, nudging has been redefined to include transparent nudging (Sunstein, 2016), where nudging techniques are made as transparent as possible: people are informed that they are being nudged. Another interesting development is "nudge plus", which moves nudging away from its intuitive-cognitive foundations (Thaler & Sunstein, 2008) towards incorporating more nuanced understandings of the dynamics of decision-making and people's reflective capacities (John, 2018).

This paper is concerned with nudging that involves communication that should not be observed by the nudgee *as* communication (unlike, for example, a pamphlet from a health authority, which clearly is a form of communication), and is thus considered in this article to be "dark side communication." Nudging's opacity exists at multiple levels, as the message (e.g. regarding the value of taking more exercise) and sender are often hidden from view, thus implying a different communication paradigm to the many communication models that assume a sender, a message and a receiver

capable of understanding and reflecting (Littlejohn & Foss, 2008). Instead, nudging's emphasis on proximal context and individuals' response to that context is reminiscent of radical behaviourism (Skinner, 1953).

The aim of this paper is to present and demonstrate a methodology that provides analytical, critical and normative purchase on health-related nudges' bypassing of reflection, shallow epistemic content and lack of transparency. Nudging in public health has, for example, been valuably explored in relation to the Foucauldian concept of "biopolitics" (Peeters & Schuilenburg, 2017). However, as Mulderrig (2018) has highlighted, few methodological approaches exist that support the analysis and critique of concrete instances of health nudges. Given the methodological gap, this article presents a three-pronged approach. First, multimodal analysis is used to identify how various semiotic modes play a role in generating the meaning of nudges. Second, the initial multimodal analysis is reviewed using Foucault's (1994[1974]) "toolbox", including theories of biopolitics, governmentality, and power/space. Foucault offers ways of dismantling existing practices but avoids providing "off the shelf" normative stances that can be generally applied, though he does recommend that those meanings that "can never be accepted in any circumstances" (Foucault, 1972, p. 26) are highlighted for criticism. Given this gap, Habermas's theory of deliberative democracy (Habermas, 1996) is employed as the third prong of the methodology for its normative traction on the findings. Bringing together Foucault and Habermas raises the question of their compatibility. However, this has already been discussed at length (Biebricher, 2007; Flyvbjerg, 1998; Ingram, 2005), and, in the next section, I will highlight ways in which they are compatible, and argue that their differences benefit the methodology.

After describing my methodological approach in more detail, I present the nudge for analysis, bags of small organic carrots strategically positioned at a supermarket till, followed by analysis and discussion, to illustrate the methodology.

2 Strategy for analysing and critiquing nudges

The three-pronged methodology for analysing nudges is presented in this section. Like Mulderrig (2018), the methodology presented here couples social semiotic (multimodal) analysis and Foucauldian perspectives, but it expands to include a third prong – the deontological theory of deliberative democracy (Habermas, 1986, 1996) to address this article's concern with knowledge and transparency.

First, I address the aforementioned question of compatibility between Foucault and Habermas, before presenting the Foucauldian and Habermasian theories that are used for their critical and normative value, respectively, in the methodology. Then, I present the aspects of social semiotic analysis that support the analysis in this article.

2.1 Foucault and Habermas – the question of compatibility

As mentioned in the Introduction, it is important to consider the question of compatibility when bringing Foucault and Habermas together in one methodology, particularly as advocates of one thinker have been quick to dismiss the other (Ashenden & Owen, 1999).

There are clear points of divergence between Foucault and Habermas, the most significant perhaps being the ontological clash between Habermas's theorisations and Foucault's more poststructuralist thinking, as Foucault, in adopting a more relativist position, did not seek to find "an ultimate rational grounding of its science, and political and moral practice" (Edgar, 2006, p. 112), as was central to Habermas's approach. Habermas (1987b) valued Foucault's analyses, but famously criticised their lack of normative specificity: "It makes sense that a value-free analysis of the strengths and weaknesses of the opponent is of use to one who wants to take up the fight – but why fight at all?" (p. 284). Normative differences between Foucault and Habermas were also highlighted by Ashenden and Owen (1999), who noted that "whereas Foucault is concerned with elaborating *a* form of critical reflection, Habermas seeks to establish *the* form of critical reflection" (p. 1).

However, in later years, the divergence between the two thinkers became less significant; this was apparently more evident to Foucault who wryly commented that "he was 'in a little more agreement with Habermas' than Habermas was with him" (Ingram, 2005, p. 257). Indeed, although perceived differences between Foucault and Habermas characterise much of Habermas's discussion of Foucault's work (e.g. in Habermas, 1987b), there are striking similarities. As Ashenden and Owen (1999) observe, both of these thinkers were deeply concerned with the topics of "enlightenment, modernity and critique" (p. 1). Habermas admired Foucault's historical accounts of "the pathologies of contemporary society" (Edgar, 2006, p. 114) as these also motivated Habermas's own work. The public's knowledge, or what one might call the epistemics of the public sphere, was also a concern shared by Foucault and Habermas. Biebricher highlighted an interview where Foucault talked about not enough public communication taking place, and that public communication did not take place at a sufficiently good level. When asked about problems in contemporary public debate, Foucault replied:

> "Why do we suffer? From too little: from channels that are too narrow, skimpy, quasi-monopolistic, insufficient. There is no point in adopting a protectionist attitude, to prevent "bad" information from invading and suffocating the "good". Rather, we must multiply the paths and the possibility of comings and goings." (Foucault, 1996[1980], p. 305).

Encouraging knowledge flows and multiple perspectives chimes well with Habermas's theory of deliberative rationality (see Section 2.3).

Biebricher (2007) describes how Foucault, in later work, moved towards a less relativist approach to truth and underlined the rights of citizens to engage with and be informed about the government's aims and tactics. Foucault asserted in an interview in 1984, the year of his death, that "it is possible to expect from governments a certain truth in relation to final aims […]: that is the *parrhesia* (free speech) of the governed, who, because they are citizens, can and must summon the government to answer for what it does […]. Yet as governed we still have the perfect right to pose questions about the truth" (Foucault, 1996[1984], p. 453). Leggett (2014) also narrows the gap between Foucault and Habermas when he makes the important point that Foucauldian theory "calls for the empowerment of a more deliberative citizen [where] [s]uch a citizen would be able to make individual choices, and participate in collective ones, free from the distortions of behavioural governing techniques" (p. 10) – very similar to Habermas.

A point of complementary rather than incompatible difference is highlighted by Biebricher (2007), who pointed out that although Habermas, like Foucault, was open to strategic action by individuals, Foucault was less interested in legitimacy and more in strategy (modes of resistance), whereas the converse was true of Habermas. As such, like Biebricher (2007), I would argue that the theories of deliberative democracy and governmentality can valuably be brought together in critical analyses of the state's or other nudging body's strategies for political action.

2.2 Foucauldian theories for critical perspectives

Although the emergence of nudging is fairly recent – it is usually traced to Thaler and Sunstein (2008) – Foucault provides critical perspectives that are relevant to nudging due to his concern with freedom, power and identity (Foucault, 1979, 1980a, 1982). For example, Leggett (2014) characterises the critical-democratic perspective on nudging that draws on Foucauldian theory as follows: "Nudge could even be seen as the 'highest stage' of advanced liberalism and the scientific discourses of late modernity. On this reading, nudge is the point at which the mechanics of human choice itself, in apparently even the most mundane settings, become scientised and subject to disciplinary interventions" (p. 8).

2.2.1 Biopolitics

Nudging in public health has previously been investigated with respect to "biopolitics" (Mulderrig, 2018; Peeters & Schuilenburg, 2017). On the face of it, public health may seem an ideal context for rolling out large-scale nudging interventions in public arenas, as such interventions can be cheap and potentially yield long-term economic benefits. However, more critical perspectives (Petersen & Lupton, 1996; Rose, 2007) have highlighted the power of public health discourses and practices to influence people in their daily lives with the purpose of optimising healthy bodies. This reflects biopolitics (Foucault, 1979, 2010; Lemke, 2011), where normal life processes fall increasingly within the purview of state governance (Foucault, 2010; Rose, 2007; Wilmer & Zukauskaite, 2016).

Foucault can be considered to have anticipated the emergence of nudging as a technique of biopower. As pointed out by Whitehead, Jones, and Pykett (2011), Foucault (2010) highlighted in a lecture in 1979 that neoliberalism had always sought to encompass both rational and non-rational elements of human behaviour, and that the predictability of both rational and irrational elements justified, from a neoliberal perspective, governmental interventions in shaping individual conduct. This is similar to the stance on the permissible reach of nudging interventions in people's daily choices evident in the nudging theory of Thaler and Sunstein (2008).

2.2.2 Governmentality

Governmentality (Foucault, 1991) explains how the governing of a population advances through intricate linkages between "questions of government, authority and politics, and questions of identity, self and person" (Dean, 2010, p. 20). Governmentality is produced by the apparatuses of state (policy, laws etc.) that regulate subjects' behaviour. Foucault calls this a "policing" (Barker, 2012, p. 482) of society. Barker (2012) highlights the many spheres of governmentality "from medicine, education, social reform, demography and criminology and by which a population can be categorised and ordered into manageable groups" (p. 482).

Mulderrig (2018), similar to Jones, Pykett, and Whitehead (2011), argues that nudging can be considered "a form of governmentality which uses subtle semiotic techniques to secure voluntary compliance with policy goals" (p. 39), though the degree of voluntariness in nudging-induced behaviour can be questioned. However, governmentality provides useful critical perspectives on nudging as it highlights nudging as a technique for producing compliance through self-discipline, as opposed to more coercive (and obvious) approaches to governing, such as legislation.

2.2.3 Power/space

Mulderrig (2018) couples the aforementioned Foucauldian theories of biopolitics and governmentality with social semiotic multimodal analysis. In this article, which also uses social semiotic multimodal analysis, I also include Foucault's theorisation of space as a setting of power. In *Discipline and Punish,* Foucault (1991[1977]) described Bentham's panopticon as a "diagram of a mechanism of power reduced to its ideal form" (p. 205). With the panopticon design of a prison, prisoners could be seen at any time, but not know when they were being surveilled. Knowledge that they might be surveilled was enough to cause the prisoners to discipline themselves; it affected their practices. Foucault's concept of the panopticon is relevant for nudging as, like nudging, it situates controlling mechanisms in space, plays upon (largely) subconscious mechanisms that affect how decisions are made, and involves power as individuals' behaviours are affected without them necessarily realising why, obviating the need for direct communication. Leggett (2014) highlights parallels between nudges' ontology of choice environment and Foucauldian theory in the following: "the hyper-politicising assertion that even the most micro, banal elements of an agent's environment contain possibilities for structuring their behaviours reads as if from Foucault himself" (p. 13). It is interesting to note that Habermas (1987a) similarly characterised the later Foucault's understanding of power as permeating, physical and complex as follows: "as the interaction of warring parties, as the decentered network of bodily, face-to-face confrontations, and ultimately as the productive penetration and subjectivising subjugation of a bodily opponent" (p. 255).

2.3 Habermasian theory for normative perspectives

Although Foucault provides significant critical leverage on nudging with respect to the state's (or other authority's) power and the subject, his theoretical framework does not provide answers to the question of *why* nudges' opaque communication with citizens is particularly problematic. For that reason, Habermas's (1996) conceptualisation of deliberative democracy is brought in for normative perspectives on the relationship between the state (or nudging authority) and the individual.

Habermas insisted on the importance of public inclusion in democratic debates; indeed, the legitimacy of a political system depends on its openness "to renovative impulses from the periphery" (Habermas, 1996, p. 357) of the public sphere. Flyvbjerg (1998) explains the process of inclusion in democratic debates as follows:

> "Habermas is a universalistic, 'top-down' moralist as concerns process: the rules for correct process are normatively given in advance, in the form of the requirements for the ideal speech situation. Conversely, as regards content, Habermas is a 'bottom-up' situationalist: what is right and true in a given communicative process is determined solely by the participants in that process." (p. 214)

According to Habermas (1987c), lack of responsiveness to the public is politically unsound, as it will give rise to clashes between the system and the lifeworld of the people, with the system encroaching on the sphere of the individual. Moreover, Habermas's theory of deliberative democracy recognises the importance of both expert knowledge and public perspectives on issues of consequence to the public. Reflecting both aspects, Habermas (2009) characterised deliberative democracy as "epistemic proceduralism" (p. 146) – "epistemic" because of its concern with knowledge(s), and "procedural" because of the importance it attaches to processes of consensus formation, including listening, discussion and fair bargaining, which are essential for the production of decisions that have legitimacy.

Joseph and Joseph (2018) summarise Habermas's basic contention of deliberative democracy as follows: "in order for political choice to be legitimate, it must be the result of deliberation among free, equal, and rational agents" (p. 10). The validity of any form of governance can thus only be determined through consensus that is achieved communicatively – as Biebricher (2007) states: "For Habermas, societies maintain themselves through socially coordinated activities that are agreed through communication" (p. 222). Moreover, engaging in discourse is how people arrive at their own conclusions about how they want to live their lives: "Insofar as I recognise what is good for me, I also already in a certain sense make the advice my own; that is what it means to make a conscious decision" (Habermas, 1993, p. 12).

Habermas acknowledged that deliberative democracy may be difficult to achieve in practice. He conceded that, due to the complexity of systems, citizens are not equal partners, but he proposed that they can exert influence by counter-steering institutional complexity (Habermas, 1987c). It is easy to see Habermas's exaltation of reason as naive – for example, when he says that "an autonomous will *gives itself* only rationally grounded laws, and practical reason discovers only laws that it simultaneously formulates and prescribes" (Habermas, 1993, p. 42, italics in original). Recent criticisms of Habermas's theory of deliberative democracy rightly point out that irrationality also forms the basis of decision-making, as is evident in the challenge of post-truth politics and the patent influence of disinformation on "deliberation's 'truth-tracking' function" (Curato, Hammond, & Min, 2019, p. 141).

However, what is valuable about Habermas's theory of deliberative democracy in relation to nudging are its normative conceptualisations of transparency and deliberation that directly oppose the behaviouristic approach of Thaler and Sunstein (2008), where nudges are delivered top-down and are meant to go unnoticed. The potential of applying Habermas for normative perspectives to an analysis of nudging has also been indicated by Leggett (2014) who observed that:

> "Habermas (1987) famously characterised modernity in terms of the encroachment of the 'system' (the steering power of both the state and market) on the 'lifeworld' (people's everyday subjectivity). Nudge could be seen as the logical conclusion of this twin assault: the state is deploying techniques well established in the market sphere in order to interfere in the most micro-level aspects of decision making. Worse still, in so doing, nudge seeks to operate on people's unreflective, unconscious systems […]. Put this way, nudge appears as a thought control experiment beyond even the most technologically advanced totalitarian regimes." (pp. 7-8).

2.4 Social semiotics for analytical purposes

Now that the critical and normative framework is in place, let us turn to the analytical approach – social semiotics – which is used to identify the various component modes of nudges and thereby helps us to understand how individual nudges work communicatively.

Social semiotics (van Leeuwen, 2005) is valuable for the analysis of nudges as it supports the identification of semiotic resources used in a nudge (cf. Mulderrig, 2018), as well as the description of these semiotic resources in relation to their communicative function in the context of specific social situations and practices. According to van Leeuwen (2005), an analysis of modes by itself is insufficient as such analysis needs to be coupled with theory that is appropriate for the object of analysis in question, which is also the practice adopted in this article as relevant theories from Foucualt and Habermas are included.

Social semiotic analysis sees communication multimodally, where various modes (such as colour, language, images, video, sound) combine to produce an overall effect. As such, a multimodal approach can be used to analyse how nudges are materialised to affect System 1, often involving the use of icons, alternative layouts or positioning, and little if any text, as well as System 2, where they may include more text. According to Machin and Mayr (2012), from a social semiotic perspective, "choices of visual elements and features do not just represent the world, but constitute it" (p. 19). In line with this constructionist understanding, the semiotic landscape reflects a society's culture (Kress & van Leeuwen, 1996, p. 35) and the discourses that shape that culture (Machin & Mayr, 2012). This is because discourses are reflected in the modes that have developed the means to realise them (Kress & van Leeuwen, 2001, p. 5).

Drawing on the social semiotic perspectives of Kress and van Leeuwen (1996), van Leeuwen (2005) and Machin and Mayr (2012), various modes relevant for multimodal analysis, selected for their relevance to the nudge that is analysed in this article, are now outlined.

The modes colour, symbol, front and back, positioning and discourse are described below, as the nudges – bags of organic carrots placed strategically at the supermarket till – are three-dimensional objects that include text and symbols, and are positioned in three-dimensional space. Other modes such as images, sound and video were not relevant for the current analysis and are therefore not presented here, but they would be relevant for other nudges, such as nudges that involve exposure to pictures of thin sculptures to make participants eat less (Stämpfli & Brunner, 2016), use videos to affect consumers' choice of healthy products (Sihvonen & Luomala, 2017), or create a "piano staircase" to make taking the stairs seem fun due to auditory feedback (Kirkup, 2010).

The first four modes described below characterize more specific attributes of the nudge – the "how" of nudging, while the fifth indicates the "what": according to van Leeuwen (2005), besides looking at the configuration of the various modes and their interplay – the "how" of meaning production – it is also important to look at the "what" of the modes, which involves exploring discourse (p. 93).

2.4.1 Colour

Colours carry a range of cultural meanings and are used purposefully in communicative situations to convey those meanings. Important qualities of colour include their saturation, where "high saturation may be positive, exuberant, adventurous but also vulgar and garish. Low saturation may be subtle and tender, but also cold and repressed, or brooding and moody" (Kress & van Leeuwen, 1996, p. 233). Another important attribute is "hue" – where "the red end of the scale remains associate with warmth, energy, salience, foregrounding, and the blue end with cold, calm, distancing, foregrounding" (Kress & van Leeuwen, 1996, p. 235). Colour is a mode that traverses all other visual modes.

2.4.2 Symbol

One of the semiotic modes is the symbol (Peirce, 1965), where the relation between the signifier and the signified is arbitrary. For example, Ledin and Machin (2020), working within the multimodal discourse tradition, characterize flags

as potent cultural symbols that connect with discourses of nationalist pride and potentially parochialism as well as right-wing political purposes (p. 170).

2.4.3 Front and back

Both this mode and the next mode relate to the three-dimensional quality of the nudge itself in three-dimensional space. Three-dimensional objects can be analysed in relation to their front and back. According to van Leeuwen (2005), "on the back of packages, for instance, we often find instructions for use, and/or more or less detailed descriptions of specifications of the content of packages, or lists of ingredients, contrasting with the front has more to do with identity" (p. 211), the product's outward expression which may include marketing narratives and discourses. The front and back are what van Leeuwen (2005) calls the "face" and "support" sides, respectively.

2.4.4 Positioning

As a nudging intervention exists in its immediate context and interacts with that context, it is useful to view nudges in terms of their placement in context, and in relation to the meanings that derive from those placements. Van Leeuwen (2005) defines composition as being about "arranging elements – people, things, abstract shapes etc. – in or on a semiotic space – for example, a page, a screen, a canvas, a shelf, a square, a city" (p. 198). Salience is relevant for positioning as salience has to do with the creation of a "hierarchy of importance" (Kress & van Leeuwen, 1996, p. 201); this can be achieved amongst other things by foregrounding. Thus, although Kress and van Leeuwen (1996) often elaborate on salience in images, for example, in relation to culturally potent symbols, it is also highly relevant in the three-dimensional setting of the real world (e.g. O'Toole, 2004), where nudges involve changes to choice architecture, for example, in cityscapes.

2.4.5 Discourse

Discourse is a central concept in multimodal discourse analysis. Van Leeuwen (2005) drew on a Foucauldian understanding of discourse (Foucault, 1972), also the approach adopted in this article. Van Leeuwen (2005) describes discourses as "resources for representation", "plural", and as identified in terms of "similar statements, repeated or paraphrased in different texts and dispersed among these texts in different ways" (p. 95), resulting in sociocultural meanings congealing around objects of discursive construction. Thus, as Machin and Mayr (2012) point out, "semiotic choices are able to signify broader sets of associations that might not be overtly specified" (p. 29). Discourses, according to Kress and van Leeuwen (2001), "not only provide versions of who does what, when and where, they add evaluations, interpretations and arguments to these versions" (p. 15). This is because discourses are not neutral but often have a legitimising function (Fage-Butler, 2017), or present a version of a desired reality that is worth striving for (Fage-Butler, 2018; Foucault, 1972).

3 Data

The data for analysis consist of an example of a single nudge which is represented in Figs. 1-3 (the images were collected on the 23rd July 2019 in a supermarket in Aarhus city centre, Denmark).

Fig. 1 shows the strategic positioning of bags of small carrots beside the rolling belt where customers place their products for scanning before purchasing. Some decades ago, products positioned strategically at supermarket tills would typically have been confectionery to maximise the chances of impulse purchasing or children pestering for the products; however, consumer pressure and governmental intervention since the 1990s have meant that supermarkets have increasingly moved their confectionery away from the check-out area to promote their corporate social responsibility (Piacentini, Macfadyen, & Eadie, 2000). Evidence from studies of nudging shows that healthy food placement in real-life settings works due to the "mindless nature of many food decisions" (Kroese, Marchiori, & de Ridder, 2015, e133).

Fig. 1: Nudging through healthy product placement in a supermarket in Aarhus City Centre

Figs. 2 and 3 show the front and back of the bag of carrots, respectively. I have included these, as two nudging types are evident. The first nudge relates to the physical placement of the bags of carrots at the till (see Figure 1). The second nudge has to do with the packaging of the products; here, the nudge is mainly textual, and is used to market the product as desirable and healthy (see Figs. 2 and 3).

Fig. 2: The front of the bag of carrots

Fig. 3: The back of the bag of carrots

4 Findings

In the analysis, I start with the micro aspects of multimodal analysis before discussing the analysis in relation to critical and normative aspects, drawing on Foucault and Habermas. In other words, I reverse the funnel shape of the methodology just presented, where I started by presenting the theoretical framework and ended with the specifics of multimodal analysis.

Starting, then, with multimodal (semiotic) analysis, Fig. 1 shows an example of a positional nudge as it involves a deliberate calibration of the choice architecture of *in situ* shopping decisions. While it is evident that the supermarket performed the nudge (the nudge takes place on their premises), it is not clear who initiated it. However, it is typical of nudges to have covert elements and not reveal all aspects of themselves to nudgees.

In Fig. 1, the positioning of the carrots is highly relevant: the carrots are closer to hand than the products being scanned, highlighting their salience. The colours of the carrots and their packaging with high saturations and warm hues (mainly red and orange) also highlight their salience against the duller background.

Fig. 2 shows the front of the bag of carrots that is also evident in the shopping situation. This is the "face" (van Leeuwen, 2005) or outward-looking side of the bag. It prominently shows the Danish flag that indicates Denmark as the country of origin, and the green keyhole sign to highlight that it is a healthy product. Both of these symbols are positive nudges that draw on existing discourses: that it is good to buy local products, good to support Danish agriculture and good to eat healthily. The message on the front, translated into English, reads: "Mini carrots. Specially produced from a chosen variety that give the little carrots their size, crunchiness and sweetness." The senses are nudged here and a discourse of exclusivity is evident.

In Fig. 3, typical of the "support" (van Leeuwen, 2005) side (the back) of consumer products, information is provided on the need to clean the carrots and where they were grown. Besides this, the translated text reads: "Mini carrots: Suitable as a snack, on the go, in a lunch box. Class 1 Danish produce." Here, three discourses are evident: the discourse relating to quality produce, that it is good to buy Danish products, and the discourse of convenience as the "fast food" quality of healthy carrots is emphasised, nudging potential buyers to see their value in their busy lives, and buy them.

In relation to Foucauldian concepts, biopolitics and governmentality normally relate to political (state) power. However, Foucault characterised power as not reducible to a single source like the state, but as manifesting itself through micro-level networks of power. As Foucault (1980b) explains: "in thinking of the mechanisms of power, I am thinking rather of its capillary forms of existence, the point where power reaches into the very grain of individuals, touches their bodies and inserts itself into their actions and attitudes, their discourses, learning processes and everyday lives" (p. 39). As such, power is evident in a myriad of settings – such as supermarkets. The setting of the supermarket is not neutral, but is infused by the politicisation of space/power, just like the panopticon.

The fact that the mundane business of shopping for food becomes an arena for a nudging intervention highlights the biopolitical aspect of nudging, where the health of individual bodies becomes the object of the intervention. The increased salience of the nudged products (carrots) leading to a greater likelihood of compliant behaviours (buying the carrots) highlights the workings of governmentality through the nudge which acts as a strong prompt to action. In the setting of the supermarket, it is public health discourses (such as "Eat more vegetables") in particular that are harnessed in the nudge. In their strategic positioning by the conveyor belt, stationary next to the moving products that the consumer has already selected, the carrots are more than an "offer"; they are a demand on the consumer to buy them, eat well and live longer. Although Foucault highlights that micro-resistance (resistance at the individual level) is always possible, and indeed inevitable (Kelly, 2009), resistance may be easier in relation to communication that relies on System 2 cognition where deliberation is involved, rather than System 1 cognition which may be more easily influenced by attributes such as salient positioning, symbols and colours (see Fig. 1).

Finally, the findings can be explored in relation to Habermas's theory of deliberative democracy. Nudges, like the positioning of the carrots in a supermarket, are ubiquitous. As they are meant to work on our subconsciousness, they are typically rolled out without prior consultation. In fact, an implication of nudging theory is that consulting people may be a pointless exercise, given people's propensity to make the wrong kinds of decisions. Nudging, be it in supermarkets, airports, or workplace canteens thus represents a technocratic form of management that is indifferent to the perspectives of the nudged, yet purports to support the freedom of the nudged. As mentioned earlier, this is at variance with the core values of transparency and public participation of good democratic governance. Thus, from Habermas's normative perspective on deliberative democracy, nudges lack validity as they have not gone through the deliberative processes that would legitimise them. Moreover, any "desirable" behaviours would not be the product of thought or volition, as nudges influence by exploiting cognitive weaknesses, again downplaying the rational aspects that are so central to Habermas's normative vision of best public communication and practice.

5 Discussion and Conclusion

This article was undertaken in response to the associated concerns of governance by stealth and bypassing reflective cognition that nudging interventions may be facilitating. Nudging is "dark side communication" as it lacks transparency, and thus breaks with one of the core values associated with good governance in democratic societies. It is also "blind spot communication" as it may elude reflective processes, taking advantage instead of cognitive weaknesses (such as the biases mentioned in the Introduction) and thus, from an ethical perspective, may be considered manipulative. Finally, nudging is very much "one way" communication – not only due to its directionality, but also because it rests on the idea that the state or other body can and should adjudicate on what is best for the public – it is "(this) one way" communication that precludes discussions of alternatives or about the inherent value or acceptability of nudges.

Importantly, nudging takes place via interventions that have a concrete form, involving changes to the environment that can be described and analysed. Increasing attention is being paid to concrete instances of nudging as objects of analysis in their own right (Ledderer er al., 2020). One trend in these studies is descriptive, for example, mapping out existing nudging techniques in public health interventions. Such studies promote understanding of nudging, as they characterise the contours of nudging activities in certain spheres. Empirical studies of nudging have highlighted that some nudges work, at least in experimental contexts, while others (such as nudges to take the stairs) can have the opposite effect (Ledderer et al., 2020). It would be jnteresting to find out if the placement of carrots at the point of payment make any positive difference to sales. If customers consider them critically, they may be aware of the positioning of the carrots as nudges – or consider them the shop's attempt to brand themselves as health promoting. Further research examining customers' perspectives would be valuable.

Given the abundance of concerns about nudging from fields such as public health, public policy and philosophy, more critical and normative approaches are warranted, however. In relation to the nudge analysed – bags of small organic carrots displayed at a supermarket till – various modes, such as colour, symbol, front and back, positioning and discourse, are intended to attract the buyer and result in a purchase. What specifically turns this into a nudge is its strategic positioning at the supermarket till which is intended to elicit an unreflective response from consumers, and result in more healthy purchasing practices. Its positioning underscores the potentially infantilising quality of the nudge, as sweets and chocolates, which used to be at the supermarket till to attract children's attention, are replaced with organic carrots as impulse purchases. The utilitarian logic behind this strategic positioning (where the end – a healthier population – justifies the means – paternalistic governing) calls for critical cross-examination.

The methodology presented here is the article's main contribution. It is offered as an approach to gaining critical traction on nudges which are a matter of public concern. Specifically, in this paper, nudges' strategic structuring of "choice" (Jones et al., 2011, p. 492) in contexts of daily living called for a three-way analysis that incorporated analytical (multimodal analysis) and critical approaches (Foucauldian theory), as well as a normative lens (derived from the Habermasian theory of deliberative democracy) to provide value-based traction on the nudging intervention. Its use of Habermasian theory is a reminder that nudges can be considered a threat to democratic processes of inclusion and transparency. The methodology could be applied on a larger set of such data; the focus of this article is on methodological depth rather than empirical breadth.

The methodology presented in this article was derived with health-related nudges in mind. It may be directly relevant for other forms of nudging, although Foucault's focus on governing the body is likely to be particularly relevant for health-related nudges, and it may therefore benefit from being extended or modified for other forms of nudging interventions. Foucault's concern with "moral psychology" (Jones et al., 2011, p. 490) and his later work on care of the self (Foucault, 1986) suggest promising lines of additional critical inquiry.

As noted in the Introduction, numerous concerns have been expressed about the acceptability of nudging as a means of managing populations. The criticisms have had consequences for the original formulation of nudge theory, causing it to be developed along particular lines. As mentioned in the Introduction, criticisms have led to evolutions in nudge theory, such as nudge plus (John, 2018) and transparent nudging (Sunstein, 2016). It should be noted that the methodology presented in this article is intended for the "classic" opaque nudge, as exemplified in the strategic positioning of apples vs. doughnuts in cafeterias described in the Introduction.

There is always a choice environment and it is never neutral: as Watzlawick et al. (1967) famously asserted, "[o]ne cannot not communicate". However, this does not mean that nudging is an acceptable mode of governance. While the focus of this article has been on the political and communicative aspects of nudging with respect to transparency and public involvement, it is important to highlight here the potential human costs to nudging: the risk of identity fragmentation as we become alienated from the decisions we find ourselves making may result in us becoming "incomprehensible to ourselves" (Bovens, 2009, p. 217). Another dystopian possibility is mass stultification, as attempts to promote society's critical reflections are disengaged, with the technocratic solution of nudging being used to streamline behaviours and outcomes.

One way around these problems is through critical engagement with the concept of nudging – or "thinking about nudging" (Leggett, 2014, p. 10) – illuminating nudging's "dark side" through critical public discourse. In that way, intended nudgees may be better positioned to spot nudges, and the implications of policymakers using this technique of

governance can be scrutinised. Critical engagement with nudging may also help to challenge the "neuroliberal" (Jones et al., 2011) aspects of libertarian paternalism that use psychological insights to manage populations, while neoliberally claiming to maintain freedom. The public's critical engagement would be in keeping with Habermas's (1996) views on deliberative democracy; indeed, it seems ever more important as democratic foundations and processes in society appear increasingly at risk, with strong signals of growing mistrust in expertise and rising populism.

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