

Russell Ackoff Doctoral Student Fellowship for Research on Human Decision Processes and Risk Management: 2013 Application

Public Attitudes towards Paternalistic Policies

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Requested Support:

\$ 4,050.00

The present research examines attitudes towards paternalistic policies that aim to improve individuals' decision making without coercion. These efforts are often called as “nudges,” as described in a seminal book written by Cass Sunstein and Richard Thaler. Sunstein defines nudges as any aspects in people's decisions-making environment that were pre-designed to influence people's behavior in predictable ways. In the last few decades, a growing body of literature has argued that nudges can address social problems such as retirement savings (Bernartzi & Thaler, 1999; Bernartzi & Thaler, 2007; Choi et al., 2002; Choi et al., 2004; Madrian & Shea, 2001), organ donations, charity donations (Abadie & Gay, 2006; Johnson & Goldstein, 2003; McKenzie, Liersch, & Finkelstein, 2006), medicare programs, public schools (Sunstein, 2004; Hoxby, 2003; Howell, 2006; Hastings & Weinstein, 2007), and consumer health (Roberto et al., 2010; Wisdom et al., 2010; Schwartz et al., 2012). In the United States and United Kingdom, these policies have inspired numerous government interventions (Sunstein, 2012).

Decades of research on nudges assumes that people would not react against these well-intentioned policies. However, this is an empirical question. Consider the public outrage towards the recent regulation in NYC that puts 16-ounce size limit on containers of sugary beverages. Furthermore, reactance theory provides evidence that people easily rebel against limitations and constraints. Reactance is defined as the motivational state that drives people to behave in a way that is opposite to the goals of others (Brehm, 1966; Chartrand, Dalton, & Fitzsimons, 2007). According to Clee & Wicklund (1980), what creates the motivational state of reactance is the mere knowledge that “someone else wants to exert control or influence one's behavior.” Chartrand et al. (2007) also found that those who score high on reactance tend to behave in a way that is opposite to the goals of their significant others. Given the evidence that reactance literature provides, we reason that people who score high on reactance would be more likely to perceive nudges as constraints on freedom or autonomy.

Research is needed to clarify the commonalities and differences in public attitudes towards regulatory policies. Integrating these two distinct lines of research, we offer two ways to predict public responses to policies. Those factors include the distinctions that lie in policies themselves, and the characteristics within individuals that we measure through existing personality/attitude scales. The first study proposes a conceptual framework for understanding nudges. We distinguish nudges into two types – informational nudges and behavioral nudges. Informational nudges influence decisions at an early stage, as shown in Figure 1. Informational nudges, such as calorie labels and nutritional labels, educate individuals rather than controlling their behaviors. These nudges may be contrasted with behavioral nudges, which influence choices by making certain options easier than others. Policies that manipulate defaults – i.e. automatic enrollment in 401(K) plans – are behavioral nudges. These nudges tend to bypass the cognitive stage to affect behavior [Figure 1].

In Study 1, the three informational nudges consisted of calorie labels, plate size labels, and calorie counters. The three behavioral nudges were food ordering in a cafeteria line, smaller plate sizes at a cafeteria line, and menus with healthier options featured at the top. For these nudges, we also explored how people's attitudes change when nudges are brought to awareness. We asked subjects to imagine that there is a sign that explains the reason behind the nudges – i.e. “Calorie labels were used to encourage healthy eating.”

Reactance scores captured individual differences in attitudes towards nudges. Scoring high on reactance correlated with decisions to vote against nudges ($r = -0.15$, $t = -2.26$, $df = 233$, $p\text{-value} = 0.025^{**}$). The data also supported our hypothesis that behavioral nudges, compared to informational nudges, were more likely to be met by reactance. Subjects who scored high on reactance were more likely to vote against behavioral nudges ($B = -1.63$, $SE = 0.66$, $t(117) = -2.47$, $p = 0.015^{**}$), but not necessarily against informational nudges.

We also found evidence that adding a sign to the decision making environment helped individuals choose healthier foods. Subjects consumed fewer calories when the sign was displayed ($t(87) = 5.67$, $p\text{-value} < 0.0001^{****}$). But subjects who scored high on reactance were more likely to be annoyed by accompanied signs for behavioral nudges ($r = 0.26$, $t(93) = 2.6456$, $p\text{-value} < 0.01$), and not informational nudges ($t(90) = 1.54$, $p\text{-value} = 0.13$).

The support of the Ackoff Fellowship will enable me to build on this research. In addition to providing support for the current hypothesis, and conducting follow up studies necessary for publication, I also hope to investigate a third category, persuasive nudges. Persuasive nudges are informational nudges that are opinionated – i.e. informational labels that provide warning. I would also like to explore the effects of religious beliefs on negative attitudes towards nudges. The financial support of \$4,050 that I am seeking will be used for two purposes within this research project: to fund data collection and to share the results of my research at two conferences. Data will continue to be collected in a series of experiments primarily in the Wharton Behavioral Lab. Typically these studies provide participants with \$5 per participant.

In addition, I anticipate that this research will be of interest to marketers, psychologists, and economists, as well as to the general public. I hope to present my results at two relevant conferences: the Association for Consumer Research (ACR) North American conference in Chicago, and the Society for Judgment and Decision Making conference in Toronto, Canada. The budget outlined below reflects estimated costs of hotel stay (at conference room rates) and travel. While the Marketing Department allocates some funding for research and travel, it is sufficient to cover only a small portion of the research I intend to conduct over the course of my studies. Any incurred expenses that the Russell Ackoff Doctoral Student Fellowship does not cover will thus be paid out-of-pocket or by any funds remaining in my departmental research budget.

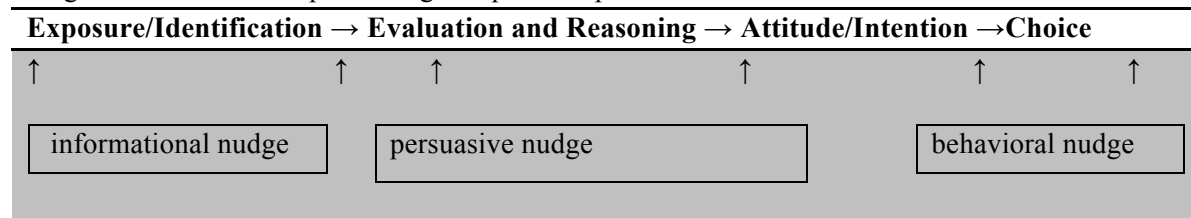
If you have any questions, or if there is any further information I can provide, please do not hesitate to call or email me. I greatly appreciate any support the Ackoff Fellowship can provide. Thank you for your consideration.

Budget of Anticipated Expenses

Item Description	Cost per Unit	Number of Units	Total Cost
Study 2: Payment for Subjects (data collection)	\$5.00	300	\$1,500.00
Study 3: Payment for Subjects (data collection)	\$5.00	200	\$1,000.00
Association for Consumer Research Conference :			
Conference Registration	\$225.00	1	\$225.00
Conference Travel	\$200.00	1	\$200.00
Conference Hotels	\$100.00	3	\$300.00
Society for Judgment and Decision Making Conference :			
Conference Registration	\$175.00	1	\$175.00
Conference Travel	\$350.00	1	\$350.00
Conference Hotels	\$100.00	3	\$300.00
Total Costs			\$4,050.00

Figure 1: Spectrum of Nudges

Stages of informational processing and possible points of influence



Reference

- Abadie, A., & Gay, S. (2006). The Impact of Presumed Consent Legislation on Cadaveric Organ Donation. *Journal of Health Economics*, 25, 599-620.
- American Medical Association. (1993). *Strategies for cadaveric organ procurement: Mandated choice and presumed consent*. Chicago: American Medical Association.
- Baker, T., & Deighton, T. (2010). Allowing patients to waive the right to sue for medical malpractice: A Response to Thaler and Sunstein. *104* (1), 233-252.
- Baron, J. (1998). *Judgment Misguided: Intuition and Error in Public Decision Making* (Vol. 4). New York: Cambridge University Press.
- Bernatzi, S., & Thaler, R. (1999). Risk Aversion or Myopia? Choices in Repeated Gambles and Retirement Investments. *Management Science*, 45 (3), 364-381.
- Brehm, J., Stires, L., Sensnic, J., & Shaban, J. (1966). The Attractiveness of an Eliminated Choice Alternative. *Journal of Experimental Social Psychology*, 2, 301-313.
- Bushman, B. (1998). Effects of warning and informational labels on consumption of full-fat, reduced-fat, and no-fat products. *Journal of Applied Psychology*, 83, 97-101.
- Chapman, G., Li, M., Colby, H., & Yoon, H. (2010). Opting in versus opting out of influenza vaccination. *JAMA*, 304, 43-44.
- Chartrand, T., Dalton, A., & Fitzsimons, G. (2007). Nonconscious Relationship Reactance: When Significant Others Prime Opposing Goals. *Journal of Experimental Social Psychology*, 43, 719-726.
- Choi, J., Laibson, D., Madrian, B., & Metrick, A. (2002). Defined Contribution Pensions: Plan Rules, Participant Decisions, and the Path of Least Resistance. In J. Poterba, *Tax Policy and the Economy* (Vol. 16, pp. 67-113). Cambridge: MIT Press.
- Choi, J., Laibson, D., Madrian, B., & Metrick, A. (2004). For Better or For Worse: Default Effects and 401(k) Savings Behavior. In D. Wise, *Perspectives in the Economics of Aging* (pp. 81-121). Chicago: University of Chicago Press.
- Clee, M., & Wicklund, R. (1980). "Consumer Behavior and Psychological Reactance," *Journal of Consumer Research*, 6, 389-405.
- Dinner, I., Johnson, E. J., Goldstein, D. G., & Liu, K. (2011). Partitioning default effects: why people choose not to choose. *Journal of Experimental Psychology*, 17, 332-341.
- Fitzsimons, G., & Lehmann, D. (2004). Reactance to Recommendations: When Unsolicited Advice Yields Contrary Responses. *Marketing Science*, 23, 82-94.
- Goldstein, D., Johnson, E., Herrman A., & Heitmann, M.(2008). Nudge Your Customers Toward Better Choices. *Harvard Business Review*, December, 99-105.
- Henion, K. (1972). The Effect of Ecologically Relevant Information on Detergent Sales. *Journal of Marketing Research*, 9, 10-4.

- Howell, W. (2006). School Choice in No Child Left Behind. In *Choice and Competition in American Education* (pp. 255-264). Lanham, Md: Rowman and Littlefield.
- Harnack, L., French, S., Oakes, M., Story, M., Robert, J., & Rydell, S. (2008). Effects of Calorie Labeling and Value Size Pricing on Fast Food Meal Choices: Results From an Experimental Trial. *International Journal of Behavioral Nutrition and Physical Activity*, 5, 63.
- Hastings, J., Van Weelden, R., & Weinstein, J. (2007). Preferences, Information, and Parental Choice Behavior in Public School Choice. *NBER Working Paper no. 12995*.
- Hoxby, C. (2003). School Choice and School Productivity: Could School Choice Be a Tide That Lifts All Boats? In *The Economics of School Choice* (pp. 287-341). Chicago: University of Chicago Press.
- Johnson, E., Bellman, S., & Lohse, G.L. (2002). Defaults, framing and privacy: Why opting in-opting out. *Marketing Letters*, 13, 5–15.
- Johnson, E., & Goldstein, D (2003). Do Defaults Save Lives? *Science*, 302, 1338-1339.
- Madrian, B. & Shea, D (2001). The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior. *Quarterly Journal of Economics* 116, 1149–1225.
- McKenzie, C., Liersch, M., & Finkelstein, S. (2006). Recommendations implicit in policy defaults. *Psychological Science*, 17, 414–420.
- Roberto, C.A., Larsen, P.D., Agnew, H., Baik, J., & Brownell, K. (2010). Evaluating the Impact of Menu Labeling on Food Choices and Intake. *American Journal of Public Health*, 100 (2): 312-318. doi: 10.2105/AJPH.2009.160226
- Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1, 7–59.
- Santilli, P. (1983). The Informative and persuasive Functions of Advertising: A Moral Appraisal, *Journal of Business Ethic*, 2, 27-33
- Schwartz, B. (2004). *The paradox of choice: why more is less*. New York: Harper.
- Schwartz, J., Riis, J., Elbel, B., & Ariely, D (2012). Inviting Consumers To Downsize Fast-Food Portions Significantly Reduces Calorie Consumption. *Health Affairs*, 31 (2), 399-407
- Sunstein, C. (2002). “Switching the Default Rule.” *New York University Law Review* 77, 106–34.
- Sunstein, C., & Thaler, R. H. (2003). Libertarian paternalism is not an oxymoron. *The University of Chicago Law Review*, 70(4), 1159–1202.
- Sunstein, C. (2012). Impersonal Default Rules vs. Active choices vs. Personalized Default Rules: A Triptych. *Regulatory Policy Program Working Paper RPP-2012-17*. Cambridge, MA: Mossavar-Rahmani Center for Business and Government, Harvard Kennedy School, Harvard University.
- Thaler, R., & Sunstein, C.(2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press, New Haven, CT, 2008 Review by Robert Frank (2008), *Ethics*, October issue.
- Thaler, R., Kahneman, D., & Knetsch, J. (1992). The Endowment Effect, Loss Aversion and Status Quo Bias. In R. Thaler, *The Winner's Curse* (pp. 63-78). Princeton: Princeton University Press.
- Wansink, B. (2010). From mindless eating to mindlessly eating better. *Physiology and Behavior*, 100, 454–463.
- Wansink, B. (2012) Package size, portion size, serving size...market size: the unconventional case for halfsize servings. *Marketing Science*, 31, 54–57.
- Wansink, B., & Sobal, J. (2007). Mindless eating: the 200 daily food decisions we overlook. *Environment and Behavior*, 39, 106–123.
- Wisdom, J., Downs, J. S., & Loewenstein, G. (2010). Promoting healthy choices: information versus convenience. *American Economic Journal: Applied Economics*, 2, 164–178.