ESSAY

BEHAVIORAL SCIENCE IN THE ADMINISTRATIVE STATE

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In some circles, there is a misconception that within government, the only or principal uses of behavioral science consist of efforts to nudge individual behavior (sometimes described, pejoratively and unfairly, as "tweaks"). Nothing could be further from the truth. behavioral science has been used, and is being used, to help inform large-scale reforms, including mandates and bans directed at companies (as, for example, in the cases of fuel-economy mandates and energy efficiency mandates). Behavioral science has been used, and is being used, to help inform taxes and subsidies (as, for example, in the cases of cigarette taxes, taxes on sugar-sweetened beverages, and subsidies for electric cars). Behavioral science has been used, and is being used, to help inform nudges imposed on companies (with such goals as reducing greenhouse gas emissions, improving occupational safety, and protecting personal privacy). Some important interventions are indeed aimed at individuals (as with fuel economy labels, nutrition labels, calorie labels, and automatic enrollment in savings plans); sometimes such interventions have significant positive effects and there is no evidence that they make more aggressive reforms less likely. Choice-preserving interventions, such as nudges, do not "crowd out" more aggressive approaches.

In the United States, many agencies are actively using behavioral science to inform regulations and other initiatives. Indeed, they are doing so to an increasing degree and in domains that include health, safety, climate change, cigarette smoking, international development, education, national security,

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energy, and consumer protection.[1] The use of behavioral science within the administrative state can be counted among the most important developments in recent decades. For various reasons, the Behavioral Science State appears to be here to stay. And while it does not usually end up in court, there are exceptions,[2] and future developments testing behavioral science uses for good or less good, or for bad, seem inevitable.

I offer two claims here. The first is that in the real world of policymaking, behavioral science is often used to reform institutions and systems, not to alter individual behavior. The second is that there is no empirical support for the proposition that interventions aimed at helping individuals, which are numerous and often effective, make systemic reform less likely.

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1. For evidence, see Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government, Exec. Order No. 14,058, 86 Fed. Reg. 71,357 (Dec. 13, 2021); Brian Deese, Neale Mahoney & Tim Wu, *President's Initiative on Junk Fees and Related Pricing Practices*, WHITE HOUSE BRIEFING ROOM (Oct. 26, 2022), https://www.whitehouse.gov/briefing-room/blog/2022/10/26/the-presidents-initiative-on-junk-fees-and-related-pricing-practices/; Using Behavioral Science Insights to Better Serve the American People, Exec. Order No. 13,707, 80 Fed. Reg. 56,365 (Sept. 15, 2015). A large number of initiatives can be found on the Office of Evaluation Science's website. *See* OFF. OF EVALUATION SCIS., https://oes.gsa.gov/ (select "Our Work") (last visited June 1, 2023). For an overview, see CASS R. SUNSTEIN, BEHAVIORAL SCIENCE AND PUBLIC POLICY (2020).

2. An intriguing early example is Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins., 463 U.S. 29, 54 (1983), where the Court made an argument about inertia and thus implicitly (and consciously?) invoked behavioral findings about the effects of default settings:

> But this and other statements that passive belts will not yield substantial increases in seatbelt usage apparently take no account of the critical difference between detachable automatic belts and current manual belts. A detached passive belt does require an affirmative act to reconnect it, but – unlike a manual seatbelt – the passive belt, once reattached, will continue to function automatically unless again disconnected. Thus, inertia – a factor which the agency's own studies have found significant in explaining the current low usage rates for seatbelts – works in *favor* of, not *against*, use of the protective device.

Id. A more recent example is Hughes v. Nw. Univ., 142 S. Ct. 737 (2022), where the Court found that a baffling form of choice architecture, imposed by a pension plan, violated the fiduciary obligations of the provider. *See also* R.J. Reynolds Tobacco Co. v. FDA, No. 6:20-cv-00176, 2022 U.S. Dist. LEXIS 221015, at *39 (E.D. Tex. Dec. 7, 2022) (striking down mandatory graphic warnings on cigarette packages, based in part on behavioral science, under the First Amendment).

BEHAVIORAL REALITY IN FEDERAL AGENCIES: A GLANCE

Some of the most significant uses of behavioral science involve fuel economy and energy efficiency mandates.[3] To be sure, these mandates reduce the externalities that come from greenhouse gas emissions and other air pollutants. But the overwhelming majority of these mandates' benefits involve *internalities* in the form of consumer savings.[4] Consumers can, of course, buy fuel-efficient vehicles and energy-efficient appliances if that is what they want to do. For the consumer savings to count as part of the justification of the regulation, public officials have had to argue, and have explicitly argued, that consumers are making mistakes—that some combination of present bias, myopic loss aversion, limited attention, and imperfect math skills lead them to purchase the wrong vehicles and appliances.[5] Without the relevant behavioral findings, on which public

3. *See* Ted Gayer & W. Kip Viscusi, *Overriding Consumer Preferences with Energy Regulations*, 43 J. REG. ECON. 248, 249 (2013); Cass R. Sunstein, *Impatient Consumers, Social Research*, (forthcoming 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4268689; Hunt Allcott & Cass R. Sunstein, *Regulatory Internalities*, 34 J. POL'Y ANALYSIS & MGMT. 698 (2015).

4. Gayer & Viscusi, *supra* note 3, at 249. It is important to note that there are continuing debates about the magnitude and even the existence of the relevant internalities.

5. See, for example, this explanation from the Department of Transportation:

> Furthermore, behavioral economics has documented numerous situations in which the decision-making of consumers differs in important ways from the predictions of the model of the fully optimizing consumer (*e.g.,* Dellavigna, 2009).
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> One explanation for such 'undervaluation' of the savings from purchasing higher-mpg models is myopia or present bias, where consumers focus unduly on short-term costs while giving insufficient attention to long-term benefits. This situation could arise because buyers are unsure whether they will actually realize the fuel savings indicated by test data posted on cars' fuel economy labels under the conditions where they drive, what future fuel prices will be, how long they will own a new vehicle, or whether they will drive it enough to realize the promised savings. As a consequence, they may view choosing to purchase a more fuel-efficient vehicle as a risky "bet," and experimental research has shown that when faced with a risky choice, some consumers appear to weigh the potential loss from an adverse outcome approximately twice as heavily as the potential gain from "winning" the bet, leading them to significantly undervalue that choice relative to its probabilistic "expected" value (e.g., Kahneman and Tversky, 1979; Kahneman, 2011). Viewed in the context of a choice to pay more for a higher-mpg car, loss aversion has been shown to have the potential to cause undervaluation of future fuel savings like that reported by manufacturers (Greene, 2011; Greene et al., 2013).
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> The "behavioral" model of consumer choice also holds that consumers' decisions are affected by the context of choices and its effect on how consumers "frame" decisions.

officials have heavily relied,[6] current fuel economy and energy efficiency mandates would fail cost–benefit analysis and would not be simple to justify.[7]

Behavioral science has also helped to underpin, motivate, and spur numerous other regulatory mandates and initiatives, including occupational safety regulations, food safety regulations, investor protections, tobacco regulations, junk fees,[8] and even the Federal Trade Commission's proposed ban on noncompete clauses.[9] Other significant uses of behavioral economics

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Corporate Average Fuel Economy Standards for Model Years 2024–2026 Passenger Cars and Light Trucks, 87 Fed. Reg. 25,710, 25,854–55 (2022).

6. See, for example, this explanation from the Department of Energy:

> There are several market failures or barriers that affect energy decisions generally. Some of those that affect the commercial sector specifically are detailed below. However, more generally, there are several behavioral factors that can influence the purchasing decisions of complicated multi-attribute products, such as boilers. For example, consumers (or decision makers in an organization) are highly influenced by choice architecture, defined as the framing of the decision, the surrounding circumstances of the purchase, the alternatives available, and how they're presented for any given choice scenario. The same consumer or decision maker may make different choices depending on the characteristics of the decision context (e.g., the timing of the purchase, competing demands for funds), which have nothing to do with the characteristics of the alternatives themselves or their prices. Consumers or decision makers also face a variety of other behavioral phenomena including loss aversion, sensitivity to information salience, and other forms of bounded rationality . . . . These characteristics describe almost all purchasing situations of appliances and equipment, including CPBs. The installation of a new or replacement CPB in a commercial building is a complex, technical decision involving many actors and is done very infrequently, as evidenced by the CPB mean lifetime of nearly 25 years. Additionally, it would take at least one full heating season for any impacts on operating costs to be fully apparent. Further, if the purchaser of the CPB is not the entity paying the energy costs (e.g., a building owner and tenant), there may be little to no feedback on the purchase.

Energy Conservation Program: Energy Conservation Standards for Commercial Packaged Boilers, 87 Fed. Reg. 23,421, 23,423 (2022) (footnotes omitted) (citation omitted).

7. To be sure, some such mandates could be justified to reduce relevant externalities. But without the consumer savings, the current level of stringency would be hard to defend.

8. *See, e.g.*, *CFPB Issues Guidance to Help Banks Avoid Charging Illegal Junk Fees on Deposit Accounts*, CONSUMER FIN. PROT. BUREAU (Oct. 26, 2022), https://www.consumerfinance.gov/about-us/newsroom/cfpb-issues-guidance-to-help-banks-avoid-charging-illegal-junk-fees-on-deposit-accounts/. See the multiple references to behavioral literature in President Biden's initiative on junk fees, Deese et. al, *supra* note 1.

9. See these words from the Federal Trade Commission:

> [R]esearch indicates consumers exhibit cognitive biases in the way they consider

involve taxes, default rules, and disclosure requirements. Cigarette taxes and taxes on sugar-sweetened beverages have been justified by reference to present bias. Drawing on behavioral findings about inertia, policymakers have automatically enrolled over 10 million children living in poverty in free school meals programs.[10] In the United States, behavioral science directly spurred the greenhouse gas inventory imposed on polluters and has significantly reduced greenhouse gas emissions.[11] Further, a rule from the

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> contractual terms, and the same may be true of workers. Consumers rarely read standard-form contracts. Consumers also tend to focus their attention on a few salient terms of the transaction, such as price and quantity, and tend to disregard other terms, particularly terms that are relatively obscure. Consumers are particularly likely to disregard contingent terms—terms concerning scenarios that may or may not come to pass—or to be unable to assess what the impact of those terms may be. Consumers also tend to disregard onerous terms or terms that involve difficult trade-offs, such as giving up legal rights or future opportunities. Workers likely display similar cognitive biases in the way they consider employment terms. These reasons explain why the imbalance of bargaining power between workers and employers is particularly high in the context of negotiating employment terms such as non-compete clauses.
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> There is considerable evidence employers are exploiting this imbalance of bargaining power through the use of non-compete clauses. Non-compete clauses are typically standard-form contracts, which, as noted above, workers are not likely to read. The evidence shows workers rarely bargain over non-compete clauses and rarely seek the assistance of counsel in reviewing non-compete clauses. Furthermore, research indicates that, in states where non-compete clauses are unenforceable, workers are covered by non-compete clauses at roughly the same rate as workers in other states, suggesting that employers may believe workers are unaware of their legal rights, or that employers may be seeking to take advantage of workers' lack of knowledge of their legal rights. In addition, there is evidence employers often provide workers with non-compete clauses after they have accepted the job offer—in some cases, on or after their first day of work—when the worker's negotiating power is at its weakest, since the worker may have turned down other job offers or left their previous job.

Non-Compete Clause Rule, 88 Fed. Reg. 3,482, 3,503 (proposed Jan. 19, 2023) (footnotes omitted).

10. USDA, DIRECT CERTIFICATION IN THE NATIONAL SCHOOL LUNCH PROGRAM: STATE IMPLEMENTATION PROGRESS REPORT TO CONGRESS, SCHOOL YEAR 2015–2016 & SCHOOL YEAR 2016–2017, at 4, 9 (2018), https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLPDirectCertification2016.pdf.

11. Lavender Yang, Nicholas Z. Muller & Pierre Jinghong Liang, *The Real Effects of Mandatory CSR Disclosure on Emissions: Evidence from the Greenhouse Gas Reporting Program* (Nat'l Bureau of Econ. Rsch., Working Paper No. 28,984, 2021), https://www.nber.org/papers/w28984 (noting that when facilities were required to report how much carbon dioxide they released, emission rates decreased by 7%–11%).

Department of Transportation requiring disclosure of ticket taxes in upfront advertised fares has been found to reduce the fraction of unit taxes that airlines pass onto consumers by about seventy-five cents on the dollar.[12] The Director of the National Economic Council, the President's leading economic adviser, described the "junk fee" initiative as "a milestone for behavioral economics – decades of scholarship bearing fruit in policies that make a difference."[13]

The Office of Management and Budget has broadly endorsed the use of behavioral economics in its proposed revision of Circular A-4, which operates as a kind of Constitution for Regulatory Analysis.[14] The proposed revision states that "behavioral biases" are a basis for regulation, standing alongside the more conventional bases, such as externalities and asymmetric information.[15] It refers to "various decision-making biases, such as those stemming from framing effects, anchoring effects, loss aversion, present bias, unrealistic optimism, and a preference for the status quo."[16] It also embraces the behavioral idea of "internalities (understood as harms that people impose on their future selves)."[17]

The proposed revision has a great deal to say about behaviorally informed tools. For example, it notes that "[m]easures that serve as "nudges"—such as changing the default or pre-selected options, or changing the manner in which information that is made available must be presented—can also improve consumer welfare without restricting choice."[18] It also notes that "nudges make most sense when the market failure involves a behavioral bias, although even in such cases, nudges may not be either appropriate or sufficient."[19] It thus leaves open the possibility that the best response to a behavioral bias might be a mandate or a ban.

Initiatives of this kind are hardly unique to the United States.[20] In the United Kingdom, for example, behavioral science has underpinned a similar

12. Sebastien Bradley & Naomi E. Feldman, *Hidden Baggage: Behavioral Responses to Changes in Airline Ticket Tax Disclosure*, AM. ECON. J.: ECON. POL'Y, Nov. 2020, at 58.

13. Brian Deese (@briandeeseNEC), TWITTER (Feb. 1, 2023, 10:07 AM), https://twitter.com/briandeeseNEC/status/1620801012314562560.

14. OFF. OF MGMT. & BUDGET, DRAFT FOR PUBLIC REVIEW OF CIRCULAR A-4, REGULATORY ANALYSIS 1 (2023) https://www.whitehouse.gov/wp-content/uploads/2023/04/DraftCircularA-4.pdf.

15. *Id.* at 18.

16. *Id.* at 19.

17. *Id.*

18. *Id.* at 26.

19. *Id.*

20. I am grateful to David Halpern for help with this paragraph.

range of regulatory and policy changes. Major financial regulators, such the Competition and Markets Authority and the Financial Conduct Authority, extensively consider behavioral factors in their judgments and regulatory changes.[21] For example, the United Kingdom's decision to impose substantial restrictions on the payday lending market was based on strong evidence that borrowers mispredicted their ability to repay and the cost of the loans.[22] Influenced by behavioral findings, the United Kingdom's decision to change defaults on pensions from opt-in to opt-out helped about 10 million workers to have pensions.[23] The design of multiple other policy measures, including the United Kingdom's added sugar levy, has been based on work from behavioral science.

It is also true that with the use of behavioral science, public officials have devoted considerable effort to changing *individual* behavior—by, for example, encouraging safer driving,[24] healthier eating, and more sensible choices for retirement saving.[25] In recent years, some of those efforts have sought to reduce "sludge" in the form of administrative burdens;[26] with an emphasis on "time taxes," the Biden Administration has undertaken many such efforts.[27] Some of these initiatives have had a real impact; some of them have

21. *See* COMPETITION & MKTS. AUTH., ONLINE CHOICE ARCHITECTURE, HOW DIGITAL DESIGN CAN HARM COMPETITION AND CONSUMERS, 2022, CMA 155, (UK), https://www.gov.uk/find-digital-market-research/online-choice-architecture-how-digital-design-can-harm-competition-and-consumers-2022-cma.

22. OFF. OF FAIR TRADING, PAYDAY LENDING: FINAL DECISION ON MAKING A MARKETING INVESTIGATION REFERENCE, 2013, OFT1492, at 21–26 (UK), https://assets.publishing.service.gov.uk/media/532ad579e5274a226b000307/payday-MIR.pdf.

23. WORK & PENSIONS COMM., PROTECTING PENSION SAVERS - FIVE YEARS ON FROM THE PENSION FREEDOMS: SAVING FOR LATER LIFE, 2022-3, HC 126, at 8 (UK), https://committees.parliament.uk/publications/30122/documents/174267/default/.

24. Consider Sweden's "Vision Zero." *See Vision Zero – Reducing Road Traffic Casualties and Injuries*, SMART CITY SWED., https://smartcitysweden.com/best-practice/408/vision-zero-reducing-road-traffic-casualties-and-injuries/.

25. *See, e.g.*, Mathias Kronlund, Veronika K. Pool, Clemens Sialm & Irina Stefanescu, *Out of Sight No More? The Effect of Fee Disclosures on 401(k) Investment Allocations* (Nat'l Bureau of Econ. Rsch., Working Paper No. 27,573, 2020), https://www.nber.org/papers/w27573 (finding that participants who had control over their retirement funds were more likely to contribute to investment funds that had lower fees and higher performance rates when disclosure forms describing these attributes were required to be given to participants).

26. *See* PAMELA HERD & DONALD MOYNIHAN, ADMINISTRATIVE BURDEN (2018); CASS R. SUNSTEIN, SLUDGE (2021).

27. Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government, Exec. Order No. 14,058, 86 Fed. Reg. 71,357 (Dec. 16, 2021); Memorandum

shown little or no benefit. But it would be false to suggest that in the real world of policymaking, official uses of behavioral science have been focused on, and dominated by, attempts to alter individual behavior. It would be far more accurate to say *exactly the opposite*—that many of the major efforts have involved efforts to target systems and institutions, sometimes through mandates and bans, sometimes through subsidies and taxes, and sometimes through nudges.[28]

OF SYSTEMS AND STRUCTURES

George Loewenstein and Nick Chater are superb and exceptionally distinguished social scientists; they have made countless important contributions to behavioral science (and Loewenstein's work in particular has had a real influence on policymakers). It is surprising but true that a lengthy article of theirs, which has attracted considerable attention, is a misfire.[29] The misfire deserves attention not only because it is useful to correct misunderstandings and mistakes, but more fundamentally because an accurate accounting is of more general interest to those concerned with the actual operations of the modern administrative state. The value of an account of those operations, which remain poorly understood, goes well beyond any academic dispute. I engage Loewenstein and Chater with these points in mind.

Loewenstein and Chater think the most serious social problems, including climate change, are not hard to solve, but that powerful private groups have blocked the solutions by insisting that the right approach lies in individual responsibility. In their account, behavioral scientists working on policy-related work have turned out to be corporate pawns or dupes. The reason is that they have focused on individuals (what they call "the i-frame") rather than on the systems in which individuals operate (what they call "the s-frame"). Loewenstein and Chater believe that the effects of i-frame interventions have been modest and disappointing.[30] They scold behavioral scientists for spending their time on i-frame interventions (where they unwittingly collaborate with powerful private groups), and they want

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from Eric Hysen, Chief Info. Officer, U.S. Dep't of Homeland Sec., on Paperwork Reduction Act Burden Reduction Initiative (Mar. 22, 2022), https://www.dhs.gov/sites/default/files/2022-05/Burden_Reduction_Initiative_Memo_Final%20PDF%20CIO%20signed.pdf.

28. Efforts to combat smoking have involved all of these tools, with particular emphasis on mandates, public smoking bans, graphic labels, and taxes.

29. George Loewenstein & Nick Chater, *The i-Frame and the s-Frame: How Focusing on Individual-Level Solutions Has Led Behavioral Public Policy Astray*, BEHAV. & BRAIN SCIS. (forthcoming 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4046264.

30. *Id.* (manuscript at 6).

them to shift their attention to system change.[31]

Since behavioral scientists in or near the world of actual policymaking have spent so much of their time on system change, it is fair to wonder whether that advice is necessary.[32] Whether we are speaking of climate change, consumer protection, rail safety, road safety, or public health, behavioral scientists working with or in the administrative state principally focus on system change. (It is a little like suggesting that professors of English literature should pay more attention to William Shakespeare.) Perhaps Loewenstein and Chater are best taken to be advising certain academic researchers, far removed from the world of policy, who have indeed devoted a great deal of effort to exploring how best to change individual behavior? Or perhaps they have been influenced by commentators and media outlets, at least some of which do seem excessively or unrealistically drawn to individual-level behavior change as a complete or near-complete response to major policy issues.[33]

To come to terms with the relevant advice, we should distinguish between (1) targets and (2) tools. Policymakers might target individuals, companies, or governments (local, state, or national). With respect to tools, policymakers might use mandates, bans, taxes, subsidies, or nudges. We could easily produce a three-by-four table, with twelve boxes, each filled in by relevant initiatives. Loewenstein and Chater are unenthusiastic about *nudges* that target *individuals*—far less enthusiastic, I believe, than the evidence actually warrants.[34] In any case, it is important to emphasize that targets and tools

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31. *Id.* (manuscript at 36).

32. I suspect that Loewenstein and Chater make this mistake because they are using some kind of heuristic, perhaps the Nudge Unit Heuristic. *See infra* note 34 and accompanying text.

33. A prominent example from across Anglo-Saxon countries is the widespread promotion of the idea that the main reasons for obesity are laziness and lack of individual self-control. Most behavioral researchers have concluded that environmental and market factors are generally more important—the promotion, availability and pumping of high sugar and fat into our food systems—and hence, are better targets for successful efforts to reduce population-level obesity.

34. Loewenstein and Chater rely on Stefano DellaVigna and Elizabeth Linos's article. *See* Stefano DellaVigna & Elizabeth Linos, *RCTs to Scale: Comprehensive Evidence from Two Nudge Units*, 90 ECONOMETRICA 81 (2022). Much might be said about that paper; consider three points. (1) The authors exclude default rules, which are, by consensus, the most impactful kind of nudge. An analysis of nudges that excludes default rules is like an analysis of quarterbacks that excludes Tom Brady. (2) The authors restrict themselves to the work of "nudge units," which have done a very small fraction of behaviorally-informed policymaking. In this regard, the authors fall victim to the Nudge Unit Heuristic, in accordance with which behavioral science work in government is captured by the work of nudge units. Like most heuristics, the Nudge Unit Heuristic produces

can be combined in diverse ways. As the example of the greenhouse gas inventory suggests, companies might be nudged by requiring forms of disclosure, which might result in system-wide change. Of course, mandates can also be imposed on individuals; consider mandatory seat belt usage, which has a plausible behavioral justification, as do, to take a far more controversial example, prohibitions on smoking.[35] And we should not underrate the potential effects of i-frame interventions, which can do a great deal of good.[36]

Various efforts to help consumers or investors, or to reduce risks to health and safety, may or may not be behaviorally informed. Those efforts may or may not be successful. Learning about individual behavior, and about what does or does not alter it, is exceedingly important.[37] It might not be the best imaginable idea, and it is not particularly nice, to scold people who are working hard, and sometimes heroically, to understand what works and what does not—even if the relevant interventions are not likely to produce large-scale changes. It is important to underline an obvious point, which is that to know which reforms to favor, the question that must be asked is what produces the highest welfare gains.[38] It is possible that s-frame interventions will produce net welfare losses

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severe and systematic errors. In most nations, the work of nudge units, important as it is, is a tiny fraction of behaviorally-informed policymaking in government; this emphatically includes the United States, where the overwhelming majority of such policymaking can be found in the cabinet departments, such as the Department of Treasury, the Department of Agriculture, the Department of Health and Human Services, and the Environmental Protection Agency. (3) Any meta-analysis might detect small average effects, which tells us astonishingly little about what matters. (A meta-analysis of medical treatments, in the history of humanity, would undoubtedly find small average effects. A meta-analysis of criminal prohibitions, in the history of humanity, might well find small average effects.) Small average effects might well disguise massive effects for some interventions. What we would like to know is which interventions have massive effects, large effects, small effects, and no effects (and why). A more sensible and helpful kind of overview can be found in Jon M. Jachimowicz, Shannon Duncan, Elke U. Weber & Eric J. Johnson, *When and Why Defaults Influence Decisions: A Meta-Analysis of Default Effects*, 3 BEHAV. PUB. POL'Y 159 (2019). These points bear, of course, on occasional controversies about "whether nudges work." Some nudges do and some nudges do not; a general analysis of hundreds of nudges, or thousands of nudges, is not informative.

35. For an early explanation, see ROBERT E. GOODIN, NO SMOKING (1989).

36. *See, e.g.*, Peter Bergman, Jessica Lasky-Fink & Todd Rogers, *Simplification and Defaults Affect Adoption and Impact of Technology, but Decision Makers Do Not Realize It*, 158 ORGANIZATIONAL BEHAV. & HUM. PROCESSES 66 (2020) (showing schools that automatically enrolled parents to receive text-messages about their child's academic performance resulted in higher GPAs and fewer failed courses).

37. For a host of evidence, see TOBY PARK, BEHAV. INSIGHTS TEAM, HOW TO BUILD A NET ZERO SOCIETY (2023), https://www.bi.team/wp-content/uploads/2023/01/How-to-build-a-Net-Zero-society_Jan-2023.pdf.

38. *See* Hunt Allcott, Daniel Cohen, William Morrison & Dmitry Taubinsky, *When Do "Nudges"*

(many of them do) and that i-frame interventions will produce net welfare gains (same parenthetical). The fact that an intervention involves systems, rather than individuals, is hardly a guarantee that it is a good idea.

THE NONEXISTENT CROWD-OUT EFFECT

Is there a crowd-out effect? If regulators focus on nudges, will they be less likely to consider mandates? Are i-frame interventions drawing attention and support away from s-frame changes? Some people seem to think so. For example, Loewenstein and Chater contend that "[b]ehavioral scientists' excessive enthusiasm for i-frame interventions policy has reduced the impetus for systemic reform."[39] That is false. Behavioral scientists, working for, with, or adjacent to the government, have been enthusiastic about system reform, and their work on i-frame interventions has not crowded out system reform. Let us put this sentence in bold: ***If we were making a list of 100 reasons why a desirable system reform has not happened in an important area, such as climate change, the fact that some behavioral scientists have studied i-frame interventions could not possibly make that list.***

Having worked in the U.S. government for a number of years, on scores of legislative proposals and well over 2000 regulations, I am unaware of *any* case in which i-frame interventions operated to deter or stop s-frame interventions, or to pull attention from them. (I have also worked with many other governments over the years, in Europe and elsewhere, and I am unaware of any such case in *any* nation.) To be sure, there might (must?) be some such cases (one? two? four?), but if anything, it would be more plausible to suggest that causation runs in the opposite direction: i-frame interventions alert policymakers (and others) to the existence of a problem, which spurs support for s-frame interventions. This "alerting" function of i-frame interventions, and their role in helping to shape and design effective s-frame interventions, are very important. For example, the increasing number of countries that have adopted nudges to discourage cigarette smoking at the individual level have also focused on more structural interventions, including restrictions on smoking in public places and cigarette taxes.

Lacking reliable evidence on behalf of their claim, Loewenstein and Chater point to unreliable non-evidence, such as the fact that the "brain represents stimuli of all kinds in only one way at a time," and surveys finding that if you tell people about an i-frame intervention, you can

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Increase Welfare? (Nat'l Bureau of Econ. Rsch., Working Paper No. 30,740, 2022), https://www.nber.org/papers/w30740; Cass R. Sunstein, *Welfare Now*, DUKE L.J. (forthcoming 2023).

39. Loewenstein & Chater, *supra* note 29 (manuscript at 36).

reduce support for an s-frame intervention.[40] Nothing follows from those experiments. Survey evidence of that kind hardly shows that the crowd-out effect is real or important—that in the actual world of policymaking (involving (a) legislation or (b) regulation, each of which has its own exceedingly complex processes and dynamics), fuel economy labels reduce support for fuel economy mandates or monetary incentives to buy electric vehicles, or that graphic warnings on cigarette packages reduce support for cigarette taxes or bans on smoking in public places. In government circles, those who favor, for example, fuel economy labels tend to also favor regulatory approaches designed to promote environmental goals. And if those who favor, for example, graphic warnings on cigarette pacakges but do not also favor a ban on cigarettes, it is not because of a crowd-out effect; it is a judgment on the merits.

It might be tempting to point to opportunity costs. If we find that regulators focus on, say, energy efficiency labels, we might find it obvious that they cannot focus on energy efficiency mandates (or carbon taxes). But the category of regulators is very large, and if some people focus on labels, it does not follow that the apparatus, taken as a whole, is restricted from focusing on mandates, or even that the attention to mandates is delayed or reduced. To be sure, it is not unreasonable to suggest that a department that explores labels will have less time for mandates. But the number of reasons for and against a focus on mandates is very large, and it is reckless to suggest that if a department explores labels, it will, for that reason, decline to explore mandates.

Loewenstein and Chater offer a set of arresting stories about corporate campaigns, in which companies have drawn attention to the importance of personal responsibility and supported behaviorial change at the individual level.[41] But what lessons can be drawn from such stories? BP's interest in carbon footprints may or may not be laudable, but would anyone argue that it is the *reason* the United States or the United Kingdom has not enacted carbon taxes, or what Loewenstein and Chater call "extensive regulation"?[42] Is it plausible to think that if behavioral scientists had not supported anti-littering campaigns, we would see more and stronger efforts to reduce plastic waste? The food industry may call for more exercise and healthier eating, not for prohibitions on the sale of fattening food. Is that amazing? It would be fanciful to suggest that some countries—Germany, Italy, France, Mexico—would have prohibited the sale of fattening food if only the food industry had not called for more exercise and healthier eating (and if

40. *Id.* (manuscript at 7–8).

41. *Id.* (manuscript at 19–20).

42. *Id.* (manuscript at 11).

behavioral scientists had not worked on how to encourage those desiderata).

If we want to offer an explanation of why some nation has not adopted a more aggressive approach to plastic waste, unhealthy eating, or climate change, surely, we can do better than to point to the fact that corporations have called attention to the importance of personal responsibility (or to academic research on nudges). One more time (but without italics, so as not to overdo it): If we were making a list of 100 reasons why system reform has not happened in some important area, such as climate change, the fact that some behavioral scientists have been enthusiastic about i-frame interventions would be unlikely to make the list. When the United States adopted an aggressive set of climate change initiatives in 2022, including subsidies of multiple kinds, behavioral science played a supportive role—and i-frame interventions were evidently not a problem.

In the end, Loewenstein and Chater offer a kind of conspiracy theory (and in this they are hardly alone). In their view, policy problems are not really hard because "tried-and-tested s-frame[] solutions are available."[43] The main obstacles, they think, are "the active and coordinated efforts to block s-frame reform[s] by concentrated commercial interests who benefit from the status quo."[44] (Their citation for that proposition is a book by the journalist Jane Mayer, ominously called *Dark Money: The Hidden History of the Billionaires Behind the Rise of the Radical Right*.)[45] In their account, the problem lies in the machinations of "powerful groups" who maintain their power partly by "promoting the perspective that these problems are solvable by, and the responsibility of, individuals."[46] Those powerful groups, consisting of or funded by billionaires, have enlisted behavioral scientists, who turn out to be pawns or dupes, unwittingly contributing to the failure to implement the obvious solutions. We can find softer versions of this argument in other places, largely on the political left, with the suggestion that choice-preserving approaches, such as nudges, are "technocratic," or "top-down," or "tweaks," or a distraction or diversion for what is needed, which is systemic change.

No one should downplay the influence, in some times and places, of powerful private groups over the processes of Congress and the administrative state. (Often such groups oppose nudges and work exceedingly hard to prevent them from going into effect.) No one should deny that in important domains, systemic change is an excellent idea. (Some behavioral scientists have spent their careers insisting on that point and

43. *Id.* (manuscript at 28).

44. *Id.*

45. JANE MAYER, DARK MONEY (2016).

46. *Id.*

working long days on behalf of systemic change.) But let us not neglect two challenges: tradeoffs and reasonable disagreement. There are no simple solutions to the problems posed by climate change, obesity, retirement policy, healthcare, privacy, educational opportunity, and plastic waste. One reason is that each of those issues involves complex tradeoffs; another is that reasonable people disagree about the appropriate response.

The good news is that behavioral science can make, and is making, significant dents in each of those problems. Incidentally, one of the ways that it can do that is by targeting individual behavior,[47] with the laudable goal of improving people's lives, and behavioral scientists who seek to understand that behavior, and to improve such targeting, ought to be applauded rather than scolded. As some regulators like to say: Better is good.

47. *See, e.g.*, Bergman et al., *supra* note 36.