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RESEARCH ARTICLE



Nudge in the news: Ethics, effects, and support of nudges

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Abstract

Governments use nudges to stimulate citizens to exercise, save money and eat healthily. However, nudging is controversial. How the media frames nudge impacts decisions on whether to use this policy instrument. We, therefore, analyzed 443 newspaper articles about nudging. Overall, the media was positive about nudges. Nudging was viewed as an effective and efficient way to change behavior and received considerable support across the political spectrum. The media also noted that nudges were easy to implement. The controversy about nudges concerns themes like paternalism, fear of manipulation, small effect sizes, and unintended consequences. Academic proponents of nudging were actively involved in media debates, while critical voices were less often heard. There were some reports criticizing how the government used nudges. However, these were exceptions; the media often highlighted the benefits of nudging. Concluding, we show how nudging by governments was discussed in a critical institution: the news media.

Evidence for practice

- Nudges—such as making organ donation the default—to change the behavior of citizens can be controversial.
- How the media frames nudges can impact decisions by politicians and policy makers on whether to use nudges.
- In the news media, the controversy about nudges concerns themes like paternalism, fear of manipulation, small effect sizes, and unintended consequences of nudges.
- The benefits of nudges, according to the media, include that nudges are cheap, supported by politicians, and easy to implement.
- Governments can use the framework on the ethics, effects, and support of nudges to analyze whether to use nudges.

Nudging is a way to change behavior without prohibiting options or significantly changing economic incentives (Thaler & Sunstein, 2008). An example of how nudges can steer behavior comes from criminal justice policy: Fishbane et al. (2020) found that nudges—in their case, simplifying forms and providing reminders via text messages—increased people's likelihood of showing up for their court dates. Benartzi et al. (2017) conclude that nudges are more cost-effective than traditional policy instruments like incentives. As well as academic enthusiasm, there is interest in nudges from governments (Bhanot & Linos, 2020). Over 200 institutions worldwide apply behavioral insights to public policy (OECD, 2022), including the United Nations and the World Bank (Sanders et al., 2018).

However, some scholars are critical of nudges (Hansen & Jespersen, 2013; Selinger & Whyte, 2011). One critique is that nudges reduce autonomy (Vugts et al., 2020). Others show that the effects of nudges in the real world are smaller than is claimed in the scholarly literature (DellaVigna & Linos, 2022). Furthermore, nudges can be manipulative. Goodwin (2012) reasons that a more fruitful government strategy would be to use deliberative models that encourage people to think deeply. Concluding, there is an extensive debate on whether and when governments should use nudging (Battaglio et al., 2019; Kasdan, 2019; Weimer, 2020).

There is a paucity of media analyses showing how nudges are framed in the news media. A media analysis is essential for two reasons. The media reports on

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governmental actions, which impacts governments' decisions (Besley & Burgess, 2002; Snyder Jr. & Strömberg, 2010). Hence, how the media frames nudges can impact decisions by politicians on whether and how to use them. In addition, scholars can use a media analysis to make inductive studies of themes about nudging. An inductive approach allows scholars to identify themes that may have been overlooked in scholarly debates on nudging.

We have therefore conducted a media analysis of the nudge debate in American and British newspaper articles from 2008 to 2020. We chose these two countries as they are frontrunners in using nudges. The book *Nudge* by the Americans Thaler and Sunstein (2008) started the nudge movement. One of the first Behavioral Insights Teams established was in the United Kingdom (Sanders et al., 2018). The media analysis included 443 articles, including pieces published in *The New York Times, The Washington Post, The Sunday Times, The Guardian*, and *The Financial Times*.

The research goal was to analyze the frequency and the assessment of nudging themes in the news. Studying this enables us to analyze how nudges are framed in a key institution: the news media. In addition, it helps scholars understand whether academic critiques are reflected in the media and whether the media holds politicians to account for using nudges. The research goal was composed of three elements. First, we identified which themes about nudging had been mentioned in the news. This is relevant as future scholars can use the themes identified to analyze topics relevant to the nudge debate, ranging from whether nudges are effective in the long run to whether they are easy to implement. Second, we analyzed how often these themes were mentioned. Was the media reporting focused mainly on the ethical aspects of nudging, or the effectiveness of nudging, or did journalists write primarily about the support nudges were getting from the public? The third element concerned assesses nudging: was the media positive about nudging, and if so, about which themes? For instance, we will analyze whether the media is positive or negative about the effectiveness of nudges. Knowing this is valuable as the media can influence political decisions about when and where to use nudges. In addition, this study adds insights into the connection between academics, politicians, and the media. We will study whether the media holds politicians to account for using nudges. We will also study whether academic proponents or critics dominate the media debate.

THEORY

A background on nudge

Nudging has its roots in behavioral economics, a research field combining insights from economics and psychology

(Thaler, 2016). Building upon these studies, scholars emphasize the combination between public administration and psychology, known as behavioral public administration (Grimmelikhuijsen et al., 2017; Schwarz et al., 2022). In their influential book Nudge (2008), Thaler and Sunstein define a nudge as "any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives" (p. 6). Choice architecture is the environment within which people make decisions, for instance, a restaurant, a shop, or a website. An example of a nudge is making hand sanitizer dispensers available in public spaces (Redelmeier & Thaler, 2021). Placing hand sanitizers can help people wash their hands more frequently. It does not force you to wash your hands and does not change economic incentives. Another nudge illustration is making vegetarian dishes the default option during conferences. Hansen et al. (2021) showed that this boosts the percentage of people who opt for the vegetarian meal: from only 6 percent when vegetarian was not the default to 87 percent when it was presented as the standard option.

Nudging provides opportunities for governments. For instance, nudges are often cost-effective (Bellé & Cantarelli, 2021; Benartzi et al., 2017), making them an attractive option for governments that aim to reduce spending. Furthermore, nudges provide more autonomy to citizens than traditional policy instruments like bans and incentives (Loewenstein et al., 2012; Tummers, 2019). Light touch instruments appeal to political parties that are hostile to government intervention. However, nudging has pitfalls, including that nudges can be manipulative (Wilkinson, 2013) and have unintended consequences (Hansen & Jespersen, 2013).

We group the opportunities and pitfalls into three categories: ethics of nudges, effects of nudges, and support for nudges. The categorization is inspired by the scholarship of Moseley (2020). In an overview article, she summarizes the debates on nudging. We used the work of Moseley as it offers a broad overview of the nudge debate. Her broad categorization contrasts with specific analyses of nudge debates, such as whether nudges impact autonomy (Vugts et al., 2020) or the long-term effects of nudging (Cronqvist et al., 2018). Using the framework of Moseley is beneficial as it helps to get a comprehensive analysis of the nudge debate in the media. A downside is that it makes it more difficult to analyze one particular topic in depth. Moseley's analysis aligns with the categories and themes in the data. However, we had to structure it slightly differently—especially regarding the attitudes and limits of nudging—to avoid overlap between categories and themes.

We identified fifteen themes within the ethics, effects, and support categories. This theory section will discuss how the categories and themes relate to academic discussions. In the Methods section, we will discuss how we have identified the categories and themes, while the Results section shows their presence in the news media.

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Finally, in the Discussion section, we will show what can be learned from analyzing how nudges are framed in the media.

Ethics, effect, and support of nudges

The ethics category covers themes regarding the moral principles involved in nudging. There is much academic debate about the ethics of nudges (Bovens, 2009; Selinger & Whyte, 2011). Topics include whether nudges undermine autonomy (Vugts et al., 2020), whether using biases of citizens is laudable (Hertwig & Grüne-Yanoff, 2017), and whether nudges should be developed in a transparent matter or work better 'in the dark' (Bovens, 2009). The media analysis uncovers which of these topics receive the most attention in the news media and whether ethical issues are present in the media that are not discussed in the academic literature. Even more interesting, we can study whether proponents or opponents of nudging have the upper hand in the media regarding ethical themes. For instance, people sympathetic to nudges will argue that nudges work with human nature. As we are all prone to biases, governments can use biases to help us (Loewenstein et al., 2012). We suffer from inertia, so best to make the default option an option that is beneficial for most of us. Criticizers would argue that using biases is infantilizing. When governments nudge people toward desirable situations, people will not make mistakes. This poses problems, as making mistakes is crucial for learning (Yeung, 2012).

Besides the ethical aspects of nudging, we analyze how the media discusses the effects of nudges. Academics have conducted meta-analyses of whether nudges are effective. For instance, Jachimowicz et al. (2019) showed that default nudges often work as intended. There are also critical voices regarding the claimed effectiveness of nudges (for instance, Szaszi et al., 2022). We can analyze whether newspapers see nudges as an effective tool for public policy. Knowing this is valuable as the media can influence political decisions about when and where to use nudges. On top of general effectiveness, we will study how the media discusses whether nudges are cost-effective, the size of the nudge effect, heterogeneous effects, and unintended consequences of nudges.

Finally, we will discuss the support of nudges. Academics show support for nudges, for instance, by noting that many governments have adopted nudges (DellaVigna & Linos, 2022) and by highlighting that Anglo–American countries are the drivers of this movement (John, 2019). This is undoubtedly true. Nevertheless, there has been resistance against nudges. A pivotal illustration is that the Trump administration abolished the Obama administration's federal nudge unit (Gosnell & Bazilian, 2021). We will analyze the support of nudges in the media and whether overall scores differ across left

and right-wing newspapers. We will analyze whether and when the media holds politicians to account for nudges gone wrong. This aligns with an essential goal of the news media: informing the public about the actions of politicians (Druckman, 2005).

METHODS

Search strategy

To study the nudge debate in the media, we carried out an electronic search using Nexis Uni. Nexis Uni—the successor to Lexis Nexis—is a database that stores the full text of newspaper articles. We searched for relevant articles using two dimensions. The first dimension concerns nudges and holds the terms [nudge] and [nudging]. The second dimension includes concepts related to nudges through the following keywords: [choice architecture], [behavior change], [behavioral science], [behavioral economics], [behavioral public policy], and [behavioral public administration]. Within each dimension, we used the [OR] operator. Between dimensions, we used the [AND] operator. We searched whether the terms appeared anywhere in the article, not only in the title. The search line for Nexis Uni was:

(Nudge OR nudging) AND (choice architecture OR behavior change OR behavioral science OR behavioral economics OR behavioral public policy OR behavioral public administration)

We used British and American spelling to ensure we found as many potentially eligible articles as possible. We set 2008 as the start date, as this is the year in which the book *Nudge* was published (Thaler & Sunstein, 2008), and ended the search on July 27, 2020. For both the United States and the United Kingdom, we selected the twenty sources with the most hits, including forty newspapers (see for a similar setup Kaufmann & Haans, 2021). The selection included prominent newspapers such as *The Guardian, The Times, The Washington Post*, and *The New York Times*, as well as smaller ones like *Daily Post North Wales, The Herald Glasgow, The Christian Science Monitor*, and *The Star Tribune*.

We included articles if they met all the following criteria:

- *Nudges*: The article mentions nudges in line with the definition of Thaler and Sunstein.
- *Nudge debate*: The article should discuss nudging. That is, it should consider its opportunities and pitfalls.
- Public policy: The article should discuss nudges in the context of public policy. We excluded articles that solely examined nudges used by private companies, for instance, nudging people to spend more time on social media.

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FIGURE 1 Percentage of newspaper articles about nudges by year. The amount of newspaper articles about nudges is stable over time, except for an outlier when Richard Thaler received a Nobel prize

Criteria 1 and 2 are not fully overlapping. Criterion 1 is about nudges: newspaper articles should mention nudges in line with the definition of Thaler and Sunstein. Criterion 2 concerns the nudge debate: news reports should discuss nudging, considering its opportunities and pitfalls. Some news features mentioned nudges—often briefly—but did not discuss the opportunities and pitfalls of nudges. For instance, the Times article entitled "Daniel Kahneman: the Nobel Prize-winner who says we're all fools" (Finkelstein, 2012) is an interview with Daniel Kahneman. It does mention nudges, but only slightly. The only quote is, "When I started the book I told Richard Thaler [the author of Nudge] that I had 18 months to finish it. He laughed hysterically and said, 'You have written about that, haven't you? It's not going to work the way you expect'." It does not provide any substantive discussion about nudges. Therefore, we have not included it in the list of included articles.

To search for eligible articles, we downloaded the full texts. We wrote R-code to develop a uniform format for the titles and body text. Later on—based on a valuable suggestion by a reviewer—we also searched for articles that mentioned [libertarian paternalism] in the second dimension of the search line, using the same date range and eligibility criteria.

To select eligible articles, we read the full text of the articles. Using the eligibility criteria outlined above and after removing duplicates, we included 443 articles. We manually screened all articles. We used a machine learning program to sort the articles so that the most relevant articles were shown first (Van Van De Schoot et al., 2021).

The references for the articles are shown in Appendix A. The top three newspapers were *The Guardian* (17 percent), *Financial Times* (13 percent), and *The New York Times* (8 percent). Other newspapers included *The Independent* (5 percent), *The Daily Telegraph* (4 percent), and *The Washington Post* (3 percent).

Figure 1 shows that there was constant attention given to nudges over time. The largest number of

articles were published in 2017, when Richard Thaler received the Nobel Prize in Economics, officially The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

Identifying the themes

We used qualitative coding (Altheide & Schneider, 2013), reading all the articles and coding the quotes by hand. Specifically, we used a directed approach to content analysis (Hsieh & Shannon, 2005). In directed content analysis, scholars start with relevant categories and themes to guide the initial coding and stay open to new insights.

It was sometimes difficult to select which themes fitted best with the newspaper quotes. To help with this, we developed descriptions of each category and theme, as shown in Table 1 in the Results. After reading all the newspaper articles and coding relevant quotes, we asked a research assistant to assess the codes independently. We discussed conflicts until we reached an agreement for all quotes. We also made sure that we could code a quote into multiple themes. Consider the quote, "In policy circles, behavioral economics has become extraordinarily fashionable, largely because its insights are presented as evidence-based and academically rigorous" (Ahuja 2011). We coded this quote as 'general support, positive' (given the statement "extraordinarily fashionable") and 'scientific, positive' (given the statement "evidence-based and academically rigorous").

When an article highlighted an effective nudge, we would code it as 1 for 'effective, positive.' When the author provided five examples of effective nudges, the article would still receive a score of one. We chose such a binary coding strategy as this balanced the coding: articles that provided many examples belonging to one theme would otherwise have impacted the results

TABLE 1 The nudge debate: Ethics, effects, and support categories and respective themes

and respective themes		
Category & Theme	Description	
Ethics of nudges	Themes regarding the moral principles of nudges	
Autonomy	Whether nudges leave people free to choose	
Biases of citizens	Whether using the systematic errors that people make to influence these people is laudable	
Biases of nudgers	Whether policy makers that develop and implement nudges make systematic errors	
Paternalism	Whether influencing the choices of people via nudges is commendable	
Manipulation	Whether government uses nudges to its own advantage, not that of the citizens	
Transparency	Whether people know that they are being nudged	
Slippery slope	Whether nudges lead to more coercive public policy	
Effects of nudges	Themes regarding the impact of nudges	
Effectiveness	Whether nudges result in a change of attitudes or behavior in the anticipated direction	
Cost-effectiveness	Whether nudges result in a sizable change in attitudes or behavior in the anticipated direction relative to the time and money invested in the nudge	
Effect size	Whether nudges result in a sizable change in attitudes or behavior in the anticipated direction	
Unintended consequences	Whether nudges have impacts that happen by accident	
Heterogeneous effects	Whether the impacts of nudges differ between people	
Long-term effects	Whether the impacts of nudges last over time	
Support for nudges	Themes regarding the attitudes toward nudges	
Support	Whether the attitudes toward nudges among stakeholders are positive	
Scientific	Whether nudges are based on the methods and principles of science	
Easy to implement	Whether executing nudges is straightforward	

Note: Overview of the categories and themes in the nudge debate, based on deduction from the academic literature (most notably Moseley, 2020) and induction from the media analysis. We have used 'whether' as we coded the quotes in the newspapers as either positive or negative for each theme. For other purposes—say a survey or an experiment—scholars could replace 'whether' with 'to what extent'.

heavily. One article that provided five examples of effective nudges would have been as impactful as five articles providing one example of an ineffective nudge. We acknowledge that using binary coding is a design choice that could have impacted our results. We highlight this as a limitation in the discussion.

The matrix theme-article comprised zeros (no code received for a theme) and ones (code received for a

TABLE 2 The nudge debate in newspapers

Category and theme	Positive %, number of quotes	Negative %, number of quotes
Ethics of nudges	13%	12%
Autonomy	7%	2%
Biases of citizens	4%	1%
Biases of nudgers	<1%	1%
Paternalism	2%	4%
Manipulation	<1%	4%
Transparency	1%	1%
Slippery slope	-	<1%
Effects of nudges	29%	15%
General effectiveness	24%	6%
Cost-effectiveness	5%	-
Effect size	-	4%
Unintended consequences	-	2%
Heterogeneous effects	-	2%
Long-term effects	-	1%
Support of nudges	23%	8%
General support	20%	6%
Scientific	2%	2%
Easy to implement	<1%	-
Total	65%	35%

Note. Most newspaper quotes on nudges were positive, but there were substantial differences between categories and between themes. % is the number of quotes per theme and its assessment, divided by the total quotes.

theme). The number of articles was 443, and the number of coded themes was 1186.

RESULTS

General results

The research goal was to analyze the frequency and the assessment of nudging themes in the news. The first element of the research goal was to identify which themes about nudging had been mentioned in the news. As shown in Table 1, we structured the data into three categories and fifteen themes.

The first category analyzed the ethics of nudges. It covered themes regarding the moral principles involved in nudging. The themes were autonomy, biases of citizens, biases of nudgers, paternalism, manipulation, transparency, and the slippery slope. The second category focused on themes regarding the effects of nudges. This category included general effectiveness, cost-effectiveness, effect sizes, unintended consequences, heterogeneous effects, and long-term effects. The last category was about the support for nudges indicated in the articles. It included the themes of general support, the scientific value of nudges, and whether nudges were easy to implement.

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FIGURE 2 Assessment by the media of nudges over time. Nudges are described positively in newspapers, and this assessment is stable over time. % is the number of quotes per year and its assessment, divided by the total quotes

We acknowledge that it is debatable which themes belong to which category. For instance, we placed the theme of whether nudges are *scientific* into the support category, as the scientific merits of nudging are related to whether politicians and policy makers support it. We placed the *biases of nudgers* theme in the ethics category, as it is connected to the discussion on whether using biases of citizens is laudable. For most themes, the placement was straightforward—for example, *manipulation* in the ethics category and *cost-effectiveness* in the effects category. In Appendix B, we provide code examples for each theme.

We have not used page numbers for quotes, as such page numbers were often not provided. Furthermore, no authors were listed for some newspaper articles, such as editorials. We have used the title and year to reference such articles in line with style guides.

Table 2 provides an overview of the themes, their frequency, and their assessment.

The most frequently discussed themes were whether nudges were *effective* (30 percent of all quotes) and whether they were *supported* by the public (26 percent). The overwhelming view expressed in these quotes was positive. More generally, the overall assessment of nudges was positive: 65 percent of the quotes were rated positively versus 35 percent negatively. There were stark differences between categories. In the ethics category, the balance was about even, while in the categories of effects and support, there were many more positive quotes than negative ones.

Figure 2 shows that nudges were viewed positively throughout the period studied. In every year but one, there were more positive than negative quotes. The most positive codes were from 2017 when Richard Thaler was awarded the Nobel Prize.

The only year with more negative than positive quotes was 2020. That year, nudges received bad press as the British Behavioral Insights Team—nicknamed "the

nudge unit"—was criticized for its proposals to battle the coronavirus pandemic. The title of an article in *The Observer* was "Nudge theory is a poor substitute for hard science in matters of life or death" (Sodha 2020).

A vital role of the media is holding politicians to account. There were indeed articles criticizing how a government used nudges. A key topic was the pandemic. We found an article in The Times entitled "The behavioral scientists do more harm than good" (Gill 2020), a piece in The Daily Telegraph entitled "Are ministers playing a straight bat on pandemic?" (Nuki 2020), and The Observer published a story with the telling title "Oh, Mr Cameron, do stop all that annoying nudging" (Bennett 2010). Moreover, there were critical discussions about attempts to improve citizens' health with nudging in articles like "Don't nudge, regulate" in The Guardian (Lawrence, 2011). In The New York Times there was a critical article on the limited effects of nudges for poverty reduction (Porter 2016), entitled "Nudges aren't enough to solve society's problems." These were exceptions. Most newspaper articles were much more positive about nudges by the government. Hence, the media holds politicians to account in some instances, but this is the exception, not the rule.

Furthermore, Thaler and Sunstein were actively involved in the media debate. Their contributions articles appeared in *The New York Times* (Sunstein 2015a; Thaler 2009b, 2011, 2015a, 2015b, 2017), *Bloomberg* (Sunstein 2015b, 2016, 2017), *The Financial Times* (Thaler & Sunstein, 2008b; Sunstein and Thaler 2008; Thaler 2009a), and *The Daily Mail and Mail on Sunday* (Thaler and Sunstein 2008a). In addition, they—or other proponents of nudging such as David Halpern and Julian Le Grand—were interviewed by journalists (for instance, Benjamin 2013; Dennis 2009) or wrote op-eds (Le Grand, 2010). Scholars who were critical of nudges received much less space, although we did find mentions of, among others, Sarah Conly (Caldwell 2013a), Edward Glaeser (Goldstein 2008a),

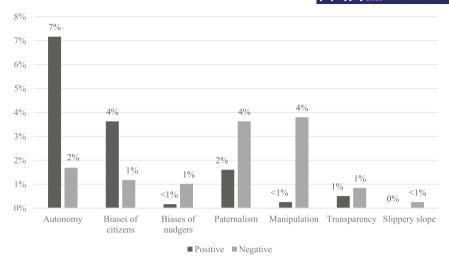


FIGURE 3 Ethics of nudges. The figure shows that newspapers were positive about the autonomy nudges provide and that nudges use biases. However, worries existed regarding biases of nudgers, paternalism, manipulation, transparency, and a slippery slope nudges can start. % is the number of guotes per year and its assessment, divided by the total guotes

and Theresa Marteau (Curtis & Campbell 2011). In conclusion, we found strong connections between proponents of nudges and the media.

Ethics

We will discuss each theme in detail, starting with the ethics category. Figure 3 shows the frequency and assessment of the themes in the ethics category.

Autonomy—whether nudges leave people free to choose—was the most often discussed theme in this category. There were more quotes stating that nudges preserved autonomy than statements arguing that nudges threatened it. In The Daily Cardinal, Steffel (2017) and colleagues discussed a Texas bill to stimulate people to become organ donors. The bill changed the text in a driver's license application from "Would you like to join the organ donor registry?" to "Would you like to refuse to join the organ donor registry?" The authors concluded, "The language does not take away individuals' freedom to choose whether they would like to be a donor, but the change would theoretically lead to more organ donors." Other authors did argue that nudges could reduce autonomy. In an article in the University Wire, the authors noted that nudges lay in an ethical gray area: "Many argue that the semblance of choice offered to citizens is merely an illusion, because people rarely think through their decisions properly" ("Tobacco 21: Can government mollycoddling go too far?" 2019).

The second theme focused on the biases of citizens. Is using the systematic errors that people make to influence these same people a laudable strategy? Hence, it is not about whether people have biases—which is a fact—but whether governments should use such biases to change the behavior of citizens. The idea that government can use biases for good is why

Thaler and Sunstein developed nudges. This is also pointed out in the newspapers. In *The Guardian*, Reeves (2015) states:

"The central promise of behavioral economics as applied to policy is to use people's weaknesses to help them achieve their goals. We want to save more for retirement, but we are myopic and suffer from inertia. So, most British employees are now being automatically enrolled into their occupation pension funds: a direct lift from Nudge."

Using biases for behavior change was often viewed positively in the newspapers: we found three times as many positive quotes as negative ones. A *Financial Times* article (Wolf 2014) defended using biases by quoting the German philosopher Immanuel Kant: "Out of the crooked timber of humanity, no straight thing was ever made." We are all made of Kant's crooked timber, and policy makers should make policy based on this notion.

When authors were critical about using biases for public policy, they often pointed out that nudges did not help people learn. Hence, nudges do not 'straighten' Kant's crooked timber. If policy makers keep nudging us, we will never learn from our mistakes. Rawnsley (2017) concluded that "the ultimate effect of [nudges] is to infantilize the citizenry."

Related to the *biases of citizens*, the authors discuss the *biases of nudgers* themselves. The politicians and policy makers that develop and implement nudges make systematic errors. Rawnsley (2017) argued that "just like other human beings, [nudgers] miscalculate risks, prioritize short-term gratification over long-term achievement and can act irrationally." Countering this, some authors pointed out that governments could devote more resources to solving a problem than citizens. In a *New York Times* article,

Thaler (2009) himself stated, "Bureaucrats are human, too, but they can also hire experts and conduct research." The majority of codes in this theme were negative, however.

The next theme was *paternalism*. Like the discussion on nudgers' biases, most codes were negative. When authors were optimistic, they often argued that nudges were less paternalistic than heavy-handed instruments like bans, mandates, or incentives. For instance, the former British Health Secretary Andrew Lansley argued that he wanted to press ahead with nudges rather than continue the more heavy-handed approach previously taken by Labor governments (Hickman 2010).

When authors were negative, they did not compare a nudge approach to other instruments but instead compared it to leaving people free. In a letter published in *The New York Times*, Hsieh (2010) stated that "the government should leave us alone to live according to our best judgment." Critics saw a government that nudged citizens as a *nanny state*. In an article in the *Scottish Daily Mail* with the subtitle "Nanny state tells us how to praise kids," Martin (2017) criticized the advice by the Behavioral Insights Team to praise children for hard work and effort.

The metaphor that authors often used when discussing manipulation—theme four in the ethics category—was that of Big Brother (for instance, Wallace-Wells 2010). Nudges were considered manipulative when the government used them to its advantage. There were only three positive quotes regarding manipulation versus forty-five negative ones. In a discussion in *The Guardian* on nudging by the World Bank, Rutter argued (2016) that one of the fiercest charges the World Bank faced was manipulation: behavioral scientists taking advantage of people's weaknesses to make them do things that were not in their best interests. On the positive side, an editorial in *The Independent* stated that critics who cried "Big Brother" were missing the point ("Applying the insights of behavioural economics will mean better - and cheaper - government" 2013).

The next theme in this category was *transparency*. The quotes about transparency leaned toward a negative stance. Transparency is connected to manipulation: if nudges are transparent, manipulation is complicated. Connolly (2017) concluded in *The Times*, "To those that recoil at efforts at manipulation, especially by governments, I think if constructed in a completely transparent manner it [nudging] should be embraced." On a critical note, Bennett (2010b) argued that nudges were "more about a stealthy way of doing politics than being straight with people."

The last theme in the ethics category was a theme seldomly discussed in the academic literature: the *slippery slope*, where a light-touch intervention like a nudge paves the way for coercive measures such as mandates. The quotes on this theme were all negative. Mario Rizzo, a professor at New York University, was quoted saying that regarding automatic enrollment in pensions, "pretty soon you are on a slippery slope, where you are dictating people's retirement choices" (Wallace-Wells 2010). Professor Edward Glaeser from Harvard University provided the

example of smoking cessation programs as evidence of a slippery slope: "the plight of smokers [is] evidence of a potentially dangerous pattern whereby the vilification of a certain activity by public-relations campaigns makes the public more amenable to increasingly draconian measures aimed at curtailing that practice" (quoted in Goldstein 2008b).

Effects

The ratio between positive and negative quotes in the ethics category was about even. In contrast, there were far more positive than negative quotes in the effects category, as shown in Figure 4.

The most often mentioned theme was the *general* effectiveness of nudges: do nudges change behavior or attitudes in the desired direction? Most authors applauded the apparent effectiveness of nudges (for instance, Jacobs 2014b; Neville 2012). Kersbergen (2018) showed that people drank around 30 percent less in the pub when beverages were served in smaller sizes, a straightforward application of the nudge theory. People did not order more drinks to compensate for the smaller serving size. She concluded that reducing the standard serving size would lead to fewer alcohol-related hospital admissions and deaths.

Nudges were described as having their share of failures. In the United Kingdom, journalists (Sodha 2020; Johnston 2014) referred to a report by the House of Lords (2011), which argued that using non-regulatory instruments such as nudges in isolation was ineffective. Nudges were considered ill-suited for significant societal challenges like battling climate change (Chakrabortty 2008a). Failures were also noted in cases where nudges should have worked: Carroll (2017), writing for *The New York Times*, discussed a study that used several techniques from behavioral economics—including a lottery and social support nudges—to encourage people to take their medication. In the end, this all failed to have an effect.

The second theme in the effects category concerned the *cost-effectiveness* of nudges. Contrary to the theme of *general effectiveness, cost-effectiveness* considers the change in attitudes or behavior relative to the investment in the nudge; that is, the impact-to-cost ratio (Benartzi et al., 2017). Sometimes, a nudge may not lead to a significant shift in behavior; hence, it is not very effective. However, it is cost-effective because it is cheap. All quotes applauded the cost-effectiveness of nudges. Nudges only take "a letter and a postage stamp" (Moore 2014) or some "stickers in students' bathrooms" (Bell 2019).

The effect size of nudges was the third theme in the effects category. The effect size was connected to the claimed high cost-effectiveness of nudges. All quotes on the effect size of nudges were negative. Nudges often have low costs but also have small effect sizes. Wolfers (2015) discussed an experiment where high

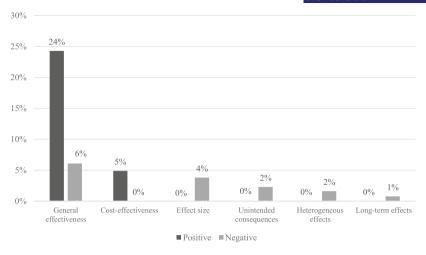


FIGURE 4 Effects of nudges. The figure shows that newspapers often argued that nudges changed attitudes and behavior in the desired direction (hence, nudges are effective), especially relative to the time and money invested in the nudge (hence, cost-effective). There were worries about effect size, unintended consequences, heterogeneous effects, and long-term effects. % is the number of quotes per year and its assessment, divided by the total quotes

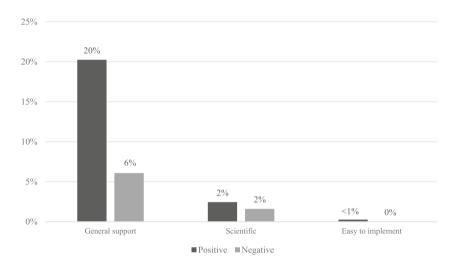


FIGURE 5 Support for nudges. The figure shows that the newspapers mentioned that stakeholders supported nudges, and that nudges were seen as scientific and easy to implement. % is the number of quotes per year and its assessment, divided by the total quotes

school seniors received text messages reminding them of the required steps to enroll in college. 68 percent of the students who received the messages enrolled in college versus 65 percent of those who did not receive messages. The difference of 3 percent was a small effect size; however, this result was achieved with only eight text messages at the cost of about \$7 per student, making it cost-effective.

The fourth theme was unintended consequences. Although positive unintended consequences could occur, all quotes on this theme focused on negative consequences. One unintended detrimental effect was that nudges could drive away support for heavier interventions like bans or taxes. Nudges were "behavioral bandages" (Steverman 2014) that "distract decision makers from more substantive efforts" (Gal 2018).

The fifth theme in the effects category concerned heterogeneous effects: does the impact of nudges differ

between people? All guotes about this theme were negative. Kirkup (2012) showed that while automatic enrollment led to more people participating in pension schemes, such schemes could result in some clients sticking to a conservative default while they would have been better off if they would have opted for a more aggressive strategy. Hence, a nudge could help on average but hurt some people.

The last theme in the effects category was the longterm effect of nudges. All guotes doubted whether nudges were influential in the long term. A stair that acts like a giant piano is funny the first time you see it but will not help in the long run (Furnham 2012). More fundamentally, in an article in The Financial Times, Murray (2012) quoted public health expert Martin McKee from the London School of Hygiene and Tropical Medicine, who argues that bringing about long-term health behavior change across entire populations is notoriously tricky. Nudging alone is

insufficient; McKee stated that strong regulation should be at the heart of preventive care policies.

Support

The third category looked at the support for nudges. The summary is shown in Figure 5. In line with the effects category, the overwhelming majority of quotes in the support category were positive. Journalists even wrote articles about nudges because nudges were popular (for instance, Gal 2018).

When we look at all positive and negative quotes and split the sample into the left-wing, center, and right-wing American or British newspapers, we can see more positive than negative quotes for all newspapers. This is shown in Table 3. For instance, left-wing British newspapers (such as *The Guardian*) had more positive quotes than negative

TABLE 3 Assessment of nudges and political stance of newspapers

Political stance	Positive	Negative	Ratio
Left-wing	21%	13%	1.6
 United States 	10%	5%	1.8
 United Kingdom 	11%	8%	1.4
Center	16%	6%	2.5
 United States 	NA	NA	NA
 United Kingdom 	16%	6%	2.5
Right-wing	19%	8%	2.2
 United States 	<1%	0%	NA
 United Kingdom 	18%	8%	2.1
Not rated	10%	6%	1.5
 United States 	10%	6%	1.5
 United Kingdom 	<1%	0%	NA
Total	65%	35%	1.9

Note: Newspapers were positive about nudges. This is true for left-wing, center, right-wing, and unrated newspapers in the United States and the United Kingdom. Left-wing—United States: Bloomberg, Star Tribune (Minneapolis MN), The Conversation, The New York Times, The Philadelphia Inquirer, The San Diego Union-Tribune, The Washington Post, USA Today. United Kingdom: The Guardian, The Observer. Center—United States: None. United Kingdom: Financial Times, The Independent, the i, The Herald (Glasgow). Right-wing—United States: Pittsburgh Post-Gazette. United Kingdom: City A.M., The Daily Mail, Mail on Sunday, MailOnline, Scottish Daily Mail, Evening Standard, The Daily Telegraph, The Sunday Telegraph, The Times, and The Sunday Times. Not rated—United States: American Banker, Cavalier Daily: University of Virginia, CE Noticias Financieras English, Chicago Daily Herald, Chicago Maroon: University of Chicago, ContentEngine Think Tank Newswire English, Cornell Daily Sun: Cornell University, Daily Bruin: University of California - Los Angeles, Daily Inter Lake, Daily Journal, Daily O'Collegian: Oklahoma State University, Dayton Daily News (Ohio), Governing, Government Technology, Islamic Development Bank Institute, La Crosse Tribune, The Battalion: Texas A & M University, The Charleston Gazette-Mail, The Christian Science Monitor, The Chronicle of Higher Education, The Daily Campus: University of Connecticut, The Daily Cardinal: University of Wisconsin-Madison, The Daily Iowan: University of Iowa, The Harvard Crimson: Harvard University, The Michigan Review: University of Michigan - Ann Arbor, The Pulse: Finch University of Health Sciences, The Salt Lake Tribune, The Tartan: Carnegie Mellon University, The Torch: Roosevelt University, The Vermilion: University of Louisiana-Lafavette, United Kingdom: Daily Post North Wales, Based on https://en. wikipedia.org/wiki/List_of_newspapers_in_the_United_Kingdom, individual websites, and ratings of newspapers via www.allsides.com.

ones (1.4 ratio), and right-wing newspapers (such as the *Evening Standard*) also had more positive than negative quotes (2.2 ratio). The ratios ranged from 1.4 to 2.5. This finding aligned with survey studies showing that there was support for nudges that governments had proposed across partisan divides (Sunstein, 2016).

Although most quotes support nudges, there was also resistance to nudges. As opposed to the Cameron (Conservative Party, UK) and Obama (Democratic Party, USA) administrations, the Blair (Labour Party, UK) and Trump (Republican Party, USA) administrations were resistant to nudges (Harford 2019). The British Labour Party attacked nudges for being too laissez-faire (Silva 2017), while American Conservatives saw a Big Brother tendency.

In an article in The New York Times, Fox and Tannenbaum (2015) argued that both sides of the political spectrum conflated their feelings about nudges with their feelings about policy goals. They provided evidence of what they called a "partisan nudge bias." Left-wing people supported the policy instrument nudges when it was illustrated with a nudge that had an agenda they agreed with—say, encouraging people to enroll in food stamps programs. They opposed nudges when an example of a conservative nudge was given—for instance, gently stimulating the wealthy to use legally acceptable tax breaks. For conservatives, the reverse was true. This aligned with the finding by Reisch and Sunstein (2016) that party affiliation was not strongly correlated with support for nudges overall. Instead, support was correlated with whether the goals of the nudge aligned with political views.

The second theme in the support category was whether nudges were *scientific*. This was related to general support, as people often supported nudges because they were seen as based on rigorous science. The majority of the codes were positive. Nudges are based on behavioral economics, which was "academically rigorous" (Ahuja 2011). Furthermore, newspapers noted that nudges were often tested using field experiments, which allowed for causal inference in the real world.

Some people were skeptical. A Member of Parliament called the nudge unit "the pseudoscientific justification for big government" (Hookham 2012). Others noted that "nudging is quickly moving in the direction of junk science" (Luciani 2019). Furthermore, p-hacking and the replication crisis undermined nudge studies' scientific status (Dewey 2017; Gill 2020).

The last theme—whether nudges were easy to implement—was not mentioned much, but it did point toward an essential feature of nudges. Developing a nudge—for instance, changing some sentences in a letter—is straightforward, while setting up subsidies or introducing bans is challenging. An article in *The New York Times* used this argument to show the value of nudging by governments (Sanger-Katz 2018).

DISCUSSION

This study aimed to analyze the frequency and assessment of nudging themes in the news media. By doing so, we can analyze how a key institution—the news media discusses nudges. We found fifteen themes surrounding the nudging debate. Various themes are familiar to academics working on nudges, such as whether nudges are autonomy-preserving and cost-effective. Hence, some themes—such as effectiveness—are relevant for scholars and the news media. It is also connected to the impact of academics on the media debate, shown by the various opeds written by academics and the fact that journalists interviewed many academics. Some themes mentioned in the media occur less often in the academic literature, such as whether nudges are based on solid science, the ease of implementing nudges, and the slippery slope that may begin with a nudge. This highlights that there are differences between the academics and the media debates on nudging. Future studies can use the fifteen themes for a nuanced analysis of the opportunities and pitfalls of nudges. In this way, scholars and practitioners can move beyond simply championing or resisting nudges.

Regarding frequency, we found that general effectiveness and support themes were most often mentioned. Less often discussed topics included the long-term effects of nudges and whether nudges were easy to implement.

Overall, the assessment of nudges was positive in all years, but one. We did find differences between themes. On the positive side, newspapers noted that nudges could preserve autonomy, and using the biases of citizens to help people was often applauded. Furthermore, nudges were seen as effective, cheap, supported among stakeholders, and built upon solid science. Worries existed that nudges could be paternalistic (nanny state), manipulative (Big Brother), have small effect sizes or unintended consequences, and that nudgers themselves suffered from biases.

This brings us to directions for future research. We only focused on British and American newspapers. Furthermore, our search criteria could have impacted the results. Future studies could analyze whether the fifteen themes be found to apply to other countries and when using other search criteria. They can then compare their results with ours. Such studies could yield exciting findings, as cross-national survey studies show that attitudes about nudges differ between countries (Sunstein et al., 2018).

Furthermore, scholars can analyze whether publication bias relates to positive reporting in the media. Della-Vigna and Linos (2022) showed publication bias in the academic nudge literature. We looked at themes that were not directly related to publication bias (such as worries about paternalism). Hence, publication bias was probably not entirely driving our results. We did find instances of the replication crisis and p-hacking being mentioned in the media (Dewey 2017; Gill 2020) and

some instances where non-significant results were discussed (Sanger-Katz 2018).

In addition, scholars could use different methods to study the nudge debate. We used qualitative coding, precisely a directed approach to content analysis. A benefit of this approach was that we could measure how often themes in the nudge debate were mentioned. We could also measure how positive or negative nudges were viewed in the media and whether this changed over time. An apparent downside was that it was labor-intensive to hand-code all the articles, making the method difficult to scale. For some quotes, it was difficult to decide which theme they belonged to, and the decision was necessarily subjective. We tried to limit the subjectivity by describing each category and theme (see Appendix A) and asking a research assistant to assess codes independently. Our binary coding could also have impacted the results. Furthermore, to keep the number of articles manageable, we included a second dimension to our search string, including terms such as behavior change and choice architecture. We might have missed relevant articles but did not mention words that we included in this second dimension.

Scholars could analyze the connections between academics and journalists in detail. We found strong connections between academics that are positive about nudges—including Richard Thaler and Cass Sunstein—and the media. Academics who were more critical about nudges were less often discussed. This is a topic that merits future investigation.

We also suggest argumentation theory as a potential future research area. Authors used rhetoric, for instance, in the discussion regarding paternalism. When authors wanted to stress that nudges were not paternalistic, they compared them to heavy-handed instruments like bans when arguing that nudges were not paternalistic. Conversely, when authors argued that nudges were overprotective of citizens, they used a different comparison: they contrasted nudges with no intervention. Being clear about what nudges are compared to adds to a nuanced debate.

Related to this, we saw other rhetorical techniques in the newspapers that could be assessed critically. One example is the *slippery slope* argument (Walton, 1992), the idea that if governments nudge now, soon they will be using bans and mandates: a small first step can lead to complex consequences and ultimately to a disastrous outcome. Scholars could question such reasoning. Scholars interested in argumentation theory could tease out the strengths and weaknesses of the arguments used in the nudge debate (see for an overview of argumentation theory Van Eemeren et al., 2013).

CONCLUSION

Governments have used nudges extensively to tackle societal problems, from problematic debts to obesity. Being the first large-scale analysis of how nudges have been

framed in the media, this study adds to the literature in five ways. First, it identifies fifteen themes surrounding the nudge debate in the media, which can be grouped into three categories: ethics, effects, and support of nudges. Next, it shows that newspapers are often positive about nudging and that this sentiment is stable over time. The third novel finding is that newspaper articles often discuss effectiveness and support but rarely discuss themes such as transparency and long-term effects. Fourth, the media did hold politicians to account for using nudges, but these were exceptions. This is connected to the fifth contribution: we show that academic proponents of nudging were actively involved in media debates, while critical voices were less often expressed. In conclusion, this study shows how nudging by governments was discussed in a critical institution: the news media.

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CONFLICT OF INTEREST

No potential conflict of interest was reported by the author(s).

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APPENDIX A: INCLUDED NEWSPAPER ARTICLES

Note. For some newspaper articles, no authors were listed, for instance, in the case of editorials. We have used the title and year to reference these articles in line with style guides. "Banks: Called to account." 2008. *The Guardian*, July 17, 2008.

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APPENDIX B: CODE EXAMPLES

Table B1.

TABLE B1 Categories and themes

Category & Theme	Code examples
Ethics of nudges	
Autonomy	Positive: "The libertarian aspect of our strategies lies in the straightforward insistence that, in general, people should be free to do what they like." (Johnston 2014)Negative: "These kinds of interventions have been criticized for unjustly interfering with an individual's autonomy." (Jachimowicz 2017)
Biases of citizens	Positive: "Rather it is a corrective to the longstanding assumption of policy makers that the average person is capable of thinking like Albert Einstein, storing as much memory as IBM's Big Blue, and exercising the willpower of Mahatma Gandhi. That is simply not how people are, they say. In reality human beings are lazy, busy, impulsive, inert, and irrational creatures highly susceptible to predictable biases and errors. That's why they can be nudged in socially desirable directions." (Goldstein 2008a) Negative: "One of the more powerful critiques of nudge is that it concentrates on the psychological manipulation of voters rather than properly educating them about choices, and the ultimate effect of this is to infantilize the citizenry." [also coded manipulation, negative] (Rawnsley 2017)
Biases of nudgers	Positive: "[Sunstein and Thaler] emphasize that in many areas—from personal finance to health—people are ill informed, inexperienced, and therefore ill equipped to make the choices that are in their own self-interest, and government has the resources to hire experts who can help demystify an increasingly complex world." (Goldstein 2008b) Negative: "regulators suffer from the same cognitive biases, behavioral inadequacies, and knowledge problems as the consumers they seek to regulate, and rarely take their own biases into consideration." ("CEI Comments on The Bureau of Consumer Financial Protection's RIF Regarding Rulemaking Processes" 2018)
Paternalism	Whether influencing choices of people via nudges is commendable Positive: "The libertarian nudging espoused by Cass Sunstein sounds like a happier and more effective way to get things done than the paternalistic dictatorialism so pervasive on all sides of today's legislative and policy divides." (Loeb et al. 2010) Negative: "Mr Thaler, who helped to advise on the creation of the British unit, described the concept as "libertarian paternalism": in other words, a different approach to the "nanny state"." (Plimmer 2014)
Manipulation	Positive: "Critics who cry "Big Brother" over government attempts to manipulate public behavior are missing the point. [] Indeed, this is about ensuring the state does not need to be Big Brother." ("Applying the insights of behavioral economics will mean better—and cheaper—government" 2013) Negative: "These choice architects are going to be extremely powerful people under the Obamist-Cameroon dispensation. It looks as though we are all going to be manipulated all the time." (Bryan 2008)
Transparency	Positive: "Nor are the best nudges covert. There may not be a sign at the canteen telling you that healthy foods have been put at the front because that's where you are more likely to choose them but organizations that adopt this as a policy can and should do so openly." (Baggini 2019) Negative: "It's more about a stealthy way of doing politics than being straight with people. Rather than being explicit about what will happen, it seems to want to lead people to 'where we want them to go'." (Bennett 2010b)
Slippery slope	Positive: No coded quotes. Negative: "Does libertarian paternalism start us down a slippery slope toward more aggressive government interventions? Edward L. Glaeser, a professor of economics at Harvard University, points to the history of cigarette regulation as a classic example of how some mildly paternalistic policies tend to build support for hard paternalism." (Goldstein 2008a)
Effects of nudges	
General effectiveness	Positive: "The unit's successes include sending letters to British GPs who were prescribing more than their peers, cutting unnecessary prescriptions by 3.3%. There have also been successful projects in the fields of education and road safety." (Quinn 2018) Negative: "Research indicates that overweight individuals have "reasonably close" to accurate estimates of the increased health risks and decreased life expectancy associated with obesity. Hence the weakness of mandated information as a modifier of behavior. A study conducted after New York City mandated posting calorie counts in restaurant chains concluded that, while 28 percent of patrons said the information influenced their choices, researchers could not detect a change in calories purchased after the law." (G.F. Will 2012b)
Cost-effectiveness	Positive: "Fortunately, the results quickly spoke for themselves. In education, for example, Thaler's insights led to the families of university students being sent text messages about what the student was working on and how they could help. (By encouraging them to study for an exam that week, for example.) This led to a marked improvement in attendance and exam results—for next to no cost." [also coded effective, positive] (Silva 2017)

TABLE B1 (Continued)

Category & Theme	Code examples
	Negative: No coded quotes
Effect size	Positive: No coded quotes Negative: "However, if people live in an environment where they are surrounded by fast-food advertising and glamorous alcohol marketing, nudging will have a limited effect." (Boseley 2010a)
Unintended consequences	s Positive: No coded quotes. Negative: "The worry, however, is that the perceived simplicity and efficacy of such [nudge] tactics will distract decision makers from more substantive efforts—for example, reducing electricity consumption by taxing it more heavily or investing in renewable energy resources." (Gal 2018)
Heterogeneous effects	Positive: No coded quotes. Negative: "Still, there's reason to be careful, Mr. Kelly says. An intervention that helps students on average may leave some individuals worse off than they were without it." (Supiano 2016)
Long-term effects	Positive: No coded quotes "There have been successes, after all, with respect to weight loss—although these seemed to disappear over time." [also coded effective, positive] (Carroll 2017)
Support of nudges	
General support	Positive: "His "nudge theory" was seized on by politicians, especially liberal ones in the west." (Rawnsley 2017) Negative: "Then the whole movement seemed to stall. The insights team in the UK saw its budget and staffing cut back significantly. Obama was replaced by a new president and administration that showed zero interest in the idea. No new breakthroughs along the lines of the opt-in/opt-out strategy emerged to attract the attention of senior officials." (Ehrenhalt 2019)
Scientific	Positive: "It reflects the widespread perception that behavioral economics combines the cleverness and fun of pop psychology with the rigor and relevance of economics." (Gal 2018) Negative: "The nudge unit's detractors remain unconvinced about its work. "It's the pseudoscientific justification for big government." says Douglas Carswell, the Tory MP for Clacton." [also coded support, negative] (Hookham 2012)
Easy to implement	Positive: "Although most people think of school lunch as a monolithic federal program, lunchrooms across the more than 14,000 U.S. school districts vary, and most decisions about what and how students eat are made locally. Most important, implementing change does not require a vote in Congress." (Black 2010) Negative: No coded quotes