

The Social Creation of Action and Inaction:

From Concepts to Goals to Behaviors

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Keywords: Action, inaction, goal, behavior change, attitude, evaluation, judgment

Abstract

This chapter presents a model of the cognitive, motivational, and behavioral implications of the concepts of action and inaction. The action or inaction nature of a behavior is a judgment, a subjective and variable construal, made by the actor or an observer based on concepts of action and inaction. In other literatures, action and inaction concepts entail affirming or negating of any behavior, but we posit that they are best defined in terms of level of effort and intentionality. People define action as more intentional and effortful than inaction and consequently establish default evaluations of action as more positive than inaction. In this chapter, we discuss how action and inaction are set as goals, how these goals differ from active and inactive means, and how these goals are implemented and considered complete. The chapter integrates disparate work on general action biases, action and inaction goals, and process models of goals. We describe specific principles that guide goal systems containing action and inaction goals, and the principles summarizing action-goal dominance at the stages of goal setting, implementation, and monitoring/completion.

Number of words: 178

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Action goals –effortful, energy demanding endstates people pursue-- are important for human survival because they ensure adequate shelter and food supply and, in so doing, facilitate effective interactions with the environment (see Karsh, Eitam, Mark, & Higgins, 2016; White, 1959). But inaction goals –restful, energy conserving endstates people pursue--cannot be underestimated. Humans survive because they are intentional about where and when to sleep, avoiding exposure to the elements and other threats. They also set the goal to decrease effort when they are fatigued or injured. From this point of view, understanding how both of these goals, and related concepts and values, are created is critical for a social psychology of action, and our understanding of attitudes, goals, and behaviors. Much of the past work on goals, however, has concentrated on goals of action and did not investigate goals of inaction.

Relative to inactions, actions receive more attention (Daniel Kahneman & Miller, 1986), elicit stronger emotional reactions (Landman, 1987; Zhou, Yu, & Zhou, 2010), trigger higher regret (Amos Tversky & Kahnemann, 1982), and are often perceived as more consequential (Baron & Ritov, 2004). Across cultures, we and others have found that people hold more positive attitudes toward action than inaction, and some Western cultures even hold negative attitudes towards inaction (Ireland, Hepler, Li, & Albarracín, 2015; Levine & Norenzayan, 1999; E. Zell et al., 2012). Furthermore, as we will argue, unless people learn that a behavior is clearly negative, actions are expected to be more positive than inactions (Sunderrajan & Albarracin, 2017, 2018, 2019).

This chapter addresses the cognitive, motivational, and behavioral implications of the concepts of action and inaction. In many contexts, *action* and *inaction* denote the affirming or

negating of any behavior. For example, from this perspective, running and sleeping would be actions, whereas not running and not sleeping would be inactions. In our chapter, however, action and inaction are defined in terms of the level of effort and intentionality involved. Simply put, if a behavior or process is highly effortful, it is conceptually an action. Other, more specific behavioral concepts are naturally relevant to behavior as well. For example, the concept of *habitual action* is more specific than the concept of *action* because the first excludes activities we never performed before. As another example, the concepts of *work* and *leisure* are more specific than the concept of *action* because they concern specific domains of human activity. Although both general and specific semantic concepts allow us to understand the world, they are often insufficient to drive goals and ultimate behavioral performance. Evaluations vary from positive to negative and can be ascribed to actions, inactions, and other specific behavioral categories. These evaluations drive goals and performance.

We describe the psychological processes that define action as more intentional and effortful than inaction and then analyze implications for evaluations of actions and inactions. We then proceed to describe how action and inaction are set as goals, and how these goals are implemented and considered complete. In doing this, we integrate disparate work on general action and inaction goals, decision making, and process models of goals. In particular, we compare action and inaction goals at each stage of goal setting, implementation, and monitoring, as well as resolution. We distinguish action and inaction goals from other goals and draw implications for future research.

When we discuss action and inaction concepts, we are often interested in how people understand them in the absence of other information. Suppose that one is asked to judge whether one prefers to *press a button* or to *not press a button*. In the absence of clearly evaluative

information, such as information about the outcomes of the behavior, any difference in the evaluations of pressing and not pressing a button must be due to biases introduced by the mere *concept* of action and inaction. As shall we seen, we often demonstrate that people perceive such trivial actions as pressing a button as more positive or intentional than similarly trivial inactions like not pressing a button (Sunderrajan & Albarracin, 2019). Of course, these findings do not imply that people cannot correct for these defaults when more information is provided. People asked to evaluate pressing or not pressing a button that will detonate a bomb would of course evaluate the action as worse than the inaction. By the same token, people are well aware than kicking another person is worse than sitting next to another person.

This chapter analyzes how evaluative *defaults* translate into interesting phenomena in the area of goals. For example, people are more likely to form and pay attention to action goals. Action goals can then guide behavior, and they are often general enough to activate a variety of different behaviors as means of satisfaction. These behaviors can be both impulsive and deliberate, trivial and important. In contrast, people are less likely to form and pay attention to inaction goals. For that reason, these goals are rarer and attract so little attention that they do not disrupt performance. Inaction goals can guide behavior too, but this requires persuading individuals that inaction can be a worthwhile state. Note that the implications of these motivational differences are likely major. For example, an action orientation can produce relatively indiscriminate patterns of behavior in which actions are selected even when inactions might turn out to be better for individuals and the societies in which they live.

ACTION AND INACTION CONCEPTS

In our framework, behavior is defined as a motor or cognitive process executed by a person, which varies along an activity continuum, with an effortful, demanding end

characterizing *action*, opposite to a passive, restful end characterizing *inaction* (Noguchi, Handley, & Albarracín, 2011; Albarracín, Hepler, & Tannenbaum, 2011; McCulloch, Li, Hong, & Albarracín, 2012; Zell et al., 2013). One may, of course, measure activity objectively by quantifying force exerted during movement, or amount of glucose consumed by taking a cognitive test. No objective measure, however, can determine whether a behavior is an action or an inaction. Rather, the test for whether a behavior is an action or an inaction is subjective.

The action or inaction of a behavior is a judgment, a subjective and variable construal made by the actor or an observer based on concepts of action and inaction. For example, in research conducted by McCulloch et al. (Study 1; 2012), a subset of participants generated a list of words related to action or inaction. As examples of action, the participants offered *select*, *walk*, and *run*. However, when another subset of participants rated these words on a scale from inaction (-3) to action (3), *select*, *walk*, and *run* differed on this action dimension. As shown in Figure 1, *select* was rated as the least active, *run* was rated as the most active, and *walk* was rated somewhere in between. This pattern illustrates the presence of variability within the subjective category of action.

Judgments of action and inaction also differ across participants and across contexts. Take *running*, which is often associated with action. Across participants, the action rating for this behavior has been shown to differ. For example, in one study in our lab, we asked participants to rate *running* on a scale ranging from complete inaction/passive (1) to complete action/active (7) (Study 2; Sunderrajan & Albarracín, 2018). Across participants, the action rating for *running* went from 3.5 to 7, indicating that how active *running* appears depends on the individual. Similarly, the action rating for behaviors can differ across contexts as well. In the same study (Study 2; Sunderrajan & Albarracín, 2018), participants were asked to judge two behaviors:

Running and *sitting*. In one condition, *running* appeared first, and in the other condition, *sitting* appeared first. Results showed that order affected how strongly participants rated these behaviors as being active or not. Specifically, *running* was rated as more active when it came after *sitting* than when it came before. The reverse was true for sitting, which was rated as more active when it came before running than when it after. Overall, these findings indicate that judgements of behaviors as actions or inactions are not only subjective and subtle but also differ by participant and context.

In the coming sections, we begin by describing the concepts of action and inaction in relation to the defining features of (a) intentionality (whether a behavior can be initiated willfully) and (b) effort (whether a behavior demands energy). We then proceed to describe implications for attitudes and goals and present a theory about the structure and operation of action and inaction goals and the stages through which they affect behavior. The corresponding principles appear in Table 1.

Action is Subjectively More Intentional than Inaction

Action and inaction are often distinguished in terms of agency: Actions are associated with greater behavioral intentionality than are inactions (Rosset, 2008). In one study (Rosset, 2008), participants were asked to decide whether specific actions (e.g., *She set the table*, *She scratched herself*) were performed on purpose or by accident. Results showed that participants judged actions as more intentional when the behavior intentionality was ambiguous and when participants were asked to make decisions quickly. This evidence suggests that, when people encounter an action, intentionality is the default unless clear information about intentionality is available— a response described as an *intentionality bias* (Rosset, 2008).

Our work has also shown this intentionality bias for actions, extending the principle to inactions, which were not studied by Rosset (2008). In some of our research (Study 1; Sunderrajan & Albarracin, 2017), participants received instructions to imagine themselves eating (or not eating) broccoli, and then to rate the behavior on a scale ranging from completely negative/not desirable (1) to completely positive/desirable (7). Participants were not only asked to imagine eating (or not eating) broccoli, but were also asked to do so in one of three conditions manipulating intentionality levels. In the high intentionality condition, participants imagined eating broccoli with a purpose or intention in mind; in the low intentionality condition, they imagined eating incidentally, without a purpose; in the control condition, they received no instructions other than to imagine eating broccoli. When participants were asked to rate the behavior of eating broccoli (action), action ratings did not differ between the high-intentionality and control conditions, suggesting that actions are seen as inherently intentional, and manipulating intentionality to be high does not add to how active they appear. In contrast, when participants were asked to rate the behavior of not eating broccoli (inaction), action ratings did not differ between the low-intentionality and control conditions, suggesting that, by default, inactions are seen to lack intent, and manipulating intentionality to be low does not make them appear more inactive.

<p>Principle 1. Action is subjectively more intentional than inaction.</p>
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Action is Subjectively More Effortful than Inaction

Action and inaction concepts also concern effort. We (e.g., Albarracín et al., 2008) have argued that behaviors involving high motor or cognitive output are characteristic of action concepts (e.g., *running*), and those involving neither motor nor cognitive output are characteristic

of inaction concepts (e.g., *non-REM sleep*). Empirical work further bolsters this argument. For example, in work we conducted (Study 1; Sunderrajan & Albarracin, 2018), participants were presented with one scenario describing either *running*, *standing*, or *lying down* –behaviors that differ in effort level. Participants were asked to imagine themselves engaging in the behavior and to then rate the behavior on a scale ranging from complete inaction/passive (1) to complete action/active (7). Consistent with predictions, participants’ action ratings of these behaviors depended on perceived effort. *Running* was perceived as most active, followed by *standing*, and then *lying down*.

Not surprisingly, there is evidence to suggest that how effortful a behavior is correlates with how active (or inactive) it is perceived to be. In our research (Study 2; Sunderrajan & Albarracin, 2019), participants were presented with a set of behaviors that varied in their levels of activity (e.g., *run*, *pull*, *meditate*, *stationary*). Participants were then asked to indicate how active and effortful each of the behaviors was on two 5-point scales ranging from not at all (1) to a great deal (5). Results showed a strong positive correlation between the two, $r = .97, p < .001$. That is, how effortful a behavior was perceived was almost identical to how active a behavior was perceived.

<p>Principle 2. Action is subjectively more effortful than inaction.</p>
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ACTION AND INACTION ATTITUDES

Action is Subjectively More Positive than Inaction

All else being equal, the concept of action is also subjectively more favorable than the concept of inaction (Ireland et al., 2015; Zell et al., 2013). That is, action and inaction differ in valence, with attitudes toward action being more positive than those toward inaction. In our

research (McCulloch and colleagues, 2012; Study 2), participants rated words that went from most active (e.g., *run*) to least active (or inactive; e.g., *sleep*) on a 7 scale from negative (-3) to positive (3). As expected, words like *active*, *run*, and *jump*, received more positive evaluations than words like *inactive*, *stationary*, and *still*.

More recent work has found similar trends. In previously mentioned research conducted in our lab (Study 1; Sunderrajan & Albarracin, 2017), participants received instructions to imagine themselves eating (or not eating) broccoli, and then rated the behavior on a scale ranging from completely negative/not desirable (1) to completely positive/desirable (7). When no additional information was provided, participants who imagined themselves eating broccoli (an action) evaluated the behavior more favorably than participants who imagined themselves not eating broccoli (an inaction). In another variant of this study, participants were asked to imagine themselves eating (or not eating) cake. Results were similar: Participants who imagined themselves eating cake (an action) evaluated the behavior more favorably than participants who imagined themselves not eating cake. To ensure that these results were not idiosyncratic or influenced by liking for cake, we ran a third variant using the trivial behavior of pressing (or not pressing) a button, replicating our earlier results. The results from this series of experiments show that action is, overall, perceived as more positive than inaction. Of course, knowledge about devastating consequences of a behavior will affect these judgments too, but for relatively neutral behaviors, or in the absence of information, people will assume that the action is more positive than the inaction (Dodds et al., 2015).

<p>Principle 3. In the absence of information about negative consequences, action is subjectively more positive than inaction.</p>
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One reason why actions are subjectively more positive than inactions concerns the attribution of higher intentionality to actions. We know that intentionality is often associated with positive evaluation. For example, ample evidence indicates that positive attitudes are associated with strong intentions (Ajzen & Fishbein, 2005), both because attitudes cause intentions and because intentions and behaviors can be used as a basis for attitudes (Albarracín & Wyer, 2001; Bem, 1972). Therefore, intentional behaviors are likely to be automatically judged as more positive than unintentional behaviors. In fact, in our research (Sunderrajan & Albarracín, 2017, 2018, 2019), the participants who read behavior scenarios with varying levels of intentionality (high, low, and unspecified) also provided evaluations. Their responses revealed that judgments of intention drove evaluations of action and inaction. As actions are subjectively more favorable to begin, describing them as intentional had no additional effect. In contrast, as inactions are subjectively more negative to begin, describing them as intentional produced more positive evaluations. These results suggest that a general positivity bias for action is driven by a corresponding intentionality bias for action.

As we have suggested (McCulloch et al., 2012), active engagement, or effort itself, may also drive desirability, because the Protestant work ethic conceptualizes effort as moral and laudable, regardless of the behavior at hand. In one study, Hsee, Yang, and Wang (2010) gave participants the option to be busy or remain idle: After completing a survey, participants were given a 15-minute break, during which they had the option to deliver their completed survey to a nearby location and wait out the remaining time (idle option) or deliver their completed survey to a faraway location (busy option). Participants who chose to be busy reported higher feelings of happiness than participants who chose to be idle. Apparently, people desire busyness and dread

idleness (Hsee et al., 2010) to the extent that keeping busy increases reported feelings of happiness.

Hsee and colleagues' (2010) research is consistent with findings showing that people find inaction boring (Fahlman, Mercer, Gaskovski, Eastwood, & Eastwood, 2009) and enjoy work (e.g., Norton, Mochon, & Ariely, 2012). In Norton et al. (2012), for example, participants were asked either to build an IKEA storage box or to only inspect one, and then they bid for the product and rated how much they liked the product. Supporting predictions, participants who built the storage box were not only willing to pay more for the storage box but also liked the product more. In other words, the subjective value of a behavior appears determined by the effort that goes into the behavior (effort justification theory; Aronson & Mills, 1959), such that mere engagement in labor increases the value of task outcomes (the IKEA effect; Norton et al., 2012).

Structure and Origins of Action and Inaction Attitudes

The inaction concept represents a relaxed state, whereas the action concept represents an effortful state. When these concepts are evaluated, a positive attitude toward action goes along with a corresponding dislike for inaction, and conversely, a positive attitude toward inaction goes along with a corresponding dislike for action. In fact, research on the structure of these attitudes suggests a general oppositional, negative association between attitudes toward action and attitudes toward inaction. For example, we collected questionnaire measures of attitudes toward action and inaction in 19 countries (see Zell et al., 2013). Participants (mainly college students, although some were general samples of adults) rated action and inaction as positive or negative via two almost identical scales. Both scales assessed to what extent action or inaction, individually, was important for happiness or contributed to society. Specifically, participants rated their agreement with items measuring attitude toward action (action is important in

people's lives, action is essential for life, actions contribute to society, being active makes people happy, and action is good) as well as items measuring attitude toward action (inaction is important in people's lives, being inactive is unpleasant, inaction is good, inaction is necessary in one's life, and inaction offers many benefits) on 1 (*strongly disagree*) to 7 (*strongly agree*) scales. Using two scales with opposing adjectives is ideal to detect attitudes that are orthogonal because they allow participants to express positive or negative attitudes toward both action and inaction. If the attitudes are orthogonal, the correlation between attitude toward action and inaction should be zero, whereas nonzero associations represent a relation between the two. A negative correlation suggests that liking action goes along with disliking inaction, which was the predominant pattern in Zell et al.'s study. A summary of these data appears in Table 2. All in all, liking action coincided with disliking inaction, a pattern that suggests preference for one versus the other. Regardless of country of origin, people liked action more than inaction, although both means were generally positive. As shown in Table 2, most countries had mean attitudes toward action that were much more positive than mean attitudes toward inaction. Moreover, attitudes toward action and inaction were negatively correlated in 10 out of 19 countries, suggesting a tendency towards oppositional attitudes (see Figure 2A). The exceptions, however, were Japan and China, where both attitudes were similarly positive.

There is a good reason to assume that cultural differences in dialecticism (see Figure 2B) would predict attitude toward action and attitude toward inaction. Dialecticism is the tendency to hold contradictory beliefs (Spencer-Rodgers, Williams, & Peng, 2010). For example, East Asians, who are dialectical, more often report contradictory evaluations of themselves and their groups, recognizing both positive and negative characteristics (Ma-Kellams, Spencer-Rodgers, & Peng, 2011; Spencer-Rodgers, Boucher, Mori, Wang, & Peng, 2009). Therefore, East Asians

report experiencing mixed positive and negative emotions at the same moment (Schimmack, Oishi, & Diener, 2002; Spencer-Rodgers, Peng, & Wang, 2010), whereas European Americans rate their mood as either positive or negative (Schimmack, Oishi, & Diener, 2002; Spencer-Rodgers, Peng, & Wang, 2010). Similarly, relevant to this chapter, more dialectical societies appear to recognize benefits in both action and action.

Our cross-cultural study described in Table 2 included the Dialectical Self-Scale (Spencer-Rodgers et al., 2010). Participants reported their agreement with statements such as *I sometimes believe two things that contradict each other* and *If there are two opposing sides to an argument, they cannot both be right* (reverse scored) on 1 (*strongly disagree*) to 7 (*strongly agree*) scales. As shown in Table 2, there was the expected variability in dialecticism across countries. Further, hierarchical-level modeling indicated that dialecticism correlated with the positivity of the correlation between attitudes toward action and inaction. That is, participants in high-dialecticism countries like Japan had a more positive correlation between action and inaction attitudes than participants in low-dialecticism countries.

Culture is also known to influence the distribution of responsibility for action. For example, *horizontal* entails equal distribution of control and responsibility among members of a group, and can be distinguished from *vertical*, which entails the concentration of control and responsibility according to status and authority (hierarchy) (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Shavitt, Lalwani, Zhang, & Torelli, 2006; Triandis & Gelfand, 1998). In horizontal cultures, such as Denmark, Australia, or the Israeli Kibbutz, responsibility for action is widely distributed and this distribution is valued. In vertical cultures, such as Japan and the US, responsibility for action is concentrated in individuals of high status, which discourages independent action for most members of a group or society. Based on these notions, we

(Albarracín, Jones, Hepler, & Li, 2017) hypothesized that, if verticality places greater social constraints on action, attitudes towards general action may be less positive in vertical than horizontal countries. In the same study analyzed by Zell et al. (2013), we used the vertical/horizontal individualism-collectivism scale (Singelis et al., 1995) to assess vertical individualism (e.g., *It is important that I do my job better than others*), vertical collectivism (e.g., *It is my duty to take care of my family, even when I have to sacrifice what I want*), horizontal individualism (e.g., *I rely on myself most of the time; I rarely rely on others*), and horizontal collectivism (e.g., *I feel good when I cooperate with others*) with 9-point scales anchored at strongly disagree (1) and strongly agree (9). Individualism and collectivism had no consistent or significant associations with attitudes toward action, which justified creating a horizontal scale and a vertical scale. Results indicated that attitudes towards action were more positively correlated with the horizontal than the vertical dimensions of the scale. Attitudes towards inaction, however, were not related to these dimensions.

Finally, there is also evidence that general or dispositional attitudes, which themselves correlate positively with positive affectivity and negatively with neuroticism, help to explain goal-directed activity level. In one study, we (Hepler & Albarracín, 2013) asked participants to complete the American Time Use Survey, which measures how people spend their time on a day-today basis (Shelley, 2005). The survey includes 17 behavioral categories such as educational activities, government services and civic obligations, as well as sports. For each category, participants are further asked *During the last 7 days, on how many days did you do this?* (using a scale from 0 to 7 days) and *How much time did you usually spend doing this on one of those days?*. Participants also completed the Dispositional Attitude Measure, a measure of attitudes towards objects in general. Our measure includes 16 independent attitude objects such

as *architecture*, *bicycles*, and *taxes* (Hepler & Albarracín, 2013), and responses are averaged to yield a single index of a participant's overall tendency to have positive or negative attitudes. Results indicated that general attitudes predicted the number of activities that people reported, without being associated with overall time spent on activities. That is, general positive attitudes predisposed people towards a variety of actions even though the overall time spent on action was unaffected.

ACTION AND INACTION GOALS

We define goals as endstates involving a behavior, a skill, an outcome, a cognitive state, or a feeling. A person may wish to travel, learn a new language, lose weight, feel more confident, or improve their mood. Goals of action have an effortful endstate, whereas goals of inaction have a relaxed endstate. A person may wish to be generally more active, or to run a marathon in April, whereas somebody else may want to nap before dinner tonight.

Several lab experiments have shown that having a general action (or inaction) goal leads to pursuing more active (or inactive) behavior. We have manipulated action versus inaction goal pursuit using various types of priming procedures, in which the participants are somehow exposed to concepts linked to general action (e.g., *active* and *go*) or general inaction (e.g., *rest* and *stop*). Following priming, participants engage in some subsequent task in which relative levels of activity and effort can be assessed, such as decision making, drawing, eating, exercising, learning, or political participation. As an illustration, in Experiment 1 of Albarracín et al. (2008), we primed participants with action or inaction during a word-completion task (e.g., *Fill in the missing letter(s): ac_ive*) and then gave them the option to participate in an active task (drawing on a piece of paper) or an inactive task (resting with eyes closed). Whereas 62% participants chose to draw when they were primed with action, only 36% chose to draw when

primed with inaction. Table 3 summarizes all the available research on our constructs of which we are aware, including all reported in our meta-analysis of priming effects on behavior (Weingarten, Chen, McAdams, Yi, Hepler, & Albarracín, 2016). Overall, priming action increased behavior compared to priming inaction ($d = 0.49$).

A critical consideration is that action and inaction goals form part of a goal system. Rarely do goals exist in isolation, which has led researchers to study systems (Pintrich, 2000; Louro, Pieters, & Zeelenberg, 2007). Kruglanski et al.'s model (2002), for example, proposes that goals are interconnected and that the interconnections vary in strength. For example, the goal of leading a happy life may be related to the goals of finding a partner and finding a satisfying job. However, the connection between leading a happy life and finding a partner may be stronger than the connection between leading a happy life and finding a satisfying job. In that case, finding a partner would be a preferred course of action when a person strives to be happy. Our framework also proposes a system of goals and places general action and inaction goals high within that system. Some action goals are general and drive the setting of many lower level goals, whereas others are more circumscribed in nature.

Generality of Action and Inaction Goals and Goal System

According to a goal systems model, the activation of a higher-level goal should transfer to lower level goals in accordance with the strength of the connections (Neely, 1977). Of course, action goals can be general to the point of involving **any** effortful physical or cognitive task and have the potential to activate such diverse specific goals as running, cleaning, decluttering, speeding, overeating, and doing homework. Whether one sets the higher or the lower level goal first is an important question. Take running, for example. Is a general action goal created first, followed by a specific goal to run, or does running exist without a general action goal ever put in

place? To better understand how general and specific action and inaction goals emerge, Figure 3 presents a schematic depiction of the influence of norms and biological forces that may underlie general and specific action/inaction goals. For example, a norm favoring indiscriminate productivity as well as neurotransmitters associated with energy and arousal (e.g., dopamine and epinephrine; also serotonin) may both control general action/inaction goals. In contrast, norms favoring excellence in specific behaviors and a reduction in available dopamine may lead to setting highly-specific action goals.

Of all factors in Figure 3, there is one connected with serotonin that has received research attention: Neuroticism. Neuroticism is a personality trait that correlates with mood, emotional lability, anxiety, and depression, which is associated with inaction in contexts ranging from changes at work to compliance with medical regimens. In other analyses of the same country samples in Table 2, we (Ireland et al., 2015) investigated whether neuroticism was linked to attitudes toward action and whether this link was mediated by depression and anxiety. We found a negative association between attitudes toward action and neuroticism, a link that remained after controlling for depression but went away after controlling for anxiety. We also found a positive association between neuroticism and attitudes toward inaction. Thus, this work suggests that the decreases in activity associated with high neuroticism stem in part from representing action less favorably and inaction more favorably.

Means of General Action and Inaction Goals

As explained before, action and inaction goals may be specific, such as being as active as possible this weekend, or doing nothing and relaxing this afternoon. However, action and inaction goals can also be quite general. For example, to achieve an A grade in a class, some people set specific action goals to attend all lectures or take notes in class. Other people set a

general action goal to work hard, which in turn guides their specific behaviors. In the general case, the goal provides more open-ended behavioral choices, which can include not only the preset goals of attending all lectures and taking notes in class but also goals identified on the fly such as attending office hours if an opportunity arises.

Within prior models of goal systems, lower-level goals are assumed to have the same attributes as higher-level goals (Williams, Huang, & Bargh, 2009). For example, in educational settings, active learning goals predict active problem coping (Grant & Dweck, 2003). In this study, undergraduates who had performed poorly on an earlier exam engaged in greater planning and increased study efforts for a later exam when they had active goals (e.g., to improve competence in a desired area) than when they had relatively inactive goals (e.g., maintain a certain GPA). However, a critical aspect of action and inaction goals, as well as action and inaction decisions more generally, is that, in contrast to what Kuglasnki and colleagues (2002) propose, in our framework the means do not necessarily resemble the goals.

Understanding why action may achieved by either action or inaction is important. When a person is sleeping, continuing to sleep requires little effort. However, when a person is currently running, switching to sleeping involves effortful, inhibitory means. Similarly, an action goal may be achieved by inertia or by effortful behavioral means. Continuing to run when one is running requires no effort. However, stopping while running can be effortful, particularly if one stops abruptly. These clarifications imply that pursuing inaction as an endstate does not require using an inactive mean, and that the degree of action or effort of the endstate does not necessarily depend on whether action or inaction led to that state (Albarracín, Sunderrajan, & Dai, 2018).

<p>Principle 4. The behavioral means to achieve action and inaction goals can be either active or inactive.</p>

Previously Identified Broad Goals as Means for General Action and Inaction Goals

Following the notion of a goal system, general action and inaction goals are distinct from, and can rely on, other previously identified high-level goals, including approach/avoidance, prevention/promotion, and locomotion/assessment. Consider promotion and prevention in regulatory focus theory (Higgins, 2012), approach versus avoidance in behavioral activation and inhibition (Carver & White, 1994), and grasping versus escaping in Buddhist philosophy (Gowans, 2004). A promotion focus is associated with seeking gains, whereas a prevention focus is associated with avoiding losses and seeking safety (Higgins, 1997). For example, promotion-focused people perform better with a gain-based goal (e.g., gaining money), whereas prevention-focused people perform better with a loss-averse goal (e.g., not losing money; Shah, Higgins, & Friedman, 1998). Interestingly, even though a promotion focus might appear similar to a motivation towards action, we maintain that promotion and prevention are distinct from action and inaction (Albarracín et al., 2008). For example, one might seek to prevent harm by taking preventive action, as shown by research in which prevention-focused students initiated preventive actions before promotion-focused participants (Freitas & Higgins, 2002). In contrast, promotion-focused students initiated behaviors to achieve positive outcomes before prevention-focused students (Freitas & Higgins, 2002). Similar logic applies to approach versus avoidance and grasping versus escaping. In short, action goals can be achieved via promotion, approach, or grasping but also via prevention, avoidance, or escaping.

Locomotion and assessment can also be means to satisfying goals of general action or inaction. A *locomotion* regulatory mode is a behavioral orientation towards quickness and ease of execution (Avnet & Higgins, 2003). An alternative regulatory mode is *assessment*, which is an orientation towards critical evaluation to determine the best possible option. In a study

examining dietary decisions, locomotion-oriented and assessment-oriented participants read essays about dietary change that espoused benefits for either one (unifinal) or two (multifocal) outcomes and then evaluated their intentions to engage in the behavior (Orehek, Mauro, Kruglanski, & van der Bles, 2012). Locomotion-oriented participants had stronger intentions to make the dietary change in the unifinal condition, whereas assessment-oriented participants had stronger intentions to make the dietary change in the multifocal condition. In a second experiment manipulating regulatory mode, participants displayed similar results when evaluating both a dietary change and an exercise regimen. This research demonstrates that both locomotion- and assessment-oriented people can be active when they have the “right” goal.

Principle 5. General action and inaction goals trigger a variety of specific behaviors as well as other broad goals.

Impulsive and Deliberate Means to Satisfy General Action and Inaction Goals

A unique aspect of general action and inaction goals is their ability to influence both impulsive and deliberate behavior. This aspect departs from other models in which goal-directed behavior is, by definition, not impulsive, and thus allows for goals to recruit both impulsive and deliberative means of satisfaction. The functional model of self-control (Dickman, 1990) states that self-control requires delaying behavior until sufficient pre-action information is available. Likewise, we propose that general action goals may serve to carefully process information, as in the case of studying scientific material following an action prime (Albarracín et al., 2008). Moreover, research by Gendolla and Silvestrini (2010) demonstrated that action (vs. inaction) primes lead to faster reaction times on a memory task. However, we propose that setting an action goal may lead to impulsive courses of action as well.

Evidence that priming action goals can increase impulsivity comes from experiments in our lab (Hepler, Albarracin, McCulloch, & Noguchi, 2012). This work involved delay-discounting tasks, in which participants were presented with a series of choices between two hypothetical rewards. By varying the size and time of the reward, the task assesses an individual's preference for immediate versus delayed gratification. For example, participants may be asked *Would you prefer \$11 now or \$30 in 7 days from now?*, and impulsive respondents are expected to choose the \$11 immediate reward. Participants' responses thus allow researchers to analyze the willingness to discount the reward as a function to the delay to receive it. This index is an area under the curve termed *k*-value and is plotted in Figure 4A. As shown, impulsivity was greater in response to a general action prime, which was confirmed in a second experiment using a Go/No-Go task (see Figure 4B).

Principle 6. General action goals trigger both impulsive and deliberate behavior.

GOAL STAGES

The process of fulfilling a meaningful goal goes through multiple stages, including goal setting, goal implementation, goal monitoring, and goal completion or abandonment. These processes are represented in Figure 5, and must be analyzed for a complete framework for action and inaction goals. Thus, in the coming sections, we discuss each process and then detail how that process unfolds in the case of action and inaction goals.

Goal Setting and Action Dominance

Before we start to exert effort towards a goal, a goal needs to be in place. In the following sections, we consider various aspects of goal setting, including deliberation, the tendency to set action (vs. inaction) goals, the difficulties associated with this tendency, and how resources

affect the setting of action and inaction goals. The principles associated with these sections all point to the presence of action dominance in goal setting.

Deliberation in Goal Setting

Goals that one sets frequently should become chronically accessible and thus easy to set again automatically, but goals can also be created deliberately, in reaction to external information. At the most deliberate level, value and expectancy are the two key determinants of goal setting (Ajzen, 1985; Kruglanski, 1996; Locke & Latham, 1990). In other words, people commonly set goals that they perceive to be rewarding if attained and also attainable. The more one believes that exercise will lead to weight loss, the more likely one is to exercise; the more one believes that one is physically capable of exercising, the more likely one is to attempt it. Accordingly, work performance increases with greater pay incentives (Pritchard & Curts, 1973) and decreases if task difficulty is too high (Locke & Latham, 2002).

In many ways, incidentally activated goals operate much like goals set with greater deliberation. First, more valued goals become activated more easily than less valued ones (Weingarten, Chen, McAdams, Yi, Hepler, & Albarracín, 2016), indicating that rewards drive goal setting even with minimal deliberation. Specifically, a goal that people do not value has no effect when people are presented with symbols or words related to the goal. Second, self-esteem decreases when people fail to attain an unconsciously activated goal (Bongers, Dijksterhuis, & Spears, 2009). Third, incidentally activated goals tax executive control and impair performance on later, unrelated tasks (Marien et al., 2012). Incidentally set goals thus share much in common with deliberately set goals, and these commonalities should apply to action and inaction goals as well.

There are, however, some differences between goals activated with more and less awareness. For example, expectancy appears to have an effect only when induced explicitly. In a study conducted by Förster, Liberman, and Higgins (2005), the researchers explicitly manipulated goal expectancy to be either high or low. Goal-related accessibility was stronger for a high-expectancy goal, compared to a low-expectancy goal, indicating that goal expectancy increases the motivation for goal pursuit. Yet, in a meta-analysis assessing the effect of action incidental primes on behavior, manipulation of these expectations had no impact on behavior (Weingarten, Chen, McAdams, Yi, Hepler, & Albarracin, 2016). It is thus likely that automatic, subconscious effects on goal pursuit depend on value but not expectancies. Alternatively, of course, the goal accessibility effects verified by Förster et al. may not translate into behavior, which was the variable synthesized in the goal-priming meta-analysis.

Turning to action and inaction goals, psychophysiological work has been conducted to establish effects of priming general action goals. For example, Hepler et al. (2012) found that, relative to subliminal inaction word primes, subliminal action and control primes had a smaller P3 amplitude during ERPs recorded during a go/no-go task, indicating lesser inhibitory control in action and control primes. This finding suggests that one effect of general action goals operates through disinhibition. However, motor preparation seems to be part of the equation as well. In particular, Takarada and Nozaki (2018) measured handgrip force and reaction time, as well as motor evoked potentials in response to general action and control primes. Importantly, findings for both supraliminal and subliminal primes revealed decreased reaction time, as well as increased total force, magnitude of motor evoked potentials, and pupil dilation. These effects imply greater preparation for action (i.e., the motor evoked potentials) and actual physical force even in response to subliminal action primes. Clearly, however, general action goals can also be

set deliberately by simply persuading people to be as active as they can or to use any opportunity to relax.

Of great relevance to this chapter, action goals should be easier to activate with less deliberation than should inaction goals. That is, given that goal value appears to influence behavior regardless of deliberation, expectancy should have overall less weight. Therefore, all else being equal, action goals, which are perceived as more positive, should be more easily activated without deliberation. In fact, research on impulsivity suggests that this is the case. For example, fairly automatic commission errors (acting when one is not supposed to) are more likely during conditions that reduce cognitive capacity to control behavior, suggesting that action goals are more easily activated in those contexts. In an experiment testing a novel continuous performance task (Rosenberg, Noonan, DeGutis, & Esterman, 2013), participants were instructed to respond to each of many male faces but not to a rare target female face. Background distractors consisted of scene images; non-distractors consisted of phase-scrambled scene images. This task is difficult and, in the study, caused participants to lower their vigilance over the 12-minute duration of the task. As the authors predicted, participants made more commission errors and showed increasingly more variable response latencies over time. Furthermore, periods of higher response-time variability were associated with higher rates of commission errors but did not affect omission errors (not acting when one is supposed to). All in all, fairly automatic action-driven errors were much more prevalent than inaction-driven errors.

Tendency to Set Action (vs. Inaction) Goals

Both action and inaction goals can be set and influence behavior, but differences in action and inaction concepts suggest that action should be a more likely goal than inaction. By definition, people pursue goals that they find positive, and action is subjectively more positive

(see Principle 3). As a result, action should be more frequently pursued than inaction. In fact, we have already described ample evidence indicating that action is perceived as more intentional and effortful than inaction in part due to the observation that people normally pursue goals of action. Furthermore, priming with action words caused greater increases in activity relative to the decrease in activity caused by inaction priming (Albarracín et al., 2008; Noguchi et al., 2011).

Consider also research on the feature positive effect (Kardes, Cronley, & Kim, 2006). In animal perception and learning, pigeons form better associations between a reward and an observed pigeon that moves, than they do with pigeons that are standing still (Dittrich & Lea, 1993). In human self-perception, an active response to express agreement leads to more later agreement than a passive response (Allison & Messick, 1988; Cioffi & Garner, 1996; Fazio, Sherman, & Herr, 1982). That is, the *presence* of an action weighs more heavily than an equally informative *absence* of an action. Likewise, goals are also based on what weighs more heavily, which explains why people are more likely to set goals of action than goals of inaction.

Difficulties Introduced by Action Goals and Switching to Inaction Goals

The attention-grabbing aspect of action goals has important consequences. Our research on the effects of simultaneous action and inaction goals has suggested an “action dominance” pattern. For example, a person who enters a group of three other people with the goal of not socializing with *Ashley* can simply form the goal of not socializing with her. Alternatively, s/he may form the goal of socializing with the other two members, *Emily* and *Michael*. Even though the inaction goal is simpler in this case, people have difficulty forming an inaction goal and, as a result, form the goal of socializing with Emily and Michael even when it is more taxing. In an experiment conducted in our lab (Albarracín, Wang, & McCulloch, 2018), participants had to either press a key to three quarters of the targets or not press a key to three quarters of the targets.

As shown in Figure 6, the proportions of misses and false alarms were both higher when participants had the goal of responding with a higher number of actions than inactions. Therefore, participants appeared to have formed action goals both when the action goals comprised three quarters of the targets and when the action goal comprised only one quarter of the targets. This finding provides support for the hypothesis that people are more likely to set action than inaction goals, and this preference may occur even when it is inconvenient or more effortful.

When people have multiple action goals (e.g., having to socialize with 2 people) versus a single inaction goal (e.g., not socializing with 1 person), setting an inaction goal may be more beneficial than setting action goals. However, the tendency to adopt action as a goal makes it difficult for people to spontaneously set inaction goals. Perhaps inducing an *inaction focus* would reduce the errors created by spontaneously setting action (vs. inaction) goals. In Albarracin et al. (2018), we achieved this objective by instructing people to focus on the inaction targets without emphasizing what to do in response to the action targets. As predicted, introducing this manipulation reduced the number of errors committed when more action targets were presented, suggesting that training can induce a beneficial inaction focus when situationally appropriate.

<p>Principle 7. Action is more likely to be set as a goal than inaction.</p>
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Resources and Selection of Action and Inaction Goals

Perhaps the most central difference between the adoption of goals of action and inaction concerns available physical and motivational resources. Generally, natural individual differences in the presence or uptake of dopamine, epinephrine, and norepinephrine can produce greater

levels of activity, including manic forms of dysregulation (DSM-5, 2000).¹ In such states, people may gamble, over shop, switch from one activity to another, speed through tasks, write a novel in a week, or develop solutions to difficult social or scientific problems. Also, individual differences in energy level are an important component of mood. For example, a popular trait measure of behavioral activation and inhibition focuses on a high energy/happy pole and a low energy/sad pole (Carver & White, 1994). All of these factors should influence the setting of action versus inaction goals.

Perceived resources are also key to adopting action and inaction goals. People who hold the belief that their resources and energy are limited tend to form general inaction goals (i.e., to rest) when they perceive themselves as lacking self-control resources (Job, Bernecker, Miketta, & Friese, 2015). In Job et al.'s study, some participants were led to believe that their resources were limited and then completed a strenuous memory task. Afterwards, when asked about various resting behaviors, participants with the limited-resource belief evaluated these resting behaviors more favorably than did those with the unlimited-resource belief. In a second study with the same comparison, limited-resource participants undergoing the same extraneous task engaged in greater resting behavior when given the opportunity than did their unlimited-resource counterparts, suggesting that selecting action or inaction goals is dependent upon perceived resource availability.² When people are tired and they believe resources are limited, they are more likely to set inaction than action goals.

¹ Of course, action can also mobilize these neurotransmitters.

² Likely due to actual and perceived resource limitations, one specific process people employ to enhance goal pursuit is goal shielding, which is the tendency to inhibit secondary goals when pursuing a primary goal (Shah, Friedman, & Kruglanski, 2002). Through goal shielding, temptations to pursue alternative goals enhance primary goal motivation and decrease secondary motivation (Fishbach, Friedman, & Kruglanski, 2003), and effects are larger if these alternative goals conflict with primary goal pursuit (Fishbach & Zhang, 2008).

Setting Action and Inaction Goals within a System of Goals

In our prior example of a goal system surrounding the goal to lead a happy life, the connection between a happy life and finding a partner is positive. In that case, an increase in activation of the goal to lead a happy life stimulates activation of the goal to find a partner. However, the connections between goals are often negative (i.e., inhibiting) in nature. Two goals may have antagonistic effects on each other because they are difficult to implement concurrently (Grouzet et al., 2005). For example, reducing sugar intake and eating chocolate cake are mutually exclusive. As another example, running and sleeping cannot co-occur. In a meta-analysis examining multiple behavior change, we found that interventions had substantial effects when their recommendations focused exclusively on either actions (exercising, eating fruits and vegetables) or inactions (resting, not smoking) (Albarracín, Wilson, Chan, Durantini, & Sanchez, 2017). However, when interventions had an equal mix of action and inaction recommendations, behavior change was modest, presumably because the action and inaction goals had inhibitory interconnections.

Within a goal system, goals can also have positive associations with behavioral means (Kruglanski & Higgins, 2007; Shah & Kruglanski, 2003). For example, the goal of getting an A in a class is often associated with the behavioral means of paying attention in class. The association between goals and means determines which means we use when we set a goal (Shah & Kruglanski, 2000). Research has shown that strengthening a specific goal-means association leads to higher success expectations (expectancy) and thus success at goal pursuit (Zhang, Fishbach, & Kruglanski, 2007; Zhang & Tu, 2011). Therefore, both action and inaction goals should have connections to behavioral means. If the association between those means and the

action or inaction goal is strong, the mean is likely to become active and the expectation of success will be higher.

Two goals can also have antagonistic effects because they compete for the use of limited resources. Pursuing multiple goals concurrently can simply be unfeasible if goals are resource intensive. People typically lack the physical energy required to be a runner, a dancer, and a parent at the same time, which produces goal competition. Goal competition (Carver & Scheier, 1982; Kruglanski et al., 2012; Kuhl, 1984; Schorr, Gerjets, & Scheiter, 2003) is a process in which two goals battle for executive resources that lead one goal to win and play a dominant role. When people focus on one goal, the chosen goal exerts a “pull” that in turn reduces resources to pursue alternate goals (Kruglanski et al., 2002). This competition is resolved through a host of strategies, either conscious or unconscious, including prioritization (e.g., Shah, 2005), goal shielding (e.g., Shah et al., 2002), satisficing (e.g., Simon, 1967), and balancing and highlighting (Fishbach, Zhang, & Koo, 2009). In prioritization, means that are uniquely capable of achieving the focal goal are chosen over means that might diffuse the focal goal by activating competing goals (Kruglanski et al., 2002). In goal shielding, activating a focal goal leads to inhibiting other goals, which is demonstrated by increases in the accessibility of concepts associated with the focal goal and corresponding decreases in the accessibility of alternate goals (Shah et al., 2002). In satisficing, people deem a goal complete once they reach a “good enough” state, which leads to reducing effort towards the goal. Whichever the resolution strategy, past research has made it clear that setting multiple goals can be cognitively taxing.

Two different conflict-resolution strategies are highlighting and balancing (Fishbach & Zhang, 2008). Highlighting accentuates the differences between active goals and potential temptations, which results in abstinence from temptation engagement (Aronson, 1997).

Meanwhile, in a balancing dynamic, temptations are integrated into current goals rather than ignored (Higgins, 1989). Interestingly, when the means to a goal are actions, action-oriented individuals may prefer balancing dynamics as they prefer to act whenever possible.

Correspondingly, inaction-oriented individuals in the same situation may prefer highlighting. In contrast, if the means are inactions, action-oriented individuals may prefer highlighting whereas inaction-oriented individuals

may prefer balancing. These issues should be investigated in the future.

The Tendency for Action Goals to Shield Actors from New Information

As described above, setting a goal assumes a commitment to an endstate selected among various others, which is protected from the pull exercised by other possible goals. Therefore, strong goals reduce attention to new information and allow actors to begin implementing steps towards the goal without interference. In this regard, past research suggests that action goals protect individuals from change to a greater extent than inaction goals. For example, in one study in our lab, participants who expected to receive a message about a social issue, such as gun control, and then experienced general action goals were quicker to report their attitudes toward gun control and less likely to change these attitudes when they received a counter-attitudinal message than were participants who experienced inaction goals (Noguchi et al., 2011).

The effects of action goals on patterns that reinforce prior attitudes go beyond the effects of a persuasive message that is presented to an audience. We (Hart & Albarracin, 2012) have also found effects of action goals in the area of selective exposure to pro-attitudinal information, which prevent viewing conflicting materials to begin. In a series of experiments, participants

were asked to take the place of a store owner faced with the decision of whether to extend the contract of their current manager (Miller) who, according to a vignette, had mixed success with the company (Fischer, Jonas, Frey, & Schulz-Hardt, 2005; Frey, 1986). In Experiment 1, for example, participants read information describing positive and negative aspects of Miller, and were then asked to make a tentative decision to extend or end his contract. Participants were then primed with action or inaction by competing words related to each concept. Control words were used in a third condition. As shown in Figure 7, the degree of selective exposure to proattitudinal information was larger in action conditions, followed by control and inaction conditions. That is, participants who had been primed with action chose information that agreed with their prior attitude, whereas people primed with inaction were more open to receiving information from the other side. All in all, much like goal shielding, setting an action goal can engage a defensive goal that is strongly set, to the detriment of other information.

Principle 8. During goal setting, action reduces attention to new information to a greater extent than inaction.

Goal implementation and Action Dominance

Setting a goal is just the first step. Most of us have the experience of not following up on a goal, even though, if we want to reach that goal, good goal implementation is just as important as good goal setting. One complexity in implementing goals is that there are often several different behavioral means to achieve them. For example, weight loss can be achieved by reducing calorie consumption (e.g., dieting) or by increasing calorie expenditure (e.g., exercising). Furthermore, some combinations of means and goals can lead to difficulties in goal pursuit. In one of our meta-analyses of health interventions (Albarracín et al., 2017), we found that the efficacy of behavior-change recommendations varied by behavioral domain and

predominance of action or inaction recommendations. For diet and exercise outcomes, interventions including predominantly inaction recommendations (not smoking and reducing fat intake) had greater efficacy than those including predominantly action (exercise and increasing intake of fruits and vegetables) recommendations. However, in the smoking domain, interventions with predominantly action recommendations were more efficacious than interventions with predominantly inaction recommendations. This further supports the notion that goals and means do not necessarily have to be both actions and both inactions (see Principle 4). However, the exact reason for these findings is currently unclear and deserves further consideration in the future.

Implementation Intentions

One known method to promote goal attainment is forming an implementation intention that ensures capitalizing on opportunities that promote the goal (Gollwitzer, 1999; Achtziger, Gollwitzer, & Sheeran, 2008). An implementation intention is an if-then statement that guides goal-directed behaviors by linking a more general intention to a specific context (Gollwitzer, 1999). For example, in research by Gollwitzer and Brandstätter (1997), at the beginning of the semester, a group of female students described both a difficult and an easy goal. Half of them were then encouraged to form implementation intentions by committing to a time, place, and action to pursue their goals, whereas the other half simply described their goals. Participants who did not form implementation intentions completed difficult goals in only 22% of the cases, whereas participants who did form implementation intentions completed difficult goals in 62% of the instances. Moreover, although the effects were weaker, implementation intentions facilitated completion even of easy goals. Given that action endstates involve effort,

implementation intentions may be ideal in this context, although unfortunately research is yet to explore this possibility.

Appropriate Implementation

Proper implementation implies that the means one selects must be realistic and appropriate to achieve a goal. However, people select behavioral means based on accessibility and salience. That is, people are more likely to select behavioral means that come to mind easily than behavioral means that take more effort to recall (Kruglanski et al., 2002). Furthermore, means that are easily available are more likely choices because they can resolve the goal more quickly. For example, having high calorie food available predicts its consumption because of convenience (Sharma, Teret, & Brownell, 2010). Likewise, living proximity is a well-known predictor of socialization, as shown by people dating partners who live close by (Yonker, Zan, Scirica, Jethwani, & Kinane, 2015).

However, the process of goal implementation is not easy and elicits stress when there is a perceived discrepancy between the ambition and the achievement (goal striving stress; Sellers & Neighbors, 2008). Whereas some people continue to strive for their set goals during stress, others relax or even cease to pursue the goal halfway. Moreover, goals of action appear to create greater implementation difficulty than goals of inaction. In the experiments from our lab described earlier (Albarracín et al., 2018), participants saw verbal and social stimuli that required a response (action) or that required no response (inaction). The design included a manipulation of the proportion of target stimuli associated with action and with inaction requests (action-target proportion). If action targets are cognitively more taxing than inaction targets, performance with a high proportion of action targets should be worse than performance with a high proportion of inaction targets. Specifically, a higher action-target proportion should trigger more omission

errors or misses, as well as more commission errors. Following expectations, we found greater proportions of both misses and false alarms when the proportion of action targets was high than when the proportion of inaction targets was high.

Principle 9. During goal implementation, action induces more errors than inaction.

Appropriate implementation requires monitoring that the goal continues to be appropriate in the situation. Runners, for example, set action as the default response and run while looking out for signals that an inaction goal is more appropriate (e.g., a crossroad, untied shoelaces). Alternatively, people may set inaction as the default response while looking out for signals that action is more appropriate. A driver who is at a crossroad facing a red light may keep a holding pattern until a green traffic light calls for action.

Changes to Initial Action and Inaction Goals During Implementation

Although a pattern of predominant action and a pattern of predominant inaction appear symmetrical, they are not always so. One asymmetry concerns the effect of the ongoing experience in resetting initial goals. Past research has shown that any established norm is vulnerable to disconfirming experience (Thøgersen, 2002), and one of our studies (Dai & Albarracín, 2019) extended this knowledge by showing that experience modifies action norms more than it does inaction norms. In the study, participants were randomly assigned to adopt either a goal of predominant action (i.e., keep pressing a key unless you see specific stimuli) or a goal of predominant inaction (i.e. do not press the key unless specific stimuli appear). We then manipulated the experience by presenting several or only one stimulus to which the goal applied. The presentation of different action stimuli suggests that the action goal is widely applicable and thus generalizes the goal, whereas a single stimulus circumscribes the goal to the specific case. We then presented the participants with several stimuli that they had never encountered before

(i.e., “surprise trials”) and tracked the error rate for these trials. These surprise trials can reveal how much the initial goal persisted or changed based on generalization to novel stimuli during the experience phase. We found that participants initially adopting the action goal had changed in response to the experience more than those initially adopting the inaction goal. This research suggests that action goals, once set, are more difficult to sustain, probably because they lead to fatigue and thus allow for environmental interference to a greater extent.

Principle 10. During goal implementation, action is more difficult to sustain and thus more vulnerable to change.

Managing Multiple Goals During Implementation

Managing multiple goals is also essential for implementation. Two hierarchical structures appear in Figure 8 and suggest very different courses of implementation. A parallel system of subgoals might include losing weight as the higher-level goal and exercise and diet as the subgoals. It is perfectly feasible to diet half of the time and exercise the other half, or to do only one of the two. In contrast, a sequential system of subgoals is illustrated by a person who must first lose weight to be able to exercise. In this case, a person who wants to lose weight may choose only to diet, or to first diet and then exercise. In this goal system, no person wanting to lose weight could choose to first exercise and then diet.

A case of parallel goal structures is when one goal can be achieved by multiple means, which themselves activate each other because of their relation to the central goal. For example, a general action goal may be connected to exercise, eating fruits and vegetables, not eating sugar, and not smoking. Given each mean’s relation to the general action goal, activating exercise

should activate eating fruits and vegetables, not eating sugar, and not smoking. Likewise, a person trying to enact healthy actions may coactivate exercise and eating fruits and vegetables, and this coactivation may make some health interventions more effective. Consistent with this possibility, in a meta-analysis, we (Albarracín et al., 2017) found that when interventions set multiple behavioral goals that fall into the same dimension (i.e., action vs. inaction), the intervention efficacy is higher. Interventions recommending exercise and eating fruits and vegetables or that recommend decreasing fat intake and quitting smoking are more efficacious than interventions recommending exercise and quitting smoking. This finding illustrated the great challenge of simultaneously adopting multiple behavioral goals, especially when they are heterogeneous in nature, and raised the important question of how people deal with action and inaction goals enacted at the same time or in close temporal proximity.

Another important issue with respect to goal implementation is the case of a system with *directional* relations. For example, in the meta-analysis we just reviewed (Figure 9; Albarracín, Wilson, et al., 2018), we found that multiple-goal interventions performed better when they recommended decreasing calorie intake and smoking (two inactions) or increasing vegetable and fruit intake and exercise (two actions), than when they recommended quitting smoking and increasing vegetable intake. Although these cases illustrate facilitating and antagonistic relations, when it comes to implementation, behaviors that causally lead to another require additional considerations. For example, if attending counseling facilitates quitting smoking, the recommendation to avoid cigarettes and attend counseling should be more efficacious than the recommendation to only avoid cigarettes. However, this should not be the case if one is trying to get people to attend counseling. In that case, the recommendation to attend counseling and quit smoking should be as efficacious as the recommendation to attend counselling.

Interestingly, in a meta-analysis of substance use interventions, we (Dai et al., 2019) found that the relation of the behaviors during the implementation phase is key to the success of behavioral recommendations. Research on substance use has shown that people who use illicit drugs are highly likely to use alcohol as well (Agosti, Nunes, & Levin, 2002; Stinson et al., 2005). That is, among people who use illicit drugs, alcohol use is known to trigger illicit drug use. As a result, we hypothesized and found that recommending alcohol-use reduction should help reduce illicit-drug use as well. In contrast, we found that people who use alcohol are less likely to also use other illicit substances. In this case, recommending that people reduce illicit drug use had no impact on alcohol use.

Principle 11. When general goals are implemented, they exert potentiating effects in accordance with the interrelation among them: (a) the joint implementation of goals that are synergistic increases implementation of all of the goals; (b) the joint implementation of goals that are mutually exclusive decreases successful implementation; and (c) the facilitating and inhibiting effects can be asymmetric, in which case activation of only one of two related goals facilitates activation of the other goal.

Goal Resolution and Action Dominance in Monitoring

The course of a goal begins with goal setting and ends with resolution. People monitor goal progress and either complete the goal or abandon it. In the coming sections, we discuss how action and inaction goals are likely to be resolved.

Monitoring and Completion

While we strive to reach a goal, we are monitoring how well we are doing in relation to the goal. Not surprisingly, this monitoring process is crucial to adjusting implementation. A

student writing a 2,000-word paper might track how many words she has written at various points during the writing process. A student trying to receive an A in a course might calculate partial grades and estimate how many points on the final exam will lead to the desired A. A recent meta-analysis by Harkin and colleagues found that monitoring goal progress promotes goal attainment (Harkin et al., 2016). However, monitoring goal progress is especially efficacious when the outcomes are overtly expressed or made public, such as when individuals participate in online groups that promote exercise.

Despite the documented benefits of goal monitoring, one study found that people do not monitor all types of goals equally (Chang, Webb, Benn, & Stride, 2017). In these studies, participants were asked to report five goals that they were currently pursuing. The researchers then manually coded each of these goals on whether the goal was: (a) prevention focused (i.e., based on security, responsibility, and/or the avoidance of negative outcomes) vs. promotion focused (i.e., based on achieving positive outcomes) and (b) thought of in quantifiable terms (e.g., as weight loss, money saved, hours of exercise) vs. non-quantifiable terms (e.g. resolving psychological issues). Participants then rated the frequency with which they assessed their progress on these goals. The studies found that participants were more likely to monitor goals that were promotion-focused (i.e., described as promoting a gain) than prevention-focused (i.e., described as preventing a loss). Also, participants were more likely to monitor goals that they thought of in quantifiable terms, presumably because the progress towards these goals was more concrete to monitor. Based on these findings, one way to ensure successful monitoring could be

to construe the goals in gain frames or to quantify a goal by dividing it up into several smaller pieces.³ Some of these issues are discussed in turn.

Tendency to monitor action. An important question concerns people's monitoring of completion when a goal entails action as opposed to inaction. Much of the relevant work is based on the notion that people attribute more responsibility to their actions than their inactions, which thus amplifies either the positive or negative affective feelings associated with the outcomes of an action as opposed to an inaction. The *action effect* (Kahneman & Tversky, 1982), for example, describes a phenomenon in which people feel greater regret for negative outcomes that result from an action than from an inaction. This effect was first demonstrated by comparing the decision made by two investors, Paul and George. In this scenario, George decides to switch his stock to a new company, whereas Paul decides against switching. Ultimately, both decisions lead to the loss of an equivalent amount of money. Yet, readers of these scenarios conclude that the person who acted (i.e., George) would feel more regret than the person who failed to act (i.e., Paul). Kahneman and Tversky (1982; Kahneman & Miller, 1986) thus reported that, when

³ Keeping track of completion also depends on the standards of completion. Monitoring of goal progress is not always objective and accurate, but rather is highly susceptible to motivational biases. For example, according to Huang, Zhang, and Broniarczyk (2012), when people have just started pursuing a goal and have accumulated only limited progress, they tend to mentally exaggerate their progress, which increases the chance of completing the goal and increasing corresponding effort. In contrast, when people have already made substantial progress and are closer to completing the goal, they mentally downplay their progress, which increases the perceived discrepancy and corresponding effort.

people experience a negative event, they value and regret action more than inaction. Based on these findings, it seems likely that people will monitor action completion more than inaction completion.

Research on morality has similarly shown that, when the possibility of a negative outcome exists, people prefer harm by omission (e.g., withholding the truth) over harm by commission (e.g., lying; *omission bias*; Baron & Ritov, 2004; Spranca, Minsk, & Baron, 1991). This pattern may occur because of the *action principle of harm* (Cushman, 2013; Cushman, Young, & Hauser, 2006). That is, people judge harm arising from an action as more immoral than they do harm arising from inaction. This principle is also consistent with the notion that monitoring action is easier than monitoring inaction, which is summarized in Principle 12.

<p>Principle 12. Action is easier to monitor than inaction.</p>

Switching to monitoring inaction. Of course, people can override default tendencies to monitor action. One constraint is contextual norms. In classic notions of economy, the norm for investment decisions is pro-omission (Kahneman & Miller, 1986), with people falling prey to *loss aversion* (the preference to avoid losses over acquiring equivalent gains; Tversky & Kahneman, 1991) and *risk aversion* (the preference for a predictable but lower payoff to an unknown payoff; Tversky & Kahneman, 1992). Loss and risk aversion of course lead to preferences for inaction over action.

Yet, the norms operating in financial contexts are highly malleable. In a series of experiments conducted in our lab (Feldman & Albarracín, 2017), participants were assigned to one of three norm conditions of action, inaction, and control. They adjusted the classic Kahneman and Tversky (1982) scenario of the two stock traders – George switches investments (action), and Paul retains his original investments (inaction). The classic scenario describes the

traders as independent, but we manipulated the company norm. In Experiment 1, the action-norm condition involved statements that the company emphasized action and proactive decision making, evaluating its employees based on their ability to act and actively pursue good investments. The inaction-norm condition stated that the company emphasized cautious and responsible decision making, evaluating its employees based on their ability to refrain from bad investments. There was also a control condition that did not indicate either preference. Following the scenario, participants reported who was likely to experience higher regret. Participants indicated that George (who acted) would experience the highest regret in the inaction-norm condition, followed by the control condition, followed by the action-norm condition (88%, 72%, and 56% respectively), indicating that social norms influence regret. Additionally, participants rated higher regret for action when the company norm favored inaction, and higher regret for inaction when the company norm favored action. Other findings further support the malleability of action monitoring. For instance, people experience more regret for their inaction in instances of past behavior (McElroy & Dowd, 2007) or situational expectations (Zeelenberg, Van Dijk, Van Den Bos, & Pieters, 2002). For example, when people learn that their inaction led to a negative outcome in the past, they show greater regret after engaging in inaction in the present (Zeelenberg et al., 2002). All in all, there are well documented shifts in action and inaction monitoring, although, by default, action is monitored more than inaction.

Abandonment

Proximity between our ambition and actual achievement often leads to satisfaction and pride, whereas distance often leads to frustration and stress (goal striving stress; Sellers & Neighbors, 2008). Proximity often leads to tagging the goal as completed and moving on to new goals or revised forms of the completed goal. For example, people often embark on higher levels

of a similar end state, such as losing the next five pounds after already losing five pounds.

Distance, however, can lead to abandonment of the goal, or abandonment of the behavioral means, in favor of more promising new ones.

One well studied consequence of discrepancies is the *action crisis* (Klinger, 1975), which describes a motivational conflict in which the individual is torn between holding on to and letting go of a personal goal. During an action crisis, people pay more attention to the goal-related costs and benefits instead of the implementation of the goal, which often impedes goal completion (Brandstätter & Schüler, 2013). Furthermore, recent research has identified a reciprocal relation between the experience of action crisis and appraisals of goal desirability and attainability (Ghassemi, Bernecker, Herrmann, & Brandstätter, 2017). Low goal attainability predicts the experience of action crisis, but the experience of action crisis also predicts goal devaluation and reductions in perceived attainability. In other words, people often fall into a vicious circle in which they are first stressed by a perceived unattainable goal, then the negative experience of the action crisis leads them to perceive the goal as even more unattainable. In the end, the only way out is to devalue and abandon the goal.

Perceived physical resources are monitored closely as well. When people perceive themselves as lacking regulatory resources, they tend to endorse statements that rationalize inaction or less effortful goal pursuit (vanDellen, Shea, Davisson, Koval, & Fitzsimons, 2014). In vanDellen et al.'s (2014) research, resource-depleted participants rationalized their inaction by convincing themselves that (a) they had made satisfactory progress, (b) still had sufficient time to fulfill their goals, or (c) should lower their standards. This effect of ego depletion on goal appraisals applied to both self-set goals and goals induced by others. As suggested

by this evidence, general inaction goals might be construed as a way to rest from the action goals and replenish scarce physical resources.⁴

CLOSING REMARKS

The factors leading an individual to act or not are fundamental to psychological science. For example, variation in chronic activity levels is present across individuals (e.g., Ireland et al., 2015) and nations (e.g. Levine & Norenzayan, 1999; Noguchi et al., 2011). These differences are likely related to the concepts of action and inaction, as well as attitudes toward action and inaction, with the latter stemming from biological factors (e.g., the action of neurotransmitters) and cultural values (e.g., preferences for horizontal decision making in a group). This chapter reviewed our theoretical position about how the concepts, value, and goals of action and inaction are created within a social group. These variables have important implications for motivational processes and for behavior. By locating our work within the broader scholarship on decision making and motivation, we hope that future scholars will pursue some of the implications of our principles and elucidate answers to the many outstanding questions about the symmetries and asymmetries between action and inaction.

⁴ As mentioned earlier, goal stages are often recursive. Goals can be reactivated irrespective of whether they were completed or not. Reactivating a goal further strengthens it in memory. Reactivating an abandoned goal allows people to reengage in a goal they once gave up on. Interestingly, besides consciously reactivating a goal, unfulfilled goals can also be reactivated unconsciously, and these reactivated unfulfilled goals can cause impairment on later tasks that require executive control (Zeigarnik, 1927; Masicampo & Baumeister, 2011).

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Table 1

Action and Inaction Principles

Domain		Principles
Action and inaction concepts		<p><i>Principle 1.</i> Action is subjectively more intentional than inaction.</p> <p><i>Principle 2.</i> Action is subjectively more effortful than inaction.</p>
Action and inaction attitudes		<p><i>Principle 3.</i> In the absence of information about negative consequences, action is subjectively more positive than inaction.</p>
Action and inaction goals	General and specific action goals	<p><i>Principle 4.</i> The behavioral means to achieve action and inaction goals can be either active or inactive.</p> <p><i>Principle 5.</i> General action and inaction goals trigger a variety of specific goals.</p> <p><i>Principle 6.</i> General action goals trigger both impulsive and deliberate behavior.</p>
	Action dominance in goal setting	<p><i>Principle 7.</i> Action is more likely to be set as a goal than inaction.</p> <p><i>Principle 8.</i> During goal setting, action reduces attention to new information to a greater extent than inaction.</p>
	Action dominance in goal implementation	<p><i>Principle 9.</i> During goal implementation, action induces more errors than inaction.</p> <p><i>Principle 10.</i> During goal implementation, action is more difficult to sustain and thus more vulnerable to change.</p>

Domain	Principles
Goal completion and action dominance in monitoring	<p><i>Principle 11.</i> When general goals are implemented, they exert potentiating effects in accordance with the interrelation among them: (a) the joint implementation of goals that are synergistic increases implementation of all of the goals; (b) the joint implementation of goals that are mutually exclusive decreases successful implementation; and (c) the facilitating and inhibiting effects can be asymmetric, in which case activation of only one of two related goals affects activation of the other goal.</p> <p><i>Principle 12.</i> Action is easier to monitor than inaction.</p>

Table 2

Alphas and Means for Key Constructs Across 19 Nations

Nation	<i>M</i> Dialecticism	<i>M</i> Attitude Toward Action Inaction	<i>M</i> Attitude toward Attitudes	Correlation (r) between Attitudes
Argentina	3.63	5.39	3.96	-.28
Bolivia	3.60	5.70	3.25	-.25
China	4.11	5.41	5.58	.61
Colombia	3.52	5.74	3.61	-.23
England	3.92	5.83	5.54	.14
Guatemala	3.31	5.89	3.96	-.19
Hong Kong	4.20	5.49	5.36	.56
Israel	3.59	5.76	3.81	-.05
Italy	3.48	5.64	3.44	-.28
Japan	4.19	5.48	5.48	.50
Mexico	3.56	5.42	3.72	-.10
Norway	3.84	5.72	4.95	.33
Philippines	3.80	5.85	3.98	-.10
Portugal	3.52	5.83	3.43	-.18
Singapore	3.93	5.44	4.30	.13
Spain	3.61	5.39	4.00	.03
Switzerland	3.73	5.59	4.57	.22
Turkey	3.43	5.71	3.19	-.31
USA	3.54	5.65	4.6	.16

Table 3

Meta-Analysis

Study	Experiment	N	Goal Manipulation	Outcome of Interest	Action vs. Control <i>d</i>	Inaction vs. Control <i>d</i>	Action vs. Inaction <i>d</i>
Albarracín et al., (2008)	1	98	Word Completion	Choice of active (doodling) vs. passive (resting) task			0.91
	2	38	Word Completion	Eating grapes (# of grapes eaten)			0.61
	3	136	Word Completion	Number of times participants freely pressed a keyboard button	0.31	-0.13	0.44
	4	37	Subliminal Priming	Memory (proportion of facts correctly recalled from a passage)			0.46
	5	36	Scrambled Sentence Task	Number of SAT problems correctly solved			0.32
	7	49	Word Completion	Number of reported thoughts; active task	-0.24	-0.96	0.59
	7	49	Word Completion	Number of reported thoughts; inactive task	0.96	0.94	0.14
Albarracín, Leeper & Wang (2009)	1	53	Exposure to exercise (control) ads	Eating raisins (kcal consumed)	0.54		
	2	51	Subliminal priming	Eating M&Ms, peanuts, and raisins (kcal consumed)	0.34		
Albarracín & Handley (2011)	1	54	Word Completion	Speed of response in reporting attitude	0.80	-0.89	1.69
Albarracín & Hart (2011)	2	70	Word Completion	Willingness to read as part of decision-making task; positive mood	0.48		
	2	69	Word Completion	Number of articles selected; negative mood	-0.30		
	3	40	Scrambled Sentence Task	Correct rejection of unseen photos; positive mood		-0.55	
	3	41	Scrambled Sentence Task	Correct rejection of unseen photos; negative mood		0.63	
Gendolla & Silvestrini (2010)	1	64	Subliminal priming	Reaction times for a memory task	0.41	-0.59	1.00

Hart & Albarracín (2012)	1	160	Word Completion	Selection of consistent vs. inconsistent selective exposure	0.37	-0.54	0.91
Hart & Gable (2013)	1	31	Word Completion	Number of correct answers on test; High motivational intensity	1.66		
	1	31	Word Completion	Number of correct answers on test; Low motivational intensity	0.87		
	1	31	Word Completion	Number of correct answers on test; No motivation manipulation	0.56		
	2	47	Word Completion	Number of correct answers on test; High motivational intensity		-1.43	
	2	47	Word Completion	Number of correct answers on test; Low motivational intensity		-0.56	
	1	105	Subliminal priming	Performance on Change Blindness task (# of differences noticed)	0.09	-0.04	0.13
Hepler et al., (unpublished)	2	201	Subliminal priming	Performance on Visual Search task (# of differences noticed)	-0.02	-0.08	0.06
	1	88	Scrambled Sentence Task	Number of SAT problems correctly solved			-0.06
Kim & Lee (2015)	3	97	Word Completion	Intention to vote in presidential election	0.27	-0.24	0.51
	4	76	Word Completion	Intention to volunteer time for political cause			0.53
Nyhuis (2012)	1	51	Subliminal Priming	Intention to vote in election			0.00
Nyhuis, Gosselt, & Rosema (2016)	1	62	Subliminal Priming	Attitudes and Intentions towards getting involved in election			0.51
Seske (2012)	1	66	Movement/Relaxing	Exercise Intentions			0.53
Takarada & Nozaki (2018)	1	18	Subliminal Priming	Motor Action responses	0.25		
	1	18	Supraliminal Priming	Motor Action responses	0.25		
Total Weighted Average <i>d</i>					0.345	-0.327	0.487

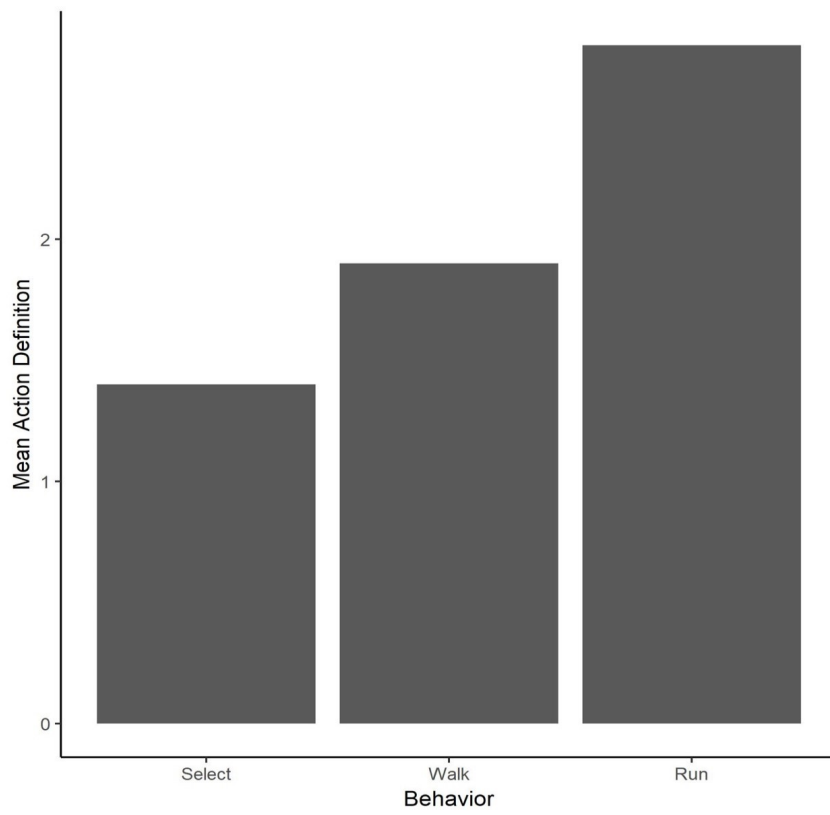


Figure 1. Mean Action Definition for Different Words.

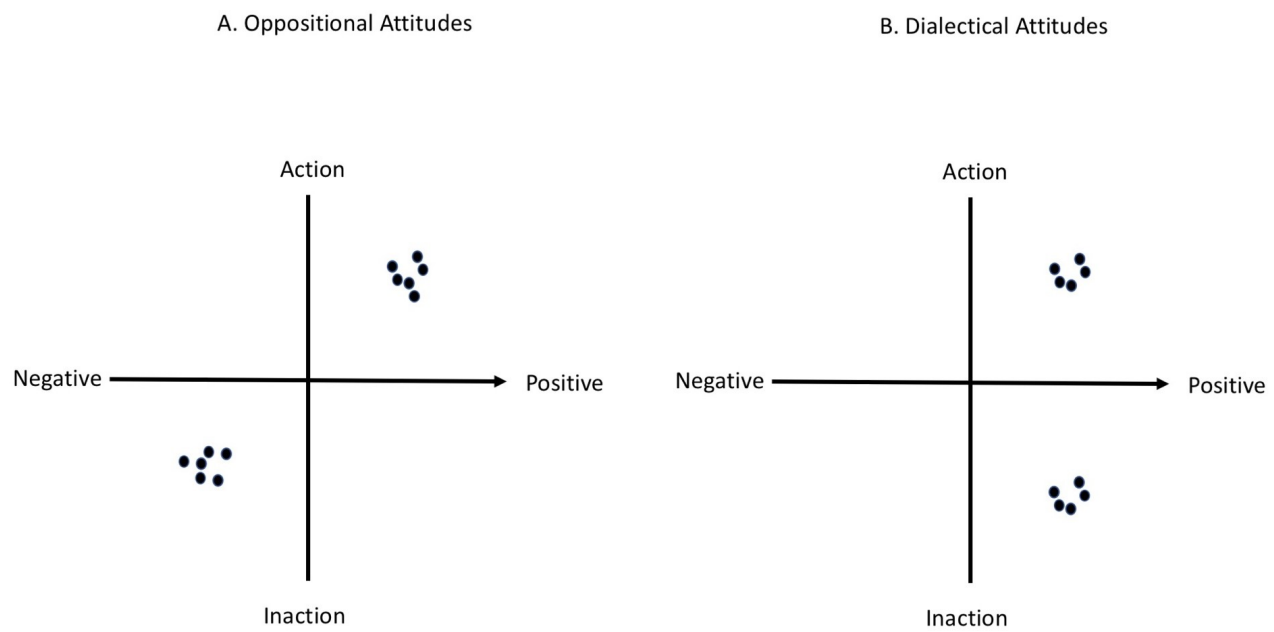


Figure 2. Structure of Attitudes toward Action and Inaction.

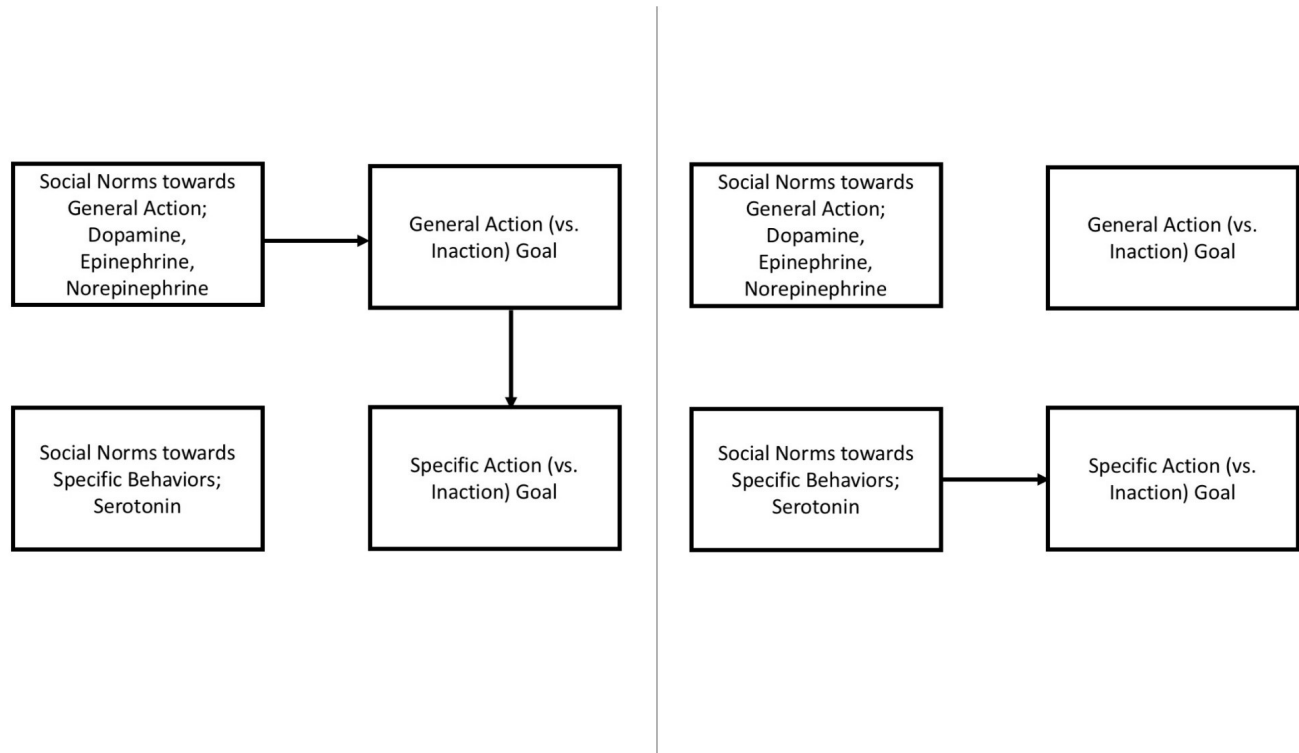


Figure 3. Normative and biological origins of action and inaction goals.

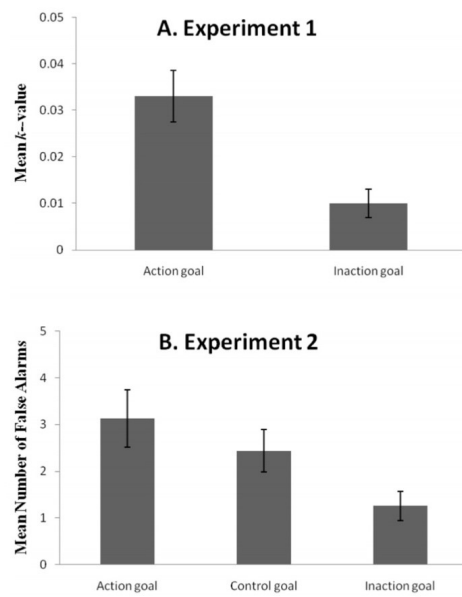


Figure 4. Influence of Action Goals on Impulsive Behavior.

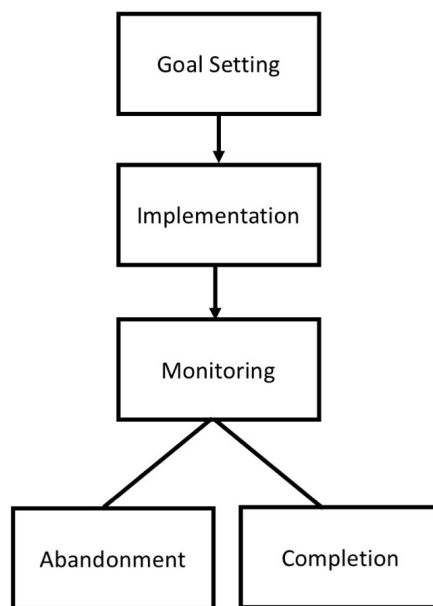


Figure 5. Our Model of Goal Stages.



Figure 6. Mean Proportion of Errors as a Function of Action-Target Proportion.

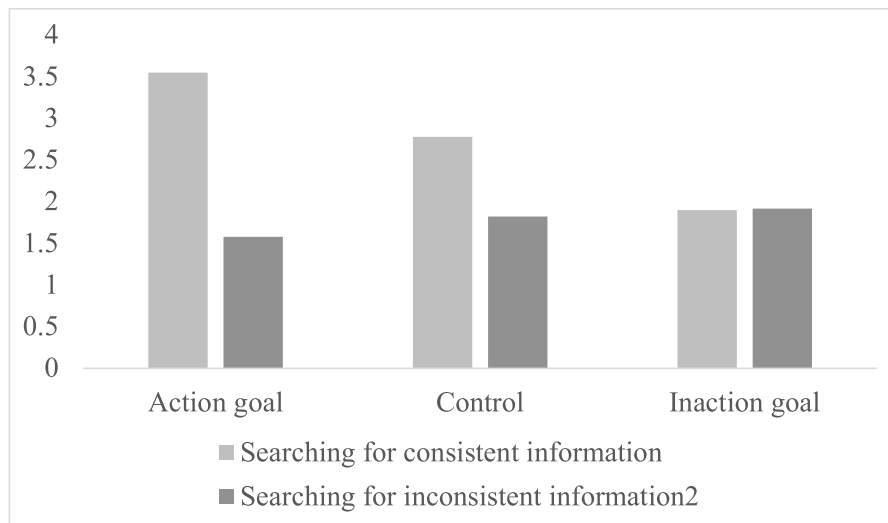


Figure 7. Mean Number of Selected Information Articles as a Function of Prime.

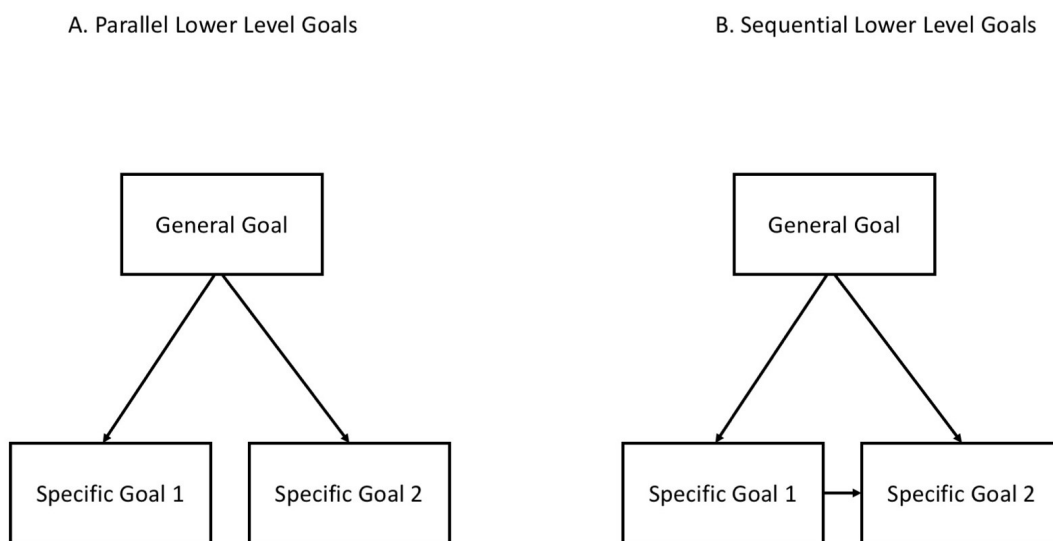


Figure 8. Goal Structures with Parallel and Sequential Specific Goals/Means.

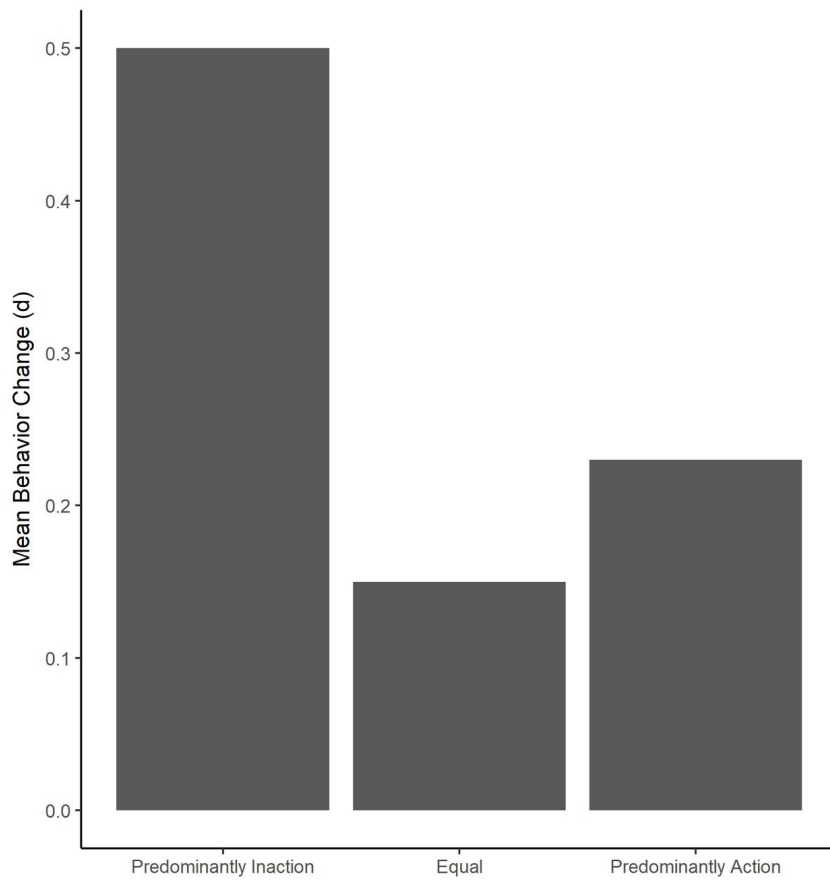


Figure 9. Mean Behavior Change as a Function of Recommendation Type.