Making the Best Laid Plans Better:

How Plan-Making Prompts Increase Follow-Through

In press, Behavioral Science and Policy

Todd Rogers

Harvard Kennedy School, Cambridge, MA 02138

Katherine L. Milkman

The Wharton School, The University of Pennsylvania, Philadelphia, PA 19104

Leslie K. John and Michael I. Norton

Harvard Business School, Cambridge, MA 02138

WORD COUNT: 4,464 (including table)

ABSTRACT
(Word count: 117)

Many intend to stay fit but fail to exercise or eat healthfully; students intend to earn good grades but study too little; citizens intend to vote but fail to turnout. How can policy-makers help people follow through on their intentions? Prompting people to make plans – an intervention grounded in behavioral science research – leverages the mechanical benefits of advance scheduling and a range of advantageous cognitive processes to increase follow-through. We review laboratory and field experiments which reveal that prompting the formation of specific implementation plans increases follow-through across a range of domains – from vaccinations to voting. Plan-making prompts are a simple, inexpensive, and powerful tool for helping people follow through on their intentions while preserving their autonomy.

Introduction

How can policy-makers and managers help people follow through on their often-unfulfilled intentions to engage in desired behaviors? People often intend to exercise and eat healthfully but then fail; many students intend to study regularly to succeed in school but do not make the time; countless citizens intend to complete tax forms or submit applications for food stamps and student aid before deadlines, but neglect to do so; and new parents intend to formulate wills and purchase life insurance but never get around to either. Each of these follow-through failures can be costly for both individuals and society. Troublingly, previous research suggests that the failure to follow through is not especially uncommon: people fail to fulfill the majority of their intentions (Young, DeSarbo, & Morwitz, 1998; Webb & Sheeran, 2006).

The objective of this article is to describe a powerful, yet often overlooked, tool that leverages insights from behavioral science to increase follow-through on a wide range of beneficial behaviors. The tool is simple, inexpensive, and effective across a wide range of domains, and it can be deployed by policy-makers while protecting the autonomy of decision makers. We view this tool as a new entry into behavioral scientists' existing arsenal of "nudges": interventions informed by behavioral science insights that facilitate individual utility-maximizing behaviors, while also preserving individual liberty (Thaler & Sunstein, 2008). The tool is grounded in one basic insight: *making concrete plans helps people follow through on their intentions.* While there are deep and robust literatures on goals, goal-setting, plan-making, and mental simulation, we will not provide a comprehensive review of each (for more on these topics, however, see Locke & Latham, 2002; Gollwitzer &Sheeran, 2006; Oettingen, 2012). Instead, we aim to define a specific tool for policy-makers and to describe the most relevant

research that undergirds how, when, and why it is effective. (In the process, we will point interested readers to more comprehensive reviews of the relevant academic literature).

In an early study related to plan making, a team of social psychologists conducted an experiment designed to increase Yale University seniors' take-up of tetanus inoculations (Leventhal, Singer, & Jones, 1965). Students randomly assigned to the *control* condition were informed about the effectiveness of tetanus shots and their availability on campus. Those assigned to the *planning prompt* condition were provided with a list of times when shots were available, a campus map highlighting the health center's location, and prompts to review their weekly schedules and to select a time when it would be feasible to stop by the health center to receive an inoculation. Twenty-eight percent of those assigned to the *planning prompt* condition received tetanus inoculations compared with just 3% of those assigned to the *control* condition.

This example highlights the potential of plan-making to increase follow-through. The intervention in this experiment provided both a prompt to make a plan and additional information about the location of the health center, however, combining plan making with other elements. As we will describe in detail below, subsequent studies have demonstrated the benefits of providing simple planning prompts as a means of increasing follow-through.

The Psychology of Plan-Making

Why would prompting people to make concrete plans about how they will achieve their intentions – formulating the where, when and how of execution – increase follow-through? Research suggests a number of reasons for the effectiveness of this nudge. First, merely asking people if they intend to engage in a beneficial behavior can increase their likelihood of engaging in it (Sherman, 1980; Morwitz, Johnson & Schmittlein, 1993; Greenwald, Carnet, Beach, & Young, 1987; Nelson & Norton, 2005). This effect has been called the "self-prophecy effect,"

the "mere measurement effect," and even the "self-erasing nature of errors in prediction." It appears to be driven by an increase in the cognitive salience and accessibility of the intention that is primed by the question (Morwitz & Fitzsimons, 2004). For example, if a person not planning to join a gym is simply asked how likely she is to join a gym, the mere question may prompt her to consider joining and to subsequently think more about the possibility than she otherwise would have. This process would then make her more likely to sign up for a gym membership.

While prompting people to make a plan harnesses the benefits of this mere measurement, it capitalizes on other psychological forces as well. Specifically, guiding people to "unpack" the when, where, and how of fulfilling their intentions (i.e., prompting plans) can increase their likelihood of following through for three reasons (Gollwitzer, 1999).

First, on a mechanical level, plan-making encourages people to develop strategies for overcoming logistical obstacles. This practical benefit is especially valuable given people's general tendency to procrastinate when faced with the prospect of engaging in beneficial behaviors that fail to provide instant gratification (O'Donaghue & Rabin, 1999; Milkman, Rogers, & Bazerman, 2008) and to be overly optimistic about how much time tasks will take to accomplish (Buehler, Griffin, & Ross, 1994). Imagine a person who intends to get a flu vaccination requiring an hour of travel to and from his health clinic. Prompting him to make a plan for receiving the vaccination may compel him to block an hour off on his calendar and to coordinate with his colleagues to ensure that his responsibilities will be covered during the time while he is away. This logistical aspect of making a plan increases the probability that he will follow through on his good intentions. Moreover, by unpacking exactly what actions getting a flu shot requires, he will be less likely to underestimate the time needed to accomplish his intention – a particularly common problem for complex tasks (Kruger & Evans, 2004).

Second, on a cognitive level, plan-making helps people to both remember their intentions at appropriate times and to activate pre-determined strategies for overcoming challenges they anticipate facing while acting on their intentions. Forgetfulness is a common obstacle to following through on good intentions (Schacter, 1999; Einstein, McDaniel, Williford, Pagan, & Dismukes, 2003). For example, 70% of women in a study who intended, but failed, to perform a breast self-examination offered forgetting as an explanation (Orbell, Hodgkins, & Sheeran, 1997). Plan-making tackles forgetfulness by creating links in memory between anticipated future moments (e.g., a specific time of day, the moment when a certain event occurs, or when a specific feeling or thought arises) and the behaviors required to achieve intentions. These moment-behavior pairs often take the following form: "if situation Y arises, then engage in behavior X" (Gollwitzer, Bayer, & McCulloch, 2005; Gollwitzer & Sheeran, 2006a). Imagine someone makes a concrete plan to drive to the clinic to receive his flu shot next Tuesday after dropping his son at daycare. Having unpacked the logistics of his plan increases the likelihood that he will spontaneously remember to get his flu shot as he drives away from daycare on the appointed Tuesday.

Finally, forming an action plan can induce a sense that one has made a commitment to engage in the target behavior. Failing to follow through on the behavior, as a result, will create the aversive experience of not honoring an explicit commitment. Previous research shows that exhibiting the inconsistency associated with breaking such explicit commitments is uncomfortable (Cialdini, 1984), and this anticipated discomfort likely contributes to the power of planning prompts as a means of increasing follow-through. Further, planning prompts that require people to make commitments to others (e.g., by reporting a plan to someone else) have the added benefit of combining social pressure to follow-through on a commitment with internal

pressure to do so (e.g., Stone, Aronson, Crain, Winslow, & Fried, 1994). Returning to our flu shot example, someone would feel worse about not getting a flu shot after having entered it on his calendar for Tuesday (rather than some abstract future date) because it would mean failing to honor an explicit commitment recorded on his calendar. Further, if he had told his spouse that he planned to get the shot on Tuesday, a failure to do so would induce added guilt, discomfort and possible embarrassment.

Despite the fact that making a plan helps people accomplish their intentions, left to their own devices, people often fail to generate concrete plans (Lynch, Netemeyer, Spiller, & Zammit 2010). Ironically, this tendency to under-plan is especially common when people begin with strong intentions. Recent research suggests that when people most staunchly intend to perform a behavior, they are most prone to undervalue factors which could help them translate their intentions into actions (e.g., plan-making). This is because people mistakenly believe that their strong intentions are enough to propel them to perform the desired future behaviors, obviating strategies that could help translate their intentions into actions (Koehler, White, & John, 2011). Thus, paradoxically, people are prone to under-plan for the behaviors they would most like to accomplish, further underscoring the thesis that interventions that encourage plan-making can improve social welfare.

Evidence for the Efficacy of Plan-Making

Prompting people to make plans has been shown to increase follow-through on a wide range of beneficial behaviors. For example, in one study, college students who committed to eating additional fruit each day over a two week period were more successful when they were prompted to supplement this commitment with a plan for how, when and where they would eat additional fruit (Armitage, 2007). Other socially beneficial intentions that have been

demonstrably increased through interventions involving plan-making prompts include exercise (Milne, Orbell, & Sheeran, 2002; Prestwich, Lawton, & Conner, 2003), dieting (Achtziger, Gollwitzer, & Sheeran, 2008), academic success (Duckworth et al., 2011), smoking cessation (Armitage & Arden 2008), recycling (Holland, Aarts, & Langendam 2006), and test preparation (Bayer & Gollwitzer, 2007; see Gollwitzer, 1999, for an extended review of earlier work). To underscore and illustrate the power of planning prompts as a policy tool, below we summarize in detail three, recent large-scale field experiments that demonstrate the power of plan-making to influence socially important behaviors on a large scale. While each of these recent studies serve as examples of light-touch ways that policy-makers might elicit concrete plan-making, they also highlights a set of conditions that increases the effectiveness of planning prompts.

Voter Mobilization. Consider the impact of plan-making prompts as a tool for mobilizing citizens to vote. In the United States, hundreds of millions of dollars are spent encouraging citizens to vote in each election cycle. Increasing participation affects who wins a given election contest, and it also affects which groups of citizens have the most influence over legislation (for a review see Rogers, Gerber & Fox, 2011). Nickerson and Rogers (2010) randomly assigned 287,000 people during the 2008 Democratic Primary election in Pennsylvania to one of several experimental groups. Those in the *control* group were not contacted. Those in the *standard* group were called and were a) reminded of the upcoming election, b) encouraged to vote, and c) asked if they intended to vote. Finally, those in the *plan-making* group were called, run through the same script as those in the *standard* group, and asked three additional plan-making questions: *when* they would vote, *how* they would get to their polling place, and *where* would they be coming from when they went to vote. Because voting records are public, the researchers could assess actual voting in the election. Those who received the *standard* call were 2.0 percentage

points more likely to vote relative to the *control* group, while those who received the *plan-making* call were 4.1 percentage points more likely to vote relative to the *control* group, a statistically significant increase. (Overall turnout in the control group was 42.9%). In short, adding three simple plan-making questions made the *plan-making* call more than twice as effective as the *standard* call. Further analyses suggested that plan-making was particularly effective because of its impact on those citizens who had not already developed a plan for getting to their polling place; citizens who lived without other eligible voters were the least likely to have previously developed a voting plan and were therefore the most responsive to the plan-making intervention. To put this effect size into context, in the 2012 Presidential Election increasing voter turnout among eligible voters by 2.1 percentage points for one candidate's supporters would have changed the outcomes in Florida, North Carolina and Ohio. Similarly, in 2008 the state outcome would have changed in Florida, Indiana, North Carolina, and Missouri. Of course, generating so large an effect size in hotly contested battleground states (as opposed to a less intense primary election) is unlikely, as is reaching 100% of eligible voters by phone to administer a plan-making intervention. This illustration simply shows that the effect of the plan-making prompt on those who received the *plan-making* call (a trivial addition to the call) was sizable.

Motivating Flu Shot Take-Up. Plan-making has also been shown to alter important health behaviors. Consider two large-scale plan-making field experiments conducted in collaboration with Evive Health, a company that sends the employees of its client corporations reminder mailings when they are due to receive immunizations and medical exams. The first experiment involved encouraging employees to receive flu shots (Milkman, Beshears, Choi, Laibson, & Madrian, 2011). Seasonal influenza leads to more than 30,000 hospitalizations and more than

25,000 deaths in the United States each year (Thompson et al., 2004; Thompson et al., 2009). However, the frequency of these adverse incidents could be greatly reduced by increasing influenza vaccination rates – flu shots are widely available, inexpensive, and effective. In an experiment designed to assess the potency of planning prompts as a tool for increasing follow-through, thousands of employees from a Mid-western company received mailings encouraging them to receive free flu shots, which were offered at a variety of on-site work clinics. Each mailing provided details about the date(s), time(s) and location of the clinic relevant to the employee to whom it was addressed. Employees were randomly assigned to experimental conditions. Those in a *control* condition received a mailing with only the personalized clinic information described above; those in the *plan-making* condition also received a prompt to make a plan by (privately) writing down the date and time when they intended to attend a clinic in a box printed on the mailing. Clinic attendance sheets and insurance claims were used to track the receipt of flu shots. This subtle plan-making prompt costlessly increased flu shot uptake from 33% of targets in the *control* condition to 37% in the *plan-making* condition. Further analysis revealed that the prompt was most effective for the subset of employees whose on-site flu shot clinics were only open for a single day, as opposed to three or five days. For this population there was little margin for error – the window of opportunity to receive a flu shot was fleeting, making failure to follow through especially costly. In this subpopulation, the planning prompt increased flu shot take-up from 30% to 38%, suggesting that plan-making interventions may be most potent when there is a narrow window of opportunity for achieving a given intention. To put these effect sizes in context, past research has shown that sending reminder letters increases immunization rates by an average of eight percentage points, and this study shows that the mere

addition of a planning prompt to an existing reminder can boost follow-through by nearly as much as the reminder itself (Briss et al., 2000; Szilagyi et al., 2000).

Motivating the Receipt of Colonoscopies. In the second experiment with planning prompts conducted using Evive Health reminder mailings, thousands of employees overdue for a colonoscopy received a mailing encouraging them to receive this procedure (Milkman, Beshears, Choi, Laibson, & Madrian, 2013). The aforementioned colonoscopy reminder mailings provided personalized details about the cost of a colonoscopy and how to schedule an appointment. They also included a yellow sticky note affixed to the top right-hand corner, which recipients were prompted to use as a reminder to schedule and keep their colonoscopy appointment. For those randomly assigned to the *plan-making* condition, this yellow note also included a plan-making prompt with blank lines on which employees could write down when and with whom their colonoscopy appointment would take place. For those randomly assigned to a *control* condition, the yellow note was blank. Approximately seven months after these reminders were mailed, 6.2% of employees who received the *control* mailing had received a colonoscopy, while 7.2% of employees who received the *plan-making* mailing had received a colonoscopy. Increasing colonoscopy take-up from 6.2% to 7.2% would be expected to save 271 life-years for every 100,000 people who national guidelines indicate should receive a colonoscopy (Zauber et al., 2008). Further, the *plan-making* mailer's impact was most potent among sub-populations most at risk of forgetfulness, such as older adults, adults with children and those who did not comply with previous reminders. This finding highlights the value of planning prompts as a possible tool for overcoming forgetfulness.

Making the Best-Laid Plans Better

The research discussed above highlights that plan-making prompts can dramatically increase people's follow-through on important, policy-relevant behaviors. Thus far, however, we have only briefly touched upon the factors that cause plan-making prompts to be most likely to increase follow-through. In other words, we haven't yet fully answered the question: how can plan-making prompts be made even better? Previous research offers a number of insights into the factors likely to increase the efficacy of this tool. Below we describe highlights of this research, and Table 1 provides an accessible summary of factors that increase the potency of plan-making interventions (for more comprehensive scholarly reviews, see Gollwitzer, 1999; Gollwitzer & Sheeran, 2006b; Dai et al., 2012).

First, it is crucial that people have (or are persuaded to form) an intention to pursue the objective for which they are prompted to generate a plan. Without an intention to follow-through, spelling out the when, where and how of achieving a given outcome will not affect behavior (row (a) in Table 1; Sheeran, Milne, Webb, & Gollwitzer, 2005). Along these lines, planning prompts that target intentions rooted in individuals' personal values (rather than external pressure) are especially effective (row (b) in Table 1; Koestner, Lekes, Powers, & Chicoine, 2002). Similarly, strategies for increasing people's commitment to their intentions through strategies like thinking about the desired consequences of following through on their intentions and identifying obstacles (i.e. "mental contrasting") can increase the potency of plan-making (row (c) in Table 1; Adriaanse et al., 2010).

On the other hand, when the route to fulfilling an intention is straightforward and easily accomplished (row (d) in Table 1; Gollwitzer & Brandstätter, 1997) or when people have already naturally formed plans (row (e) in Table 1; Nickerson & Rogers, 2010), planning prompts can be unnecessary. In fact, the propensity to plan is a relatively stable individual attribute: some

people tend to regularly make plans, while others tend not to (Lynch, Netemeyer, Spiller, & Zammit 2010), and those who tend not to stand to gain the most from planning prompts. Further, planning prompts add the most value when people face obstacles to achieving their intentions (row (d) in Table 1; Gollwitzer & Sheeran, 2006a) such as forgetfulness (row (f) in Table 1; Milkman et al., 2013), and limited windows of opportunity (row (g) in Table 1; Dholakia & Bagozzi, 2003; Milkman et al., 2011). In fact, planning prompts can be just as effective when people are experiencing cognitive busyness as when they are in a less taxing cognitive state (Brandstätter et al., 2001).

One reason that planning prompts work is because they link the plan in a person's mind with features of the moment in which the plan is to be enacted. For example, planning prompts are especially potent when they guide people to develop concrete and precise mappings of the form "if I face obstacle X, then I will perform behavior Y." Developing this type of if-then plan in advance of encountering a given obstacle enables the if-then plan to be automatically activated when faced with that specific obstacle. This activation arises because the if-then plan is cognitively linked to the obstacle. For a similar reason, vague plans to "eat more healthily tomorrow" are far less likely to be effective than precise plans to "buy a spinach salad for dinner from the deli next door at 6 pm tomorrow." Precise plans increase the chances of recalling the plan at the appropriate moment because the concrete elements of the plan (e.g., noticing that the clock just struck 6 pm) can serve to cue the plan itself (e.g., eating salad at 6pm; rows (h), (i), and (j) in Table 1; Gollwitzer & Sheeran, 2006b). Further, as discussed previously, prompting people not only to form plans but also to state them publicly can enhance their impact by layering on the added benefits of social pressure and accountability (row (k) in Table 1; Cialdini, 1984).

Several recent laboratory studies have identified some contexts in which plan-making can actually be *harmful*. For example, plan-making may be harmful when applied to multiple intentions concurrently rather than to a single intention. By highlighting the many challenges associated with completing a multitude of intentions, unpacking the where, when and how of fulfilling multiple intentions may undermine commitment and therefore success in achieving the intention (row (l) in Table 1; Dalton & Spiller, 2012). Similarly, making multiple plans may undermine intention fulfillment by interfering with people's ability to recall and act on their intentions at critical moments (also row (l) in Table 1; Verhoeven et al, 2013). Additionally, recent research suggests that plan-making may be detrimental when achieving an intention requires recognizing and seizing unexpected opportunities. Despite the benefits of plan-making, under some conditions it can prevent people from using "out-of-plan" opportunities to achieve their intentions (row (m) in Table 1; Bayuk et al, 2010; Masicampo & Baumeister, 2012). These new research findings suggest that policy-makers should focus on administering planning prompts for single, specific intentions that can be executed in specific time windows.

Relatedly, planning prompts are particularly useful for intentions that can be fulfilled with a single and continuous set of actions as opposed to over multiple discontinuous actions (row (n) in Table 1; Buehler, Peetz, & Griffin, 2010; Peetz, Buehler, & Wilson, 2010). For example, becoming an organ donor requires completing one form, whereas writing a will often requires multiple steps including collecting documentation of one's assets and deliberating with a lawyer. Intentions that are completed over multiple discontinuous actions are particularly vulnerable to being disrupted by factors outside of a decision-maker's immediate control (i.e., a work or family emergency, getting distracted, not having copies of the appropriate paperwork, etc.). As a result, breaking intentions that require multiple sessions into smaller sub-intentions

that require only a single session may be a particularly useful strategy for amplifying the impact of planning prompts.

Table 1. When and why plan-making interventions are most effective.

	Plan-making will be most potent when:	**Because plan-making:**
a.	People already hold a strong intention	Facilitates follow-through on pre-existing intentions.
b.	Intentions are motivated by personal values (as opposed to external pressures).	Helps people overcome and avoid obstacles, enabling more effective pursuit of intentions that are important to the self.
c.	People have thought about the positive consequences of achieving their intentions and the obstacles to achieving them.	Works best when people are committed to their intentions and understand the obstacles they face.
d.	Intention fulfillment is relatively complicated, with at least a few obstacles.	Helps people follow through on intentions that they otherwise would struggle to fulfill.
e.	People have not already made plans.	Is redundant for people who have already formed plans.
f.	People are at high risk of forgetfulness.	Is most valuable to people who are most in need of follow-through aids.
g.	There are limited time windows in which to perform the implementation behaviors.	Increases the likelihood of initiating specific behaviors in specific moments that are cognitively linked to the intentions.
h.	The planning requires detailed thinking about how to overcome specific obstacles.	Fosters the development of strategies to overcome obstacles and makes those strategies more likely to be accessible exactly when they are most needed.
i.	There are precise, unique moments when the implementation behaviors must be initiated.	Works best when the initiation of the plan is cognitively linked to a specific situation or moment.
j.	The plans involve concrete implementation details.	Embeds plans in memory so that when concrete cues (e.g., where, when) arise, the intentions are triggered in memory.
k.	The plans are stated publicly.	Enhances commitment when declared to others.
l.	There is only one intention about which plans are being formed.	Can highlight the difficulty of achieving a long list of intentions, thereby undermining commitment to all of the intentions.
m.	Achieving intentions does not require being opportunistic.	Plan making can make people less adaptable when out-of-plan opportunities arise.
n.	Intentions can be achieved with single or continuous actions (as opposed to with multiple discontinuous actions).	Plans that require multiple discontinuous actions are especially vulnerable to disruption.

Conclusion

Taken together, the research summarized above suggests that prompting plan-making can increase the impact of policies designed to bolster individuals' follow-through on beneficial – but under-performed – behaviors. An extra benefit of planning prompts is that they can often be added to existing messaging aimed at changing behavior at zero marginal cost. Of course, greater use of plan-making on its own is unlikely to eliminate any given important societal challenge; it can be, however, a cost effective component of broader intervention programs. In light of its widely-documented efficacy, it is somewhat puzzling that plan-making has not been more broadly adopted by policy-makers. While there are doubtless many reasons for this underutilization, two explanations seem particularly likely.

First, much of the discussion about "nudges" has occurred between policy-makers and economists, while research on plan-making has been conducted predominantly by cognitive and social psychologists. This, of course, is exactly the sort of problem the *Behavioral Science and Policy* has been established to address.

The second reason we suspect that the planning prompt tool has not been on the radar of those who influence policy is that most plan-making research published prior to 2010 suffered from at least one limitation in external validity, such as using undergraduate college students as participants and examining outcomes that are not of specific policy relevance. While these features are not threats to the validity or rigor of past plan-making research, they likely limit its perceived credibility and applicability in the eyes of those who shape policy.

Large-scale, natural field experiments studying the impact of psychologically-informed interventions – such as plan-making – on behavior can help psychological science influence policy (Carpenter, Harrison & List, 2004). From the perspective of basic behavioral science, such research can help establish the robustness of behavioral phenomena and has the potential to unearth important moderators that might be difficult to explore in laboratory settings. For those interested in societal change, this research can generate scalable, cost-effective interventions with the ability to help people make better choices.

REFERENCES

Achtziger, A., Gollwitzer, P. M., & Sheeran, P. (2008). Implementation intentions and shielding goal striving from unwanted thoughts and feelings. *Personality and Social Psychology Bulletin, 34(3),* 381-393.

Adriaanse, M. A., Oettingen, G., Gollwitzer, P. M., Hennes, E. P., De Ridder, D. T., & De Wit, J. B. (2010). When planning is not enough: Fighting unhealthy snacking habits by mental contrasting with implementation intentions (MCII). *European Journal of Social Psychology*, *40*(7), 1277-1293.

Armitage, C.J. (2007). Effects of an implementation intention-based intervention on fruit consumption. *Psychology and Health*, 22, 917–28.

Armitage, C.J., & Arden, M.A. (2008). How useful are the stages of change for targeting interventions? Randomized test of a brief intervention to reduce smoking, *Health Psychology*, *27*, 789–98.

Bayer, C., & Gollwitzer, P. M. (2007). Boosting scholastic test scores by willpower: The role of implementation intentions. *Self and Identity*, *6*, 1-19.

Brandstätter, V., Lengfelder, A., & Gollwitzer, P. M. (2001). Implementation intentions and efficient action initiation. *Journal of Personality and Social Psychology*, *81*, 946-960.

Briss, P. A., Rodewald, L. E., Hinman, A. R., Shefer, A. M., Strikas, R. A., Bernier, R. R., ... & Williams, S. M. (2000). Reviews of evidence regarding interventions to improve vaccination coverage in children, adolescents, and adults. American journal of preventive medicine, 18(1), 97-140.

Buehler, R., Griffin, D., & Peetz, J. (2010). Chapter one-the planning fallacy: Cognitive, motivational, and social origins. *Advances in experimental social psychology*, *43*, 1-62.

Buehler, R., Griffin, D., & Ross, M. (1994). Exploring the "planning fallacy": Why people underestimate their task completion times. *Journal of Personality and Social Psychology, 67*, 366–381.

Carpenter, J.P., Harrison, G.W., & List, J.A. (2005). Field experiments in economics: An introduction. *Research in Experimental Economics* (pp 1-15). Elsevier Ltd.

Cialdini, R.B. (1984). Chapter 3: Commitment and Consistency: Hobgoblins of the Mind. *Influence: The Psychology of Persuasion*. Harper Collins Publishing: New York, NY.

Dai, H., K.L. Milkman, Beshears, J., J.J. Choi, D. Laibson, and B.C. Madrian (2012). Planning prompts as a means of increasing rates of immunization and preventive screening. *Public Policy & Aging Report*, 22(4), 16-19.

Dholakia, U. M., & Bagozzi, R.P. (2003). As Time Goes By: How goal and Implementation Intentions Influence Enactment of Short-Fuse Behaviors1.*Journal of Applied Social Psychology*, *33*(5), 889-922.

Duckworth, A. L., Grant, H., Loew, B., Oettingen, G., & Gollwitzer, P. M. (2011). Self-regulation strategies improve self-discipline in adolescents: benefits of mental contrasting and implementation intentions. *Educational Psychology*, *31*(1), 17-26.

Einstein, G. O., McDaniel, M. A., Williford, C. L., Pagan, J. L., & Dismukes, R. K. (2003). Forgetting of intentions in demanding situations is rapid. *Journal of Experimental Psychology: Applied, 9,* 147-162.

Fitzsimons, G. J., & Morwitz, V. G. (1996). The effect of measuring intent on brand-level purchase behavior. *Journal of Consumer Research*, *23*, 1–11.

Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist, 54*, 493-503.

Gollwitzer, P. M., & Brandstätter, V. (1997). Implementation intentions and effective goal pursuit. *Journal of Personality and Social Psychology, 73*, 186-199.

Gollwitzer, P. M., & Sheeran, P. (2006a). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology, 38*, 69-119.

Gollwitzer, P. M., & Sheeran, P. (2006b). Implementation Intentions. As posted at: http://cancercontrol.cancer.gov/brp/constructs/implementation_intentions/goal_intent_attain.pdf

Gollwitzer, P. M., Bayer, U., & McCulloch, K. (2005). The control of the unwanted. In R. Hassin, J. Uleman, & J. A. Bargh (Eds.), *The new unconscious* (pp. 485-515). Oxford: Oxford University Press.

Greenwald, A. G., Carnot, C. G., Beach, R., & Young, B. (1987). Increased voting behavior by asking people if they expect to vote. *Journal of Applied Psychology*, *72*, 315–318.

Harrison, G.W., & List, J.A. (2004). Field experiments. *Journal of Economic Literature*, *42*, 1009-1055.

Holland, R.W., Aarts, H. & Langendam, D. (2006). Breaking and creating habits on the working floor: A field experiment on the power of implementation intentions. *Journal of Experimental Social Psychology*, *42*, 776–83.

Koehler, D. J., White, R. J., & John, L. K. (2011). *Good intentions, optimistic self-predictions, and missed opportunities. Social Psychological and Personality Science*, *2*, 90-96.

Koestner, R., Lekes, N., Powers, T. A., & Chicoine, E. (2002). Attaining personal goals: self-concordance plus implementation intentions equals success. *Journal of personality and social psychology*, *83*(1), 231.

Koestner, R., Lekes, N., Powers, T. A., & Chicoine, E. (2002). Attaining personal goals: Self concordance plus implementation intentions equals success. *Journal of Personality and Social Psychology*, *83*, 231-244.

Kruger, J., & Evans, M. (2004). If you don't want to be late, enumerate: Unpacking reduces the planning fallacy. *Journal of Experimental Social Psychology*, *40*(5), 586-598.

Leventhal, H., Singer, R., & Jones, S. (1965). Effects of fear and specificity of recommendation upon attitudes and behavior. *Journal of Personality and Social Psychology*, *2*, 20-29.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American psychologist*,*57*(9), 705.

Lynch Jr, J. G., Netemeyer, R. G., Spiller, S. A., & Zammit, A. (2010). A generalizable scale of propensity to plan: the long and the short of planning for time and for money. *Journal of Consumer Research, 37*(1), 108-128.

Masicampo, E. J., & Baumeister, R. F. (2012). Committed but closed-minded: when making a specific plan for a goal hinders success. *Social Cognition,30*(1), 37-55.

Milkman, K.L., Beshears, J., Choi, J.J., Laibson, D., & Madrian, B.C. (2011), Using implementation intentions prompts to enhance influenza vaccination rates. *Proceedings of the National Academy of Sciences, 108*, 10415-10420.

Milkman, K.L., Beshears, J., J.J. Choi, D. Laibson, and B.C. Madrian (2013). Planning prompts as a means of increasing preventive screening rates. *Preventive Medicine, 56*, 92-93.

Milkman, K.L., Rogers, T. & Bazerman, M.H (2008). Harnessing our inner angels and demons: What we have learned about want/should conflicts and how that knowledge can help us reduce short-sighted decision making. *Perspectives on Psychological Science, 3(4):* 324-338.

Milne, S., Orbell, S., & Sheeran, P. (2002). Combining motivational and volitional interventions to promote exercise participation: Protection motivation theory and implementation intentions. *British Journal of Health Psychology, 7*, 163-184.

Morwitz, V. G., Johnson, E., & Schmittlein, D. (1993). Does measuring intent change behavior? *Journal of Consumer Research, 20*, 46-61.

Morwitz, V.G. & Fitzsimons, G.J. The mere-measurement effect: Why does measuring intentions change actual behavior? *Journal of Consumer Psychology, 14*, 64-74.

Nelson, L.D. & Norton, M.I. (2005). From student to superhero: Situational primes shape future helping. *Journal of Experimental Social Psychology, 41*, 423-430.

Nickerson, D.W. & Rogers, T. (2010). Do you have a voting plan? Implementation intentions, voter turnout, and organic plan making. *Psychological Science, 21(2),* 194-199.

O'Donoghue, T. & Rabin, M. (1999). Doing it Now or Later. *American Economic Review, 89 (1)*, 103-124.

Oettingen, G. (2012). Future thought and behaviour change. *European review of social psychology*, 23(1), 1-63.

Orbell, S., Hodgkins, S., & Sheeran, P. (1997). Implementation intentions and the theory of planned behavior. *Personality and Social Psychology Bulletin, 23*, 945-954.

Ordóñez, L. D., Schweitzer, M. E., Galinsky, A. D., & Bazerman, M. H. (2009). Goals gone wild: The systematic side effects of overprescribing goal setting. *The Academy of Management Perspectives*, 23(1), 6-16.

Peetz, J., Buehler, R., & Wilson, A. (2010). Planning for the near and distant future: How does temporal distance affect task completion predictions?. *Journal of Experimental Social Psychology, 46*(5), 709-720.

Prestwich, A., Lawton, R. & Conner, M. (2003). The use of implementation intentions and the decision balance sheet in promoting exercise behavior. *Psychology and Health*, 18, 707–21.

Rogers, T., Gerber, A. S., & Fox, C. R. (2012). Rethinking Why People Vote: Voting as Dynamic Social Expression. *Behavioral Foundations of Policy*.

Schacter, D.L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychologist, 54*, 182-203.

Sheeran, P., Milne, S. E., Webb, T. L., & Gollwitzer, P. M. (2005). Implementation intentions. In M. Conner & P. Norman (Eds.), *Predicting Health Behavior* (2nd ed., pp. 276-323). Buckingham, UK: Open University Press.

Sherman, S. J. (1980). On the self-erasing nature of errors of prediction. *Journal of Personality and Social Psychology, 39*(2), 211.

Stone, J., Aronson, E., Crain, A. L., Winslow, M. P., & Fried, C. B. (1994). Inducing hypocrisy as a means of encouraging young adults to use condoms. *Personality and Social Psychology Bulletin, 20*(1), 116-128.

Szilagyi, P. G., Bordley, C., Vann, J. C., Chelminski, A., Kraus, R. M., Margolis, P. A., & Rodewald, L. E. (2000). Effect of patient reminder/recall interventions on immunization rates: a review. JAMA, 284(14), 1820-1827.

Taylor, S. E., Pham, L. B., Rivkin, I. D., & Armor, D. A. (1998). Harnessing the imagination: Mental simulation, self-regulation, and coping. *American psychologist, 53*(4), 429.

Thaler, R.H., & Sunstein, C.R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.

Thompson, W.W., Shay, D.K., Weintraub, E., Brammer, L., Bridges, C.B., Cox, N.J., & Fukuda, K. (2004). Influenza-associated hospitalizations in the United States. *The Journal of the American Medical Association,* 292(11), 1333-1340.

Thompson, W.W., Weintraub, E., Dhankhar, P., Cheng, P.Y., Brammer, L., Meltzer, M.I., Bresee, J.S., Shay, D.K. (2009). Estimates of US influenza-associated deaths made using four different methods. *Influenza and Other Respiratory Viruses, 3(1),* 37-49.

Verhoeven, A. A., Adriaanse, M. A., Ridder, D. T., Vet, E., & Fennis, B. M. (2013). Less is more: The effect of multiple implementation intentions targeting unhealthy snacking habits. *European Journal of Social Psychology,* 43(5), 344-354.

Webb, T.L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the empirical evidence. *Psychological Bulletin, 132,* 249–68.

Young, M.R., DeSarbo, W.S., & Morwitz, V.G. (1998). The stochastic modeling of purchase intentions and behavior. *Management Science*, 44, 188–202.

Zauber, A.G., Lansdorp-Vogelaar, I., Knudsen, A.B., Wilschut, J., van Ballegooijen, M., & Kuntz, K.M. (2008). Evaluating test strategies for colorectal cancer screening: A decision analysis for the U.S. Preventive Services Task Force. *Annals of Internal Medicine, 149*, 659-69.