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Harnessing the power of words to address the COVID-19 crisis

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Abstract: Behavioral public administration theory suggests that seemingly irrelevant word choice manipulations can influence behavior. We contend that the power of words has frequently been overlooked in the COVID-19 crisis. Given that most decisions mobilize System 1 cognition, words can be an important tool in pursuing socially-desirable outcomes. Beyond their substantive content, words choice matters because language operates largely via automatic processes. Based on findings from this literature, words can be harnessed to induce behavioral change aligned with public health objectives. We elucidate several mechanisms through which these effects are likely to occur and suggests concrete applications to the COVID-19 crisis.

Keywords: behavior; COVID-19; frames; words.

Harnessing the power of words to address the COVID-19 crisis

In addressing the COVID-19 crisis, all types of policy tools should be explored. The most critical measures on the frontline are medical, *i.e.* monitoring, treatment, and vaccine administration. However, citizens can also play an important role in affecting the dynamics of the crisis by changing their behaviors. To this end, individuals have been asked to stay at home, respect social distancing and adopt proper hygiene practices (WHO, 2020). Social scientists can contribute to the frontline of behavior change by leveraging insights from experimental studies to inform effective behavior change strategies (Grimmelikhuijsen et al., 2017; Cepiku et al., 2021). They can also increase social welfare by helping caregivers to “care with words” (Draper et al., 2013). Our contribution aims to enhance the measures that policymakers and healthcare providers can leverage by addressing a very simple behavioral lever that is often overlooked: the words that are used in public communications and in interpersonal communications.

While social science has contributed a number of insights applicable to inducing behavior change, we raise the considerable potential of word choice. Although we do not advocate for relying only on word choice as a means to change behavior,¹ we seek to highlight the latent potential of words as a tool for behavior change, and cite evidence suggesting that much can be gained if the power of words is harnessed and channeled in the right direction. Deliberate reasoning based on the *homo economicus* perspective (System 2 thinking) is not always the best guide for designing health-related communications. Instead, we raise evidence suggesting that it can be more effective to consider *homo heuristicus* by

¹ Most governmental approaches include strong command-and-control and economic (dis)incentive-based instruments (Tummers, 2019; Friedson et al., 2021; see Aoki, 2021 for an interesting discussion comparing stay-at-home request versus order with financial penalties in Japan).

designing messages that activate and channel automatic processes (System 1 thinking) in human beings towards desirable directions (Gigerenzer & Brighton, 2009; Kahneman, 2011). Indeed, although word choice cannot serve as a substitute for more standard coercive approaches, it can complement them. Even if average effect sizes are small, population-wide aggregate effects could be substantial. Simply said, given its potential cost-effectiveness, word choice deserves the attention of public health authorities and others crafting messages regarding COVID-19.

Words and frames can function to construct social reality. They have a behavioral power that can be harnessed and channeled to reach socially-desirable outcomes such as the adoption of new behaviors and habits, but they can also serve to justify the unjustifiable (Farrow et al., 2021; Zavattaro et al., 2021). Kahneman and Tversky (1984) made a groundbreaking contribution when they showed that people react differently to identical health-related policy options to address a disease when these options are presented in different frames. Given that some biases and heuristics (e.g., status quo bias, loss aversion) are triggered by the choice of words used, words can serve as a low-cost nudge to change perceptions and behaviors (Farrow et al., 2018; Thaler & Sunstein, 2008). As many institutions and healthcare practitioners communicate important messages to the public in the context of COVID-19, we believe that a more systematic appreciation for the relative effectiveness of words in changing behaviors is warranted.

It is worth observing that words do not constitute a unique strategy by which public organizations can effectively communicate with the public to pursue better health outcomes. Other means include pictures, short videos, numbers, games, etc. We focus on words for several reasons. First, words can be considered as a basic unit of analysis or action. They are used in other strategies in combination with other elements. For instance, short videos (and sometimes pictures) are frequently accompanied by words. Second, words are pervasive

across communication settings, especially in messages that are developed and delivered on a regular or daily basis (e.g., COVID-19 daily reports). In these circumstances, words are sometimes used without much reflection regarding the differential impacts that alternative words may have. In light of the empirical evidence on the importance of word choice in determining perceptions and behavior, inviting public health professionals to reflect more on the words they use to deliver their messages is warranted. Third, the words employed by governments or those in positions of authority are likely to be repeated by others, causing chain reactions. Fourth, words can be easily modified without incurring high costs. This property is particularly important in times of heavy budgetary constraints.

A behavioral perspective suggests that public administration practices can leverage words in ways that generate behavior change beyond what is predicted by the conventional rational model of decision-making. We first overview the behavioral theory of public administration that predicts that subtle seemingly irrelevant wording manipulations can substantially influence behavior. We then elucidate three easy-to-use techniques that can be used in the context of managing the COVID-19 crisis. Special attention is given to the application of these mechanisms to important aspects of the current public health crisis.

THE RELEVANCE OF WORDS IN BEHAVIORAL PUBLIC ADMINISTRATION

In his seminal work, Herbert Simon (1976) emphasized the need to connect the fields of psychology and public administration. Literature on a behavioral theory of public administration only emerged much later, in the early 2010s (Kasdan, 2020; Tummers, 2020; see also Ford, 2021 for a humanity-based public administration view). Grimmelikhuijsen et al. (2017) define behavioral public administration as the interdisciplinary analysis of public administration from the micro-level perspective of individual behavior and attitudes by drawing on recent advances from psychology and behavioral sciences. A basic tenet of this

theory posits that the behavior of public servants and other constituents frequently deviates from predictions issuing from the *homo economicus* model. This rational view of human behavior, manifested in principal-agent models, has dominated the field of economics and policy design and has generated significant advances in a theoretical understanding of behavior.

For many years, reliance on this model of decision-making led the scientific literature to overlook evidence that people frequently make decisions in environments where the theoretical conditions of the theory are not satisfied and that they often use mental heuristics in doing so. A behavioral theory of public administration posits that alternative models such as *homo heuristicus* or *homo behavioralis* (Gigerenzer and Brighton, 2009) are most effective in explaining and even predicting human behaviors. An understanding of human biases can lead to better-designed interventions and generate substantial improvements in the effectiveness of public administration practices. The growing literature in this field has focused more on reporting and documenting the existence of behavioral biases in public administration settings (Battaglio et al., 2019; Grimmelikhuijsen et al., 2017) and less on designing behaviorally informed solutions (Bhanot and Linos, 2020). For instance, although public servants seek to make objective decisions, evidence suggests that they are not exempt from framing effects (e.g., Bellardinelli et al., 2018; Banuri et al., 2019). Several well-publicized results have recently supported the relevance of a behavioral theory of public administration and led to the establishment of influential behavioral insights units in many national governments (Mukherjee and Giest, 2020). Among these findings, the manipulation of framing and wording in various contexts such as tax collection (Hallsworth et al., 2017) or police recruitment (Linos, 2018) have proven particularly promising.

Our main proposition extends this line of reasoning by arguing that words matter in public communication. Although words are not their sole tool, public administrators

nevertheless employ words in many of their interventions and should be aware of the extent to which selecting some words over other ones can advance the pursuit of socially desirable goals (Farrow et al., 2018). In what follows, we develop three simple word-related strategies that can be taken advantage of to a greater extent in the management of the COVID-19 crisis.

CHANGING BEHAVIOR BY APPROPRIATELY NAMING THE SITUATION

In every community, explicit rules and implicit conventions determine the names or labels that will be used (Webel, 2020). Evidence has shown that perceptions of risk and danger and attendant reactions are highly influenced by the words that are used to describe a given situation. Research has found that hurricanes with feminine names result in significantly more deaths than those with masculine names, perhaps of gender-related stereotypes that “lead to lower perceived risk and consequently less preparedness” (Jung et al., 2014). An immediate potential application related to COVID-19 is whether the virus has been determined to be a feminine or masculine noun in various languages (e.g., French, Italian, Spanish). Indeed, a potential implication of this choice is that it could subconsciously influence perceptions of the severity of the virus and the subsequent precautions taken.

Another element that policymakers to devote more attention to in establishing naming conventions is processing fluency of alternative names. For instance, pharmaceutical companies invest heavily in naming drugs, with a notable preference for names with X, Y and Z, because drugs with names using these letters have been shown to influence their perceived qualities in the mind of doctors and end users (Mc Neil, 2003; Collier, 2014). Interestingly, disfluency may increase people’s awareness to risks in the health domain (e.g., Song & Schwarz, 2009; Dohle & Siegrist, 2014). Song and Schwarz (2009) found that participants evaluated food additives with disfluent, difficult-to-pronounce names as more hazardous than food additives with fluent, easy-to-pronounce names. A natural application of these findings

to the COVID-19 crisis is to consider how naming the virus, the vaccines or the words used to characterize the situation itself can be used to increase people's awareness about risk and possibly improve their preparedness. For instance, the virus was initially named by scientists as the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).

In the same vein, are 'stay-at-home' orders, 'lockdowns,' and 'shelter-in-place' orders equally as effective? When implemented in early phase, appropriate surveys could provide a rigorous comparison of people's reactions to alternative formulations and have the potential to yield highly useful insights for policymakers. Moreover, once it is already in widespread use, changing a naming convention is very difficult, notably due to lock-in effects. Another lesson from fluency theory is that familiar things and words require less effort to process and this ease unconsciously signals truth (Reber & Schwarz, 1999). An example of this applied to the COVID-19 crisis is short and simple message used in United Kingdom: "stay at home, protect the NHS, save lives". Evidence has shown that repeated exposure to messages such as health advice increases its familiarity but also its perceived veracity. The emphasis put on fluency should not negate the other behavioral dimensions of words and names, such as avoiding the use of names can be harming and stigmatizing (Fukuda et al., 2015).

EXPLOITING THE AFFECTIVE POWER OF WORDS

Words are not neutral vehicles. Evidence demonstrates that the relative success or failure of a policy instrument in various domains depends not only on its expressive function and pecuniary incentives, but additionally on the vocabulary that is used to describe it (Farrow et al., 2018; Clot et al., 2017; Tan & Low, 2011). Individuals' willingness to pay a given amount or to change behavior has been shown to differ according to the labels used to describe the amount of the payment (e.g., tax *versus* offset) or the incentives (payment *versus*

compensation), notably due to the affective reactions that alternative words evoke (Sussman & Olivola, 2011; Clot & Grolleau, 2017).

Beyond their formal accuracy, words can also have informal connotations. As vehicles for expression, they can also foster negative emotions such fear and despair (e.g., being stuck at home) or positive emotions such as understanding and hope (e.g., staying safe at home), with the attendant behavioral consequences. To avoid the detrimental effects of eliciting negative affect, experts have advised against the use of emotionally loaded words, e.g. the “10 words leaders should avoid when discussing coronavirus with their employees” (Murphy, 2020).

Concretely, several countries have encouraged people to respect “social distancing”, by staying 6-10 feet away from others. Although this choice may have been well-intentioned, the behavioral science literature suggests that it may not be optimal for at least three reasons. First, it may have engendered confusion regarding the behavior that is sought, that is “physical distancing” rather than “social distancing”. Second, “social distancing” is likely to entail some negative social effects beyond physical distancing, such as discouraging people from exchanging greetings at a reasonable distance. Third, “social distancing” may inadvertently create a fertile ground for other health-related problems (Holt-Lunstad et al., 2010). We do not argue that most people have adopted a kind of “social fast”, but the term ‘social distancing’ “does not differentiate between social activities that maintain physical distance while fostering social connectivity” (Allen et al., 2020). The WHO changed its original position and has instead begun using the term “physical distancing” to encourage people to remain socially connected (Gale, 2020).

Weible et al. (2020) has emphasized that emotionally charged language can recall cultural and historical contexts that can be put to strategical use. For instance, in the UK, Boris Johnson referred to COVID-19 as the “invisible killer” that “threatens”, linking fear

with the unprecedented and uncontrollable to legitimize drastic reductions in personal freedom. In contrast, the Prime Minister in Sweden described the virus as “testing our country, our society and us as human beings”, a language that fosters hope and invokes a social response motivated by solidarity. COVID- 19- related research has also found support for the advantages of appealing to citizens’ prosocial motivations and empathy as means for promoting physical distancing (Pedersen & Favero, 2020). This literature has found that words that refer to prosocial issues and empathy rather than self-interest can be effective in reaching this goal (see Grant & Hoffman, 2011 for an example on hand washing).

WORDS AS IDENTITY MARKERS AND GENERATORS OF SPONTANEOUS ASSOCIATIONS

Beyond their semantic meaning words can evoke spontaneous associations and bear on identity constructs. The UK motto “Save the NHS” [National Health System] can serve as an identity marker and invite empowerment. Although these spontaneous associations do not necessarily correspond to an objective reality, they have nevertheless been shown to influence judgement and behavior. Even minor or arbitrary similarities between people can foster identity-based affects that have the capacity to influence a cascade of behaviors (Farrow et al., 2018). Importantly, the associations and identity concerns evoked are not always aligned with socially and ethically desirable goals.

For instance, qualifying the COVID-19 as the “Wuhan virus” or even “the Chinese virus” as done by several American officials and media outlets is likely to activate identity-related interpretations and the accompanying dynamics of in-group favoritism and out-group prejudice and stigmatization. These effects were evidenced by a subsequent increase in xenophobic incidents and a degradation of US-China relations (Zavattaro et al., 2021). According to Webel (2020) “in addition to inflaming racism, emphasizing the foreign or

external origins of a disease [e.g., the Indian variant] influences how people understand their own risk of disease and whether they change their behavior”. The Iranian Prime minister Ali Khamenei, used such a conflict-related framing by claiming that the virus “comes from the US” and could even be “manipulated” by the US, allowing the government to legitimize its limited ability to deal with the pandemic and to link anxiety related to COVID-19 to anxieties related to geopolitical conflict (Weible et al., 2020).

The COVID-19-related discourse of many public officials is replete with war-related terms and metaphors. Understanding how such terms can be effective in uniting people and encouraging them to change their behavior by complying with public health advice is important. Nevertheless, the use of military metaphors and analogies in addressing a sanitary crisis has been described as “ironic, unfortunate, and unnecessary” (Nie et al. 2016). Additionally, analogies may create blind spots in critical evaluation (Peckham, 2019). The respective aims of healing and war are in conflict. Military metaphors can inadvertently further stigmatize patients and subliminally endorse the legitimacy of war and violence in social and political life. War metaphors implicitly equate individuals with “soldiers” from whom total obedience (rather than awareness, civic duty and solidarity) is required. The “enemy” can moreover encompass more than the virus itself (*e.g.*, infected individuals, foreigners) and legitimize authoritarian abuses. Furthermore, the use of war metaphors can be unnecessary especially when more positive alternatives (*e.g.*, fight or war *versus* challenge or journey) are available and underutilized (Nie et al. 2016). For instance, a long-forgotten word was revived during the COVID-19 crisis in Denmark that helped it to flatten the curve and lift popular sentiment (Johanson, 2020).

CONCLUSION

While words do not, on their own, provide a solution to every public policy issue, it is clear that word choice can have impacts on behavior. Especially in contexts where lives may be at stake, it is important for policymakers and healthcare providers to appreciate that no word is neutral in its behavioral implications, and that trade-offs are therefore inherent in every message communicated. In addition to their descriptive content, they have connotations and a performative function that can shape reality. Given that most behaviors are governed by automatic processes, words should be considered not only for their objective meaning, but also for the potential affective and other behavioral significance. As such, word choice in public communications constitutes a low-cost nudge with first order effects. Language can even become more relevant after a lockdown phase - for example, once systems "open up", there might be more- and less-effective words to encourage compliance with public health best practices, for example, wearing masks.

Rather than leaving to chance or to other factors such as historical practice or manipulation the word choice in the management of the COVID-19 crisis, we advocate to devote more attention to the used words. Although top public administrators and policymakers recognize the power of words, we encourage them to consider word choice and the communication of public policies as a crucial step in the policy implementation cycle, especially in the context of COVID-19 crisis management. Further context-specific research and increasing the literacy of public communicators in this arena will be critical in order to better leverage the power of words in public administration.

Moreover, word choice cannot be reduced to a one-size-fits-all decision and requires to consider various subgroups and to adapt accordingly messaging. Citizens are heterogeneous and the same words can affect different individuals in different ways. Citizens differ, for example in their political views. As a result, the same message from a Republican

or Democratic politician could have very different, if not opposite, consequences depending on its audience. Regarding environmental perceptions, for instance, Schuldt et al (2011, see Farrow et al., 2018 for more details) found that ‘global warming’ was a more affectively-laden expression than ‘climate change’ for Republicans, as compared to Democrats. This political heterogeneity must be considered in order to refine and tailor the words used in addressing specific groups, but also in selecting the most appropriate messengers for a particular message and audience.

As a general principle, we argue that a tailored approach that takes into consideration individual heterogeneity is preferable, although its use should be validated by a cost-benefit analysis given the assumed higher costs involved. One way to analyze and address this heterogeneity is proposed by Li (2020) who distinguished different types of citizens and posit that considering their informational needs can improve the coproduction of health outcomes. The author distinguished between Type I and Type II individuals, who tend to use System 1 and System 2 cognition, respectively (Kahneman, 2011). Consequently, governments do not need to design particular strategies to communicate to Type II individuals because these individuals actively seek and consume additional information in order to make well-informed COVID-19 related decisions. Type I individuals, however, tend to pay more attention to the credibility of information received than to the availability of specific types of information in making of COVID-19-related decisions. In this framework, the (positive or negative) power of words can be increased in the case of Type I individuals, especially in low-trust environments. Li (2020) also suggested that in low-trust settings, credibility and trustworthiness can be increased by relying on credible intermediaries. These insights suggest that selecting the “right words” may not be enough if they are not relayed by credible messengers. Nevertheless, we also admit that in some circumstances, a one-size-fits-all

approach could be justified if the gains from addressing the citizen heterogeneity by adopting a tailored approach do not compensate the incurred costs.

Taken together, the research collected here indicates that weighing the pros and the cons of specific word choices by conducting rapid and simple experiments has the potential to provide decision makers with valuable insights regarding the possible effects of word choice on the public policy outcomes they seek to achieve.

REFERENCES

- Allen, H., Ling, B., & Burton, W. (2020). Stop using the term ‘social distancing’ -- Start talking about ‘physical distancing, social connection’. *Health Affairs*, April 27.
10.1377/forefront.20200424.213070
- Alter, A. L. (2013). The benefits of cognitive disfluency. *Current Directions in Psychological Science*, 22(6), 437–442. <https://doi.org/10.1177/0963721413498894>
- Alter, A. L., & Oppenheimer, D. M. (2009). Uniting the tribes of fluency to form a metacognitive nation. *Personality and Social Psychology Review*, 13(3), 219–235.
<https://doi.org/10.1177/1088868309341564>
- Aoki, N. (2021). Stay-at-home request or order? A study of the regulation of individual behavior during a pandemic crisis in japan. *International Journal of Public Administration*, 44(11-12), 885–895. <https://doi.org/10.1080/01900692.2021.1912087>
- Banuri, S., Dercon, S., & Gauri, V. (2019). Biased policy professionals. *The World Bank Economic Review*, 33(2), 310–327. <https://doi.org/10.1093/wber/lhy033>
- Battaglio Jr, R. P., Belardinelli, P., Bellé, N., & Cantarelli, P. (2019). Behavioral public administration ad fontes: A synthesis of research on bounded rationality, cognitive biases, and nudging in public organizations. *Public Administration Review*, 79(3), 304–320.
<https://doi.org/10.1111/puar.12994>

Belardinelli, P., Bellé, N., Sicilia, M., & Steccolini, I. (2018). Framing effects under different uses of performance information: An experimental study on public managers. *Public Administration Review*, 78(6), 841–851. <https://doi.org/10.1111/puar.12969>

Bhanot, S. P., & Linos, E. (2020). Behavioral public administration: Past, present, and future. *Public Administration Review*, 80(1), 168–171. <https://doi.org/10.1111/puar.13129>

Cepiku, D., Giordano, F., Bovaird, T., & Loeffler, E. (2021). Managing the Covid-19 pandemic—from a hospital-centered model of care to a community co-production approach. *Public Money and Management*, 41(1), 77–80. <https://doi.org/10.1080/09540962.2020.1821445>

Clot, S., Grolleau, G., & Méral, P. (2017). Payment vs. compensation for ecosystem services: Do words have a voice in the design of environmental conservation programs? *Ecological Economics*, 135, 299–303. <https://doi.org/10.1016/j.ecolecon.2016.12.028>

Collier, R. (2014). The art and science of naming drugs. *Canadian Medical Association Journal*, 186(14), 1053. <https://doi.org/10.1503/cmaj.109-4864>

Dohle, S., & Siegrist, M. (2014). Fluency of pharmaceutical drug names predicts perceived hazardousness, assumed side effects and willingness to buy. *Journal of Health Psychology*, 19(10), 1241–1249. <https://doi.org/10.1177/1359105313488974>

Draper, P.R., Wray, J. & Burley, S. (2013). Exploring nurses' use of language with older people. *Nursing Older People*, 25(9), 18–23. <https://doi.org/10.7748/nop2013.11.25.9.18.e509>

Farrow, K., Grolleau, G., & Mzoughi, N. (2018). What in the word! The scope for the effect of word choice on economic behavior. *Kyklos*, 71(4), 557–580. <https://doi.org/10.1111/kykl.12186>

- Farrow, K., Grolleau, G., & Mzoughi, N. (2021). ‘Let’s call a spade a spade, not a gardening tool’: How euphemisms shape moral judgement in corporate social responsibility domains. *Journal of Business Research*, 131, 254–267. <https://doi.org/10.1016/j.jbusres.2021.04.002>
- Ford, M. R. (2022). Making people matter: Moving toward a humanity-based public administration. *Administration and Society*, 54(3), 522–539. <https://doi.org/10.1177/00953997211030213>
- Friedson, A. I., McNichols, D., Sabia, J. J. & Dave, D. (2021). Shelter-in-place-orders and public health: Evidence from California during the Covid-19 pandemic. *Journal of Policy Analysis and Management*, 40(1), 258–283. <https://doi.org/10.1002/pam.22267>
- Fukuda, K., Wang, R., & Vallat, B. (2015). Naming diseases: First do no harm. *Science*, 348(6235), 643. <https://doi.org/10.1126/science.348.6235.643>
- Gale, R. (2020). Is ‘social distancing’ the wrong term? Expert prefers ‘physical distancing,’ and the WHO agrees. *The Washington Post*, March 26. https://www.washingtonpost.com/lifestyle/wellness/social-distancing-coronavirus-physical-distancing/2020/03/25/a4d4b8bc-6ecf-11ea-aa80-c2470c6b2034_story.html
- Gigerenzer, G., & Brighton, H. (2009). Homo heuristicus: Why biased minds make better inferences. *Topics in Cognitive Science*, 1(1), 107–143. <https://doi.org/10.1111/j.1756-8765.2008.01006.x>
- Grant, A. M., & Hofmann, D. A. (2011). It’s not all about me: Motivating hospital hand hygiene by focusing on patients. *Psychological Science*, 22(12), 1494–1499. <https://doi.org/10.1177/0956797611419172>
- Grimmelikhuijsen, S., Jilke, S., Olsen, A. L., & Tummers, L. (2017). Behavioral public administration: Combining insights from public administration and psychology. *Public Administration Review*, 77(1), 45–56. <https://doi.org/10.1111/puar.12609>

Hallsworth, M., List, J. A., Metcalfe, R. D., & Vlaev, I. (2017). The behavioralist as tax collector: Using natural field experiments to enhance tax compliance. *Journal of public economics*, 148, 14–31. <https://doi.org/10.1016/j.jpubeco.2017.02.003>

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, 7, e1000316. <https://doi.org/10.1371/journal.pmed.1000316>

Johanson, M. (2020). 'Samfundssind': How a long-forgotten word rallied a nation. *BBC*, August 4. <https://www.bbc.com/worklife/article/20200802-how-the-long-forgotten-word-samfundssin-rallied-a-nation>

Jung, K., Shavitt, S., Viswanathan, M., & Hilbe, J. M. (2014). Female hurricanes are deadlier than male hurricanes. *Proceedings of the National Academy of Sciences*, 111(24), 8782–8787. <https://doi.org/10.1073/pnas.1402786111>

Kahneman, D. (2011). *Thinking fast and slow*. Farrar, Strauss and Giroux.

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39(4), 341. <https://doi.org/10.1037/0003-066X.39.4.341>

Li, H. (2020). Communication for coproduction: Increasing information credibility to fight the coronavirus. *American Review of Public Administration*, 50(6-7), 692–697. <https://doi.org/10.1177/0275074020942104>

Linos, E. (2018). More than public service: A field experiment on job advertisements and diversity in the police. *Journal of Public Administration Research and Theory*, 28(1), 67–85. <https://doi.org/10.1093/jopart/mux032>

McNeil Jr., D. G. (2003). The science of naming drugs (sorry Z is already taken). *The New York Times*, December 27. <https://www.nytimes.com/2003/12/27/business/the-science-of-naming-drugs-sorry-z-is-already-taken.html>

Mukherjee, I., & Giest, S. (2020). Behavioural insights teams (BITs) and policy change: An exploration of impact, location, and temporality of policy advice. *Administration and Society*, 52(10), 1538–1561. <https://doi.org/10.1177/0095399720918315>

Murphy, M. (2020). 10 words leaders should avoid when discussing coronavirus with their employees. *Forbes*, March 8. <https://www.forbes.com/sites/markmurphy/2020/03/08/ten-words-leaders-should-avoid-when-discussing-coronavirus-with-their-employees/>

Nie, J-B., Gilbertson, A., de Roubaix, M., Staunton, C., van Niekerk, A., Tucker, J. D., & Rennie, S. (2016). Healing without waging war: Beyond military metaphors in medicine and HIV cure research. *The American Journal of Bioethics*, 16(10), 3–11. <https://doi.org/10.1080/15265161.2016.1214305>

Oliver Kasdan, D. (2020). Toward a theory of behavioral public administration. *International Review of Administrative Sciences*, 86(4), 605–621. <https://doi.org/10.1177/0020852318801506>

Peckham, R. (2019). COVID-19 and the anti-lessons of history. *The Lancet*, 395(10227), 850–852. [https://doi.org/10.1016/S0140-6736\(20\)30468-2](https://doi.org/10.1016/S0140-6736(20)30468-2)

Pedersen, M. J., & Favero, N. (2020). Social distancing during the COVID - 19 pandemic: Who are the present and future noncompliers? *Public Administration Review*, 80(5), 805–814. <https://doi.org/10.1111/puar.13240>

Reber, R., & Schwarz, N. (1999). Effects of perceptual fluency on judgments of truth. *Consciousness and Cognition*, 8(3), 338–342. <https://doi.org/10.1006/ccog.1999.0386>

Schuldt, J. P., Konrath, S. H., & Schwarz, N. (2011). "Global warming" or "climate change"? *Public Opinion Quarterly*, 75(1), 115–124. <https://doi.org/10.1093/poq/nfq073>

Schwarz, N. (2004). Metacognitive experiences in consumer judgment and decision making. *Journal of Consumer Psychology*, 14(4), 332–348. https://doi.org/10.1207/s15327663jcp1404_2

- Simon, H. A. (1976). *Administrative behavior* (3rd ed.). The Free Press.
- Song, H., & Schwartz, N. (2009). If it's difficult to pronounce, it must be risky: Fluency, familiarity, and risk perception. *Psychological Science*, 20(2), 135–138.
<https://doi.org/10.1111/j.1467-9280.2009.02267.x>
- Sussman, A. B., & Olivola, C. Y. (2011). Axe the tax: Taxes are disliked more than equivalent costs. *Journal of Marketing Research*, 48(SPL), S91–S101.
<https://doi.org/10.1509/jmkr.48.SPL.S91>
- Tan, C., & Low, D. (2011). Incentives, norms and public policy. In D. Low (Ed.). *Behavioral economics and policy design: Examples from Singapore*. World Scientific Publishing Co, 35–49 (Chap. 2).
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.
- Tummers, L. (2020). Behavioral public administration. In B. G. Peters & I. Thynne (Eds.). *Oxford Research Encyclopedia of Politics*.
<https://doi.org/10.1093/acrefore/9780190228637.013.1443>
- Tummers, L. (2019). Public policy and behavior change. *Public Administration Review*, 79(6), 925–930. <https://doi.org/10.1111/puar.13109>
- Webel, M. (2020). Calling COVID-19 a ‘Chinese virus’ is wrong and dangerous – The pandemic is global. *The Conversation*, March 25. <https://theconversation.com/calling-covid-19-a-chinese-virus-is-wrong-and-dangerous-the-pandemic-is-global-134307>
- Weible, C. M., Nohrstedt, D., Cairney, P., Carter, D. P., Crow, D. A., Durnová, A. P., Heikkilä, T., Ingold, K., McConnell, A., & Stone, D. (2020). COVID-19 and the policy sciences: Initial reactions and perspectives. *Policy Sciences*, 53, 225–241. 10.1007/s11077-020-09381-4

WHO. (2020). Coronavirus disease (COVID-19) advice for the public.

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

Zavattaro, S. M., Entress, R., Tyler, J., & Sadiq, A.-A. (2021). When deaths are dehumanized:

Death care during COVID-19 as a public value failure. *Administration and Society*, 53(9),

1443–1462. <https://doi.org/10.1177/00953997211023185>