FACILITATING SUCCESSFUL BEHAVIOR CHANGE: BEYOND GOAL SETTING TO GOAL FLOURISHING

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Most successful coaching engagements encourage clients to start, increase, decrease, modify, or stop behaviors that contribute to their effectiveness and performance on the job (Fogg, n.d.). Successfully sustaining new or altered behaviors over time until they become a habit is even more difficult (Nowack, 2009). Goal intentions (e.g., "I want to be a more participative and involvement-oriented leader") have been found in a recent meta-analysis to be a weak predictor of acquiring new habits and account for approximately 28% of the variance in successful behavior-change efforts (Gollwitzer & Sheeran, 2006). Translating insight in coaching engagements to deliberate, varied, and ongoing practice has been shown to be associated with long-term successful behavior change (Nowack & Mashihi, 2012). This paper reviews current issues and best practices in goal intentions, goal striving, and goal flourishing to maximize coaching success with clients.

Keywords: goal striving, goal setting, implementation intentions, behavior change, habits

Goal setting and the initiation of new behaviors and sustaining them over time is particularly challenging for most individuals. However, we are all creatures of habit. In fact, on the basis of experience-sampling diary studies using student and community samples, approximately 45% of everyday behaviors tend to be repeated in the same location almost every day (Neal, Wood, & Quinn, 2006; Wood & Rünger, 2016). It is surprising to note that people report a heterogeneous set of actions that vary in habit strength each day, including diverse and established behaviors such as exercise, eating, and daily activities (Wood, Quinn, & Kashy, 2002; Wood, Tam, & Guerrero, 2005). This paper will attempt to summarize current evidence and practice behind goal intentions, goal setting/planning processes, and goal striving resulting in successful creation of new habits (goal flourishing) by addressing six important questions (see Figure 1). Initially, it will be useful to define specific characteristics of coaching goals and then present important factors associated with goal flourishing, including some common myths about goal striving and giving up/quitting goals.

Recent neuroscience research provides both a framework for understanding the resistance to initiating new habits and the challenges around goal flourishing. For example, there appears to be broad and meaningful individual differences in our motivation to try new behaviors, a willingness to take risks, and a tendency to seek novel and intense experiences (Holmes, Hollinshead, Roffman,

Six Important Questions about Goal Setting, Goal Striving, and Goal Flourishing
1. What are the key characteristics of goals?
2. If goal intentions aren't generally effective to facilitate behavior change what works better?
3. Goal striving: When are clients most motivated?
4. How long does it take for new habits to form?
5. When should clients "hold" and when should they "fold" in goal striving?
6. Does practice make perfect?

Figure 1. Six questions about goal setting.

Smoller, & Buckner 2016). Using magnetic resonance imaging (MRI), Holmes et al. (2016) measured the size of particular regions of the brain for each participant and measured self-reported traits associated with sensation-seeking and impulsivity as well as alcohol, tobacco, and caffeine usage. The strongest links occurred in brain areas related to the ability to regulate emotions and behavior most strongly associated with the anterior cingulate and middle frontal gyrus. Changes in those brain structures also significantly correlated with participants' self-reported tendency to act on impulse and with heightened use of alcohol, tobacco, or caffeine.

Current research suggests that availability and type of social support (Chiaburu, Van Dam, & Hutchins, 2010; Martin, 2010; Orehek & Forest, 2016) as well as regulation of emotions are equal to, or even more important than, cognitions in predicting both intention and initiation of new habits (Lawton, Conner, & McEachan, 2009). These findings imply an important role for coaches in considering the social-support climate of clients, helping them to manage their emotional reactions and consequences for engaging in behavioral-change efforts as well as assessing "readiness to change" stages that are associated with successful behavior change.

For example, one of the purposes of using 360-degree feedback in coaching interventions is to provide information to coaches to illuminate strengths as well as potential areas for development (Bracken, Rose, & Church, 2016; Nowack & Mashihi, 2012). Some negative reactions to such feedback might actually be motivating for successful behavior change (Atwater & Brett, 2005), but neuroscience research provides answers about why "underestimators" (whose self-ratings are more critical than the ratings of their observers) or those who interpret the feedback as judgmental or hurtful are disengaged and lack motivation to change behavior (Woo, Sims, Rupp, & Gibbons, 2008). In addition, interpersonal judgment and social evaluation tend to elicit strong stress reactions, with cortisol levels in one's system being elevated 50% longer when the stressor is interpersonal versus impersonal (Dickerson & Kemeny, 2004). As a result, individuals who negatively interpret feedback and experience emotional hurt, rejection, and pain tend to have both blunted motivation to initiate behavior change and diminished readiness for creating implementation intentions that are crucial for successful behavior change. Fortunately for practitioners, there are some individual-change models that help optimize understanding, acceptance, and action that are based on feedback to ensure successful behavior change.
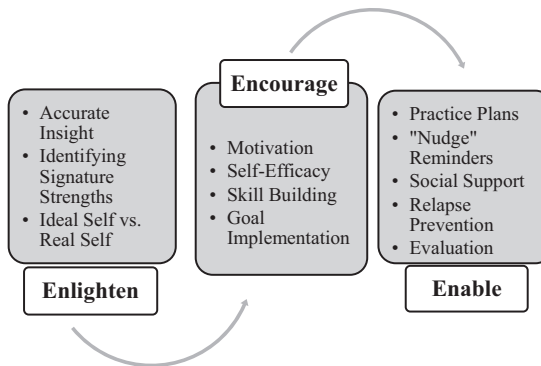
Figure 2. Enlighten, Encourage, and Enable individual change model.

Building on the process models of feedback and change by Gregory, Levy, and Jeffers (2008), Koroleva (2016), and London and Smither (2002), I have proposed a more specific individual behavioral-change model that draws heavily on evidence-based research in the health-psychology and behavioral-medicine literature (see Figure 2). The 3-E model of individual behavior change (Enlighten, Encourage, and Enable; Nowack, 2009) represents a merging of recognized individual behavioral-change theories and models, including the theory of planned behavior (Ajzen, 1991), self-efficacy and social–cognitive theory (Bandura, 1977), the health-belief model (Becker, 1974), the transtheoretical model of change (TTM; Prochaska & Velicer, 1997), and extension of the elements of goal-setting theory and performance posited by Locke and Latham (2002). Each of these theories and models should be useful to all coaches who are attempting to influence both insight/awareness and successful behavior change with their clients.

Successful coaching engagements foster both self-efficacy and self-management of clients (Joo, 2005; Grover & Furnham, 2016). Self-management theorists agree upon two important components that involve cognitive, emotional, and behavioral challenges in goal flourishing (i.e., the successful adoption and targeted results of goal pursuits): goal setting and goal striving (Mann, De Ridder, & Fujita, 2013). Goal setting (Fogg Behavior Grid; Fogg, 2012) typically involves two concepts—the valence of behaviors (start, increase, decrease, stop, do differently) and frequency (one time, sometime, and all of the time). Goal striving typically involves the implementation of actions and behaviors related to goals that have been set, redefining goals during the pursuit, managing lapses from distractions, and dealing with loss of energy or resources that interferes with successful accomplishment. Although often temporal, there are situations in which reappraisal of goals often follows perceived or real obstacles and challenges (e.g., if the goal is unrealistic or resources needed to accomplish the goal change, such as for financial reasons).

Clients tend to initially identify goals (Koestner, Lekes, Powers, & Chicoine, 2002) in which they have an intrinsic stake ("What is in it for me?") and when they perceive what others expect or desire of them (e.g., 360-degree-feedback results by one's boss or direct reports to change specific leadership practices). Self-determination theory (Deci & Ryan, 1985), readiness to change (Prochaska & Velicer, 1997), the 3-E model of individual change (Nowack, 2009), and other related models all suggest that a client's level of motivation and self-efficacy is a critical predictor of successful goal adoption, maintenance, and adherence over time.

Hierarchy of goals also shape what clients will focus on. For example, if a specific goal (e.g., deploying a stress-management technique such as mindfulness meditation) competes with another goal (e.g., spending more time with one's children after work) based on finances, time, or energy, then clients are unlikely to maintain it over time (Riediger & Freund, 2004). Therefore, helping clients to explore both inhibitors and promoters of goals would appear to be a useful exercise by coaches to facilitate goal completion and success. In addition, research by Kruglanski and colleagues (2002) suggests that when client goals have more than one payoff, clients are more likely to pursue

all of them because doing so maximizes the outcome with the same effort (e.g., soliciting and accepting feedback from direct reports might simultaneously increase engagement of employees while enhancing perceived agreeableness as a personality trait of the leader).

What Are the Key Characteristics of Goals?

There are several important characteristics that directly influence the goal pursuit that individuals engage in (Koo & Fishbach, 2010). Some of the most important characteristics include difficulty (e.g., easy vs. challenging), proximity of the end state (e.g., short term vs. long term), number of goals to tackle at one time (e.g., single vs. multiple), type of goal (e.g., learning vs. performance), and motivational mindset (e.g., avoidance vs. approach). Each of these five characteristics of goals will be briefly described here.

Easy Goals Versus Challenging/Stretch Goals

Previous studies have traditionally emphasized that goals should not be overly ambitious as exemplified by the SMART goal acronym, which suggests that goals should be specific, measurable, attainable, realistic, and timely (Latham, 2003). However, current research suggests that challenging goals lead to greater effort, focus, and persistence than moderately difficult or easy goals and that SMART goals might not be very effective in fully operationalizing the complexity needed for deliberate practice (Nowack, 2015). Such "big, hairy, audacious goals," or BHAGs, help provide a clear vision of what is to be measured and evaluated at the end of a large-scale behavior-change effort (Collins, 1999).

It has also been suggested that people who perceived their goal as difficult to attain reported higher positive emotion, an increase in job satisfaction, and perceptions of occupational success (Latham & Locke, 2006). In fact, there is some evidence that difficult and unrealistic goals might actually inspire, rather than interfere with, goal pursuit (Latham & Locke, 2013; Linde, Jeffrey, Finch, Ng, & Rothman, 2004). Other research suggests that difficulty of a coaching goal does not appear to impact how successful the coaching engagement actually is in terms of overall goal attainment (Sonesh et al., 2015).

Consider the following implications for coaching: Some researchers argue that lowering the difficulty of goals, rather than enhancing motivation, is the desired strategy for successful behavior change (Fogg, 2012). In summary, encouraging clients to set challenging goals is more likely to stimulate initial readiness to change. However, when faced with obstacles or challenges, reducing barriers to achieving goal success by modifying their difficulty might be a good strategy to follow for clients in coaching engagements (Fogg, 2012).

Short-Term Focus Versus Long-Term Focus

Goals are often distinguished by how far forward they project into the future. Schunk (2001) suggests that short-term goals are achieved more quickly and result in higher motivation and better self-regulation than more distant or long-term goals. Furthermore, research suggests that if long-term goals must be established, subdividing or "chunking" them into more manageable tiny actions or steps can produce greater benefits (i.e., goal attainment).

The time frame for completion needs to be reasonable for goals to be attained (Latham & Locke, 2006). However, individuals are more likely to maintain goals in the face of obstacles and challenges when more time remained for goal pursuit than when less time remained (Schmidt & Deshon, 2007), suggesting that for shorter-term goals, experiencing setbacks early will not necessarily lead to extinction of the initial goal. In addition, people who wrote out their short-term goals, shared their commitment to complete the goals with others, and communicated progress with others were approximately 33% more successful than those who did not document their goals, share intent, and communicate progress with others (Matthews, 2012). Finally, a single focus on the goal without having a specific backup plan appears to be predictive of goal achievement given a longer time frame to accomplish desired results (Shin & Milkman, 2016).

Consider the following implications for coaching: For most coaching engagements, clients should be encouraged to focus on specific and short-term goals and the underlying steps and behaviors to facilitate progress and success. Building in tracking and monitoring systems (Harkin et al., 2016; Webb, Joseph, Yardley, & Michie, 2010) and encouraging clients to share their intentions with goal mentors might also be useful strategies to optimize successful achievement of both short-term and long-term goals (Cole-Lewis & Kershaw, 2010; De Leon, Fuentes, & Cohen, 2014; Fanning, Mullen, & McAuley, 2012; Mashihi & Nowack, 2013).

Single Goals Versus Multiple Goals

Behavior-change efforts are typically individualistic, based on a myriad of individual and environmental factors, and tend to be progressive, regressive, or even static (Nowack, 2009). Mixed evidence supports the argument that multiple simultaneous efforts (e.g., behaviors planned to improve multiple competencies at the same time) tend to be equal or even more effective than focusing on single goals because they reinforce quick benefits (Achtziger, Gollwitzer, & Sheeran, 2008; Hyman, Pavlik, Taylor, Goodrick, & Moye, 2007). On the other hand, several studies suggest that focus on a single implementation intention might be superior to multiple goal intentions (Dalton & Spiller, 2012). Additional research extends these findings by showing that formulating multiple plans in the service of the same goal is also not beneficial (Verhoeven et al., 2013).

Consider the following implications for coaching: Individuals can accomplish more than one goal at a time, assuming that these goals do not conflict with each other in some way (Locke & Latham, 2002). As such, coaches should raise realistic concern about overall success when clients express an interest in working simultaneously on multiple goals in their initial contracting agreement or throughout the coaching engagement. For example, rather than making multiple implementation intentions at once, a phased approach might be more successful. In this way, one new behavioral goal or habit could be targeted with an implementation intention first, and only when the new desired behavior has been reached, according to some metric of agreed-up improvement by the coach and client, might a new goal be addressed.

Learning Goals Versus Performance Goals

An individual's goal orientation and personality can accurately describe the goals that they choose and the methods used to pursue those goals (DeShon & Gillespie, 2005). A performance versus learning characteristic of goals (Elliott & Dweck, 1988) involves the achievement of a specific standard (e.g., performance goal such as "lose 15 pounds") as opposed to the development of a specific skill (e.g., learning goal such as "acquiring the skill to practice mindfulness meditation"). Instead of focusing on the end result, a learning goal focuses attention on the discovery of effective strategies, skills, or techniques to attain and sustain desired results (Seijts, Latham, Tasa, & Latham, 2004). Latham and Locke (2013) argued that it is best to set a learning goal when an individual lacks the ability to perform the task and to set a performance (outcome) goal when the person has the ability to attain a desired level of performance.

When trying to accomplish a learning goal, the individual will learn to master all of the necessary skills that are associated with acquiring that goal. In the process, he or she may ask for feedback and reflect on progress to master whatever it takes to learn the new skill. On the other hand, trying to attain a specific performance goal can place additional cognitive demands that could interfere (e.g., choking) with goal accomplishment (e.g., Beilock, Carr, MacMahon, & Starkes, 2002).

Consider the following implications for coaching: Performance goals can be appropriate when the necessary skills to perform a task are already mastered and the primary focus is to exert more effort to reach a higher level of performance. Seijts, Latham, Tasa, and Latham (2004) found that individuals with learning goals demonstrated the following advantages over those with performance goals:

1. They took the time necessary to acquire the knowledge to effectively perform the task and to analyze the task-relevant information that was available to them.

2. They showed an increase in self-efficacy as a result of the discovery of appropriate strategies for task mastery. Other research supports the notion that learning goals are especially effective in enhancing self-efficacy and self-regulation (Schunk, 2001).
3. They had a significantly higher commitment to their goals than did those with a performance goal.

It is a good idea to set up goals that will allow your clients to focus on mastering the skills necessary to perform a new behavior as well as goals that target specific outcomes. For instance, a client may have a performance goal of creating a more productive team or losing a specific amount of weight. However, by establishing a learning goal, the client would focus on acquiring the skills to build a high-performance team or to maintain a healthy weight in order to ensure that the targets or outcomes are successfully accomplished.

Avoidance Goals Versus Approach Goals

Goals that clients have can either be focused on securing desired outcomes (approach goals) or they can target avoiding unwanted outcomes (avoidance goals). Avoidance goals, aiming to eliminate an undesired end state (e.g., "avoid being overly controlling in my staff meetings"), tend to have more ambiguous strategies associated with them and should not typically be used (Carver & Scheier, 1982).

Because approach goals tend to be more effective than most avoidance goals, one strategy for behavior-change interventions is to encourage clients to redefine any avoidance goals into approach goals (e.g., "be more participative and listen more to my staff during our meetings before I suggest my own ideas"). In addition, people are more likely to engage in an approach goal when they have set a low-high range goal (e.g., lose 2 to 4 pounds this week) versus when they have set a single-number goal (Scott & Nowlis, 2013). Coaches should consider encouraging their clients to utilize more low-high range goals when appropriate for specific desired behaviors.

Consider the following implications for coaching: With some goals, clients may be able to use a "substitution goal" (e.g., "in meetings, soliciting suggestions and input from others instead of expressing my own ideas and opinions") or a different goal for which the avoidance goal is instrumental (e.g., "seeking input and then summarizing the ideas of others" is instrumental for "not being seen as being an overly directive or authoritative leader"). The Fogg Behavior Grid (Fogg, 2012) offers a comprehensive typology of strategies and drivers for coaches to use with their clients, focusing on either approach goals (start doing, doing more, or doing differently) or avoidance goals (stop doing or doing less), and it provides examples for when the end result is one time (e.g., run a marathon), sometimes (i.e., situational or periodic), or all of the time (i.e., become an ongoing behavioral ritual).

If Goal Intentions Are Not Generally Effective to Facilitate Behavior Change, What Works Better?

Research suggests that attempts to change people's intentions alone may not always result in successful maintenance of behavior over time (Lawton et al., 2009). Many people express a strong desire and intent to become more effective and to try new behaviors, but often they never really initiate or sustain a new change for very long (e.g., relapse). Some research suggests that the perceived importance of the goal (i.e., concern for the desired end point of the behavioral change) might be the best predictor of those who will initiate new behaviors (whether they keep it up or not). On the other hand, the individual factors of self-efficacy, perceived control, and being clear about the disadvantages (i.e., the cons of behavioral change) are stronger predictors of clients who successfully maintain new behaviors over time (Rhodes, Plotnikoff, & Courneya, 2008).

In general, clients are most strongly committed to goals that are desirable (attractive) and attainable (Oettingen et al., 2009). However, neither of these factors guarantees that these judgments translate into actual practice (Oettingen & Gollwitzer, 2007). Several studies provide evidence that cognitively contrasting a desired future state with impeding reality (mental contrasting) effectively

increases motivation and commitment to implement a goal (Gallo, Cohen, Gollwitzer, & Oettingen, 2013; Oettingen, Marquardt, & Gollwitzer, 2012; Oettingen et al., 2009).

These studies suggest that a structured approach to comparing and contrasting future success versus realistic barriers determines the energy that will be used to commit and pursue personal/professional goals. Simply, coaches could help clients directly reflect and compare their vision of a desired future (e.g., enhanced professional performance or adopting new behaviors) with the current situation that may hinder goal pursuit and success (e.g., barriers, temptations, and obstacles). This technique appears to be consistent with "self-talk" motivational-interviewing strategies used to enhance readiness to change (e.g., Passmore, 2007) and comparing the "real" versus "ideal" self in the intentional-change model posited by Boyatzis and Akrivou (2006).

In summary, intentions to change behavior are weak predictors of actual behavior change (Nowack, 2015). However, the use of implementation intentions (practice plans) appears to be significantly more robust (Gollwitzer & Sheeran, 2006). A meta-analysis involving more than 8,000 participants in 94 independent studies revealed a medium-to-large average effect size ($d = 0.65$) of implementation intentions on goal achievement in various domains (e.g., interpersonal, environmental, health) on top of the effects of mere goal intentions (Conner & Higgins, 2010; Gollwitzer & Sheeran, 2006). These findings provide coaches with a specific approach to contracting and supporting goal initiation to translate them into ongoing practice plans using an if-then model with clients (See Figure 3). As such, implementation intentions are defined as if-then plans that have been shown to cause sustained changes in behavior and acquisition of new habits (Gollwitzer & Sheeran, 2009).

The "if" part of the goal is the trigger or cue and the "then" part of the goal is a statement of the specific behavior desired to be modified (e.g., stop, start, do more, do less). Some habit triggers will be situation-based (e.g., "When I feel anxious, I will practice mindfulness meditation to calm me down" or "When I notice the other person speaking, I will seek to understand what is being said before I share my own ideas") and others will be time-based (e.g., "When it is Monday, Wednesday, and Friday morning at 7:00 a.m. for the next month, I will attend my 50-min yoga class" or "At each weekly staff meeting, I will solicit the ideas of my staff and summarize them before sharing my own thoughts and suggestions"). Both types might be relevant to use depending on the specific goal being targeted. Fogg (2012) and Nowack (2015) have suggested that one of the most potent triggers is pairing a new behavior with an existing habit (e.g., if a client has a routine in the morning that is already established, then it is easier to link a new behavior to that existing habit).

Studies show that the "if" component of implementation intentions facilitates the accessibility of situations, and linking "if" with "then" automates the behavioral response specified in the "then"

Goal Intention Example

"To stay calm in anxiety producing situations"

Practice Plan Example

"If my heart starts to race, then I will begin using my mindfulness breathing technique and focus on how relaxed I begin to feel"
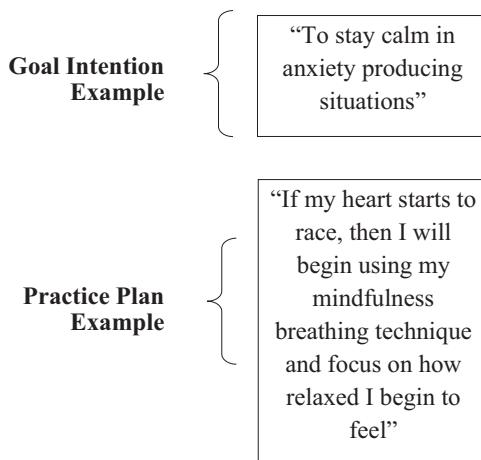
Figure 3. Practice plan/implementation intention example.

component (Gollwitzer & Sheeran, 2009). Implementation intentions are powerful for coaches to use with clients because they systematically facilitate deliberate practice to ensure both neuroplasticity and long-term goal success (Conner & Higgins, 2010; Mashihi & Nowack, 2013).

Goal Striving: When Are Clients Most Motivated?

Models such as the Transtheoretical Behavior Change Model (TTM; Prochaska & Velicer, 1997) suggest that clients are ready to change when they are ready to change. The TTM refers to readiness stages of differential motivation with respect to both goal initiation and striving (e.g., precontemplation to maintenance stages). With respect to goal striving, clients have already moved through contemplation, preparation, and action stages, but not all clients have the motivation to continue with their goal pursuits despite some progress being made. In practice, client motivation typically varies, so what do we know about when clients are most motivated in a cycle of goal initiation and striving?

In general, the most common indicator for a subjective evaluation of a "best day at work" is perceived progress in a goal by an individual or team (Amabile & Kramer, 2011). Amabile and Kramer (2011) investigated a total of 26 project teams composed of 238 individuals who were asked to report daily on moods, motivations, perceptions of the work environment, what work was accomplished, and what events stood out in their mind (nearly 12,000 diary entries). Steps forward (progress) occurred on 76% of people's best mood days and setbacks on only 13% of those days. Therefore, progress—even a small step forward—was highly correlated with the number of days employees reported being in a good mood, although causality between mood and progress was not possible to discern in this study (Amabile & Kramer, 2011). Nonetheless, this finding and the research of others (e.g., Fogg, 2012) suggest that coaches should emphasize and reinforce tiny steps of progress by their clients to maintain a high level of motivation and positive affect throughout the course of a coaching engagement.

When clients work toward goals they monitor their progress in two ways—what they have achieved so far and how much they have left to do. It appears that clients switch between the methods depending on how close they are to reaching a goal. Research with university students asked to pursue a specific goal (e.g., correcting errors in an essay) showed that students were less motivated halfway through the tasks, which likely reflects the point where they switch their focus from how much they achieved to how much they had left to do (Bonezzi, Brendl, & De Angelis, 2011). Despite the widely accepted belief that motivation to reach a goal increases as clients approach the desired end state, these findings suggest that this is not always the case and this very much depends on the standard of reference used to monitor progress.

Client motivation within coaching engagements typically follows a U-shaped pattern such that motivation is highest at the beginning and end of a goal pursuit rather than in the middle (Bonezzi et al., 2011; Touré-Tillery & Fishbach, 2011, 2012). Because beginning and end (vs. middle) positions with respect to goal setting are often arbitrarily determined, one thing coaches can do with clients is to reduce the length of the "middle" by dividing goal pursuits into subgoals requiring smaller actions and dates to follow up. This should increase the likelihood that clients will continue to successfully maintain their efforts toward goal completion. Taken together, these studies suggest motivation is most likely to fluctuate most in the middle of goal striving (i.e., slacking is more likely in the middle of a goal pursuit); therefore, this is the optimum time for coaches to explore new ways to enhance the readiness-to-change level of their clients to avoid potential derailment or outright failure.

How Long Does It Take for New Habits to Form?

One important outcome in coaching engagements and leadership-development initiatives is successful habit and behavior change based on targeted goals of the client. Neuroscience research provides practitioners with a better understanding about how long it takes, on average, for new

behaviors to become comfortable and automatic. It is important to point out that there is a difference between changes at the neural level (neuroplasticity) and resulting behaviors becoming more efficient and leading to visible performance outcomes that are meaningful for clients (Kleim & Jones, 2008).

For example, the posterior hippocampus (visual-spatial memory center) in London taxi-cab drivers has been shown to increase in size with years of experience (Woollett, Spiers, & Maguire, 2009), extensive piano practicing has been associated with enhanced plasticity of white-matter areas of the brain (Bengtsson et al., 2005), adults attending a juggling course showed detectable changes in brain structure within 3 months (Draganski et al., 2004), and short-term practice of mindfulness meditation has resulted in significant changes in the brain measured by functional magnetic resonance imagery (fMRI; Tang, Hölzel, & Posner, 2015). However, previous and current practice of new behaviors is required to translate observable neural change into skill improvement and actual health benefits.

To illustrate, doctors who have previous video-game experience and currently report playing games make significantly fewer endoscopic surgical errors than surgeons who have no previous video experience (Rosser et al., 2007). Finally, in a waiting-list control study using objective measures of autoimmune lesions, clients with multiple sclerosis practicing a comprehensive stress-management program demonstrated significantly less development of disease (exacerbations and new lesions), but no evidence of subsequent improvement was observed when clients discontinued using these coping techniques 26 weeks after the study (Mohr et al., 2012). At a practical level, getting clients to "start" new habits and behaviors does appear to create significant and observable neural change, but unless the behavior is maintained, it is unlikely that the advantages will be translated into enhanced performance ("use it or lose it").

Research by Lally, Van Jaarsveld, Potts, and Wardle (2010) suggests that new behaviors can become automatic, on average between 18 and 254 days, but it depends on the complexity of what new behavior a client is trying to put into place as well as their personality. They studied volunteers who chose to change an eating, drinking, or exercise behavior and tracked them for success. Participants completed a self-report diary, which they entered on a website log, and were asked to try the new behavior each day for 84 days. For the habits, 27 chose an eating behavior, 31 a drinking behavior (e.g., drinking water), 34 an exercise behavior, and 4 did something else (e.g., meditation). Analysis of all of these behaviors indicated that it took 66 days, on average, for this new behavior to become automatic and natural. The range was anywhere from 18 to 254 days (median 66 days). The mean number of days varied by the complexity of the habit: drinking = 59 days, eating = 65 days, and exercise = 91 days.

Additional research suggests that interleaving (mixing up deliberate practice) results in even greater skill performance and success than merely repeating new behaviors over and over (Lin et al., 2013). A substantial body of research has established that interleaving (defined as practicing different skills in quick succession) significantly improves both learning and performance in students and adults (e.g., Rohrer, 2012; Rohrer, Hedrick, & Steershick, 2015).

Therefore, creating new habits requires tremendous self-control and emotional regulation to reach a limit of self-reported automaticity for performing an initially new behavior. Taken together, practitioners should consider that translating a goal into a new habit for most clients might take longer than expected (approximately 2 months or more of deliberate practice) assuming that clients have an appropriate motivation level for readiness to change throughout a coaching engagement. As a result, shorter-term coaching engagements and complex behavior-change efforts might require greater repetition and diversity of practice (interleaving) to demonstrate effectiveness.

When Should Clients "Hold" and When Should They "Fold" in Goal Striving?

Research in both health and organizational psychology suggests that several five-factor models (FFMs) are significantly associated with goal initiation, goal striving, and successful behavior change over time (Hampson & Friedman, 2008; Kern & Friedman, 2008; Lyubomirsky, King, & Diener, 2005; Smither, London, & Reilly, 2005). For example, a review of the training-transfer

literature by Zu Knyphausen-Aufsess, Smukalla, and Abt (2009) suggested that learners who are higher in emotional stability and more extroverted are most likely to maximize training success in terms of knowledge acquisition and skill improvement over time.

It seems both intuitive and reasonable that persistence and drive would generally be associated with goal striving and successful behavior change. In a series of studies by Angela Duckworth and colleagues, individuals demonstrating "grit" were more likely to be successful in both academic and job-related goals and measures of performance (Duckworth, Peterson, Matthews, & Kelly, 2007). Grit (defined as passion and perseverance for long-term goals) accounted for an average of 4% of the variance in success-outcome measures (e.g., educational attainment among two samples of adults [$N = 1,545$ and $N = 690$], academic GPA among Ivy League undergraduates [$N = 138$], and retention in two classes of U.S. Military Academy, West Point, cadets; Duckworth et al., 2007).

However, a recent meta-analysis by Credé, Tynan, and Harms (2016) found that grit, as typically measured, appears to be only moderately correlated with diverse performance and retention outcomes and is strongly confounded with the construct of conscientiousness. Their results, based on 584 effect sizes from 88 independent samples representing 66,807 individuals, suggest that the true utility of the grit construct may solely be due to perseverance, which overlaps with FFM measures of conscientiousness (Credé et al., 2016). As such, continuing in the face of goal challenge and pressure (i.e., "holding") would appear to be generally advantageous for successful goal attainment and maximized by those high in grit, achievement orientation, and drive (i.e., conscientiousness)—until it is not.

According to several studies, quitting ("folding") may be a better coping strategy for the well-being of clients when facing unattainable goals. In a series of studies, psychologists Gregory Miller and Carsten Wrosch have found that people who feel comfortable quitting when faced with unattainable goals may have better mental and physical health than those who persevere and push themselves to succeed (Wrosch, Miller, Scheier, & Brun de Pontet, 2007; Wrosch, Scheier, & Miller, 2013). These findings build on their previous research, which found that those persistent individuals experienced higher levels of an inflammatory protein called C-reactive protein (an indicator of inflammation) and increased cortisol (Miller & Wrosch, 2007). Given that chronic inflammation represents a risk factor for various diseases (e.g., heart disease; Miller, Chen, & Zhou, 2007), these findings provide evidence for another mechanism potentially linking goal disengagement, psychological well-being, and physical-health outcomes.

As such, effort and persistence are not always the most adaptive responses to the experience of goal-related obstacles and challenges. On the basis of these findings, coaches might be more supportive for clients, in the face of unattainable goals, to actually disengage and explore goal reengagement. In fact, goal-disengagement and goal-reengagement capacities are typically not strongly correlated with each other, making it possible for practitioners to emphasize both behaviors (Wrosch, Scheier, Carver, & Schulz, 2003). Support for this perspective is provided by King and Hicks (2006), who investigated how individuals cope with lost opportunities and mistaken expectations and their association with health, happiness, and personality development. The happiest individuals acknowledged loss, did not spend much time ruminating on the past, and more easily disengaged from failure and "what might have been" in the past. Overall, they were more likely to be focused on and committed to current goals, passions, and life activities (King & Hicks, 2006).

Does Practice Make Perfect?

Most coaches and clients resonate with the old saying that "practice generally makes perfect." As such, it is commonly accepted that individual differences in performance reflect differences in the amount of deliberate and accumulated practice (activities that are structured and repetitive to enhance effectiveness in any domain). Or, at least if you do something long and hard enough, then you will likely become an expert.

In fact, there is a big difference between "experts" and those "who are expert" in what they do (Ericsson, 2007). In a 1996 book coedited by Anders Ericsson and others titled *The Cambridge Handbook of Expertise and Expert Performance*, two of the authors concluded that great perfor-

mance comes mostly from two things: regularly obtaining concrete and constructive feedback and deliberate practice with difficult tasks (Ericsson, 1996a, p. 4). For example, the authors found that the best skaters spent 68% of their practice doing really hard jumps and routines compared with those who were less successful (they spent only about 48% of their time doing the same difficult things). Ericsson (1996b) defined "deliberate practice" to mean focused, structured, serious, and detailed attempts to get better. That means it has to be challenging and difficult (i.e., practicing the most difficult tasks).

In two other studies, Ericsson, Krampe, and Tesch-Romer (1993) recruited musicians from different levels of accomplishment and asked them to retrospectively estimate the amounts of time per week they had engaged in deliberate practice. Group averages were highest for the most accomplished musicians. On average, the "best" violinists had accumulated more than 10,000 hr of deliberate practice, compared with less than 8,000 hr for the "good" violinists and not even 5,000 hr for the least accomplished "teachers." Ericsson et al. (1993) concluded that "individual differences in ultimate performance can largely be accounted for by differential amounts of past and current levels of practice" (p. 392).

Brooke Macnamara and her colleagues from Princeton University recently conducted the largest review and meta-analysis of studies exploring the relationship between deliberate practice and performance in several domains (Macnamara, Hambrick, & Oswald, 2014). Their research also tests the widespread "10,000-hour rule" popularized in several books (Colvin, 2008; Gladwell, 2008) that suggests that it takes 10,000 hr of practice to become an expert in any given skill domain. Their research included 111 independent samples, with 157 effect sizes and a total sample of 11,135 participants (Macnamara et al., 2014). They explored the deliberate practice and performance relationship in various domains and two sets of factors. The first factor was based on the predictability of a task or how often the behavior might be expected to be performed (e.g., handling an aviation emergency to running each day) and the second was how the previous research was conducted and how practice was actually measured (e.g., recall or log).

Their findings contradict the popular urban myth and claim that individual differences in expertise and performance are largely accounted for by the amount of deliberate practice a person engages in over time. In fact, the percentage of variance accounted for by deliberate practice in five specific domains was as follows: games 26%, music 21%, sports 18%, education 4%, and professions less than 1% (Macnamara et al., 2014). Even in the most widely studied domains of expertise research (music and chess), deliberate practice does not appear to adequately explain individual differences in performance (Hambrick et al., 2014).

A subsequent meta-analysis (Macnamara, Moreau, & Hambrick, 2016) focused on the performance of elite athletes to test the premise that individual differences in sports performance largely reflect individual differences in accumulated amount of deliberate practice (Ericsson, 2007). Overall, deliberate practice accounted for 18% of the variance in sports performance. However, the contribution differed depending on skill level. Most important, deliberate practice accounted for only 1% of the variance in performance among elite-level performers.

Deliberate practice explained a similar amount of variance in performance for youth as it did for adult athletes (19% vs. 15%), and higher skill was independent of starting age (Macnamara et al., 2016). Taken together, the popular myth of the requirement for 10,000 hr to become expert is clearly not supported by research evidence, suggesting that genetic influence and other factors might account for the unexplained variance in performance (e.g., with athletes it might be ease of accumulating muscle mass or cortical motor control associated with superior coordination).

Certainly, deliberate practice is a necessary, but not sufficient, condition to explain individual differences in skills, and it appears that more variance is not explained by deliberate practice than what is explained by it. From a practitioner perspective, these results suggest the importance of considering other broad factors that may contribute to individual differences in competence and expertise (e.g., cognitive ability, personality, peer support, and genetic predisposition). For example, across a wide range of piano-playing skill, deliberate practice accounted for less than half of the variance (45.1%) in sight-reading performance (Meinz & Hambrick, 2011). However, working

memory capacity (which is highly stable and largely heritable) added incremental validity and explained an additional 7.4% variance of performance above and beyond deliberate practice.

In addition, another study explored the popular 10,000 "rule" by examining associations between musical ability and practice ($rs = .18–.36$) in 10,500 Swedish twins (Mosing, Madison, Pedersen, Kuja-Halkola, & Ullén, 2014). Findings from this study suggest that practice does not always make perfect if you do not have the minimal capabilities and the proper mindset to begin with. Surprisingly, associations between music practice and music ability were predominantly genetic, and, contrary to the researcher's hypothesis, nonshared environmental influences did not contribute. Genetic influences on hours of practice were substantial, explaining 69% of the variance in males and 41% in females, with additional shared-environmental influences in females (21%). Music abilities were moderately heritable, ranging between 12% and 61% (Ullén, Mosing, Holm, Eriksson, & Madison, 2014). Finally, using a sample of more than 850 twin pairs, Hambrick and Tucker-Drob (2015) found, after controlling for music practice, that there was a statistically significant genetic effect on music accomplishment.

Although it seems reasonable to predict that anyone who engages in thousands of hours of deliberate practice will develop a high level of skill in any field, it appears that our basic skills and abilities may actually limit the ultimate level of performance that can be attained. Genes and environment are both important for essentially any behavior, and practice is no exception. However, there is a strong indication that extreme environmentalist models of performance and expertise (e.g., "practice is everything") are likely to be just an urban myth (Nowack, 2015; Plomin, Shakeshaft, McMillan, & Trzaskowski, 2014).

Coaches and consultants should encourage clients to practice new skills until they become comfortable and automatic, but they should be cognizant of the limits of deliberate practice in realistically converting "competent jerks" into "loveable stars" on the job. Evidence is convincing that not all clients we work with can change very much despite deliberate and accumulated practice (Hambrick et al., 2014). In practical terms, the magnitude of behavior change expected and required by organizations that hire coaches to help employees change behavior may, at times, be both unrealistic and unattainable for some.

Conclusion

In general, there has been a lack of attention in both research and practice to exploring ways to successfully help clients initiate and sustain new behavior in training and coaching interventions (Bracken et al., 2016; Joo, 2005; London & Smither, 2002; Mashihi & Nowack, 2013). On the basis of the current neuroscience and behavioral research, coaches and consultants should consider the following suggestions for optimizing goal setting and successful behavior change with their clients.

Skydiving Is Not Advised for Those Who Have a Tendency to Fail

Despite common edicts from psychologists, educators, and parents that perseverance and relentless pursuit of goals optimize work and life success and well-being, recent research actually suggests a curvilinear pattern. In fact, some lifetime failure has been shown to be associated with optimal well-being (Seery, 2011; Seery, Leo, Lupien, Kondrak, & Almonte, 2013). Popular concepts such as grit (Duckworth et al., 2007) appear to reinforce a "never quit" philosophy despite evidence of only modest associations with diverse performance outcomes and conceptual overlap with conscientiousness (Credé et al., 2016). In fact, failure in accomplishing goals should not be viewed as a weakness in clients, and terminating the pursuit of unrealistic or unattainable goals might actually prove to be a better strategy in terms of physical health and psychological well-being (Miller & Wrosch, 2007; Wrosch et al., 2013).

Practice Makes Better (Not Perfect)

More statistical variance in expertise and successful performance is not explained by deliberate practice than is explained. Deliberate practice is merely a necessary, but not sufficient, condition for

skill competence and significant performance improvement, whether behavioral or mental (Pascual-Leone, Amedi, Fregni, & Merabet, 2005; Pascual-Leone et al. 1995). What needs to be carefully considered is the investment of time, energy, and money compared to other factors such as readiness to change and physical, cognitive, and psychological abilities that might limit successful goal attainment and high performance (Macnamara et al., 2016). Even with the most motivated clients, meta-analytic research suggests only small to modest effect sizes for skills-based outcomes, implying that not all clients are capable of significant changes in behavior (Jones, Woods, & Guillaume, 2016).

Goal Intentions Are Not the Same As Practice Plans

Wanting to change, often observed as stating intentions through goals, does not necessarily ensure nor predict successful change. Motivated clients with a readiness to change will have the greatest success translating stated goals into practice plans (Gollwitzer & Sheeran, 2006). Using if-then intention methods for goal implementation with clients maximizes goal striving, completion, and success. The "if" part of implementation intentions refers to the trigger or cue for implementing desired behavior and can be existing habits, time, or specific situations such as meetings with others (Fogg, 2012). Coaches should enhance the use of regular practice plans with their clients to facilitate maximum neuroplasticity through varied deliberate practice for approximately 60 to 90 days, depending on the complexity of the desired target behavior, resulting in unconscious competence required for higher levels of comfort, skill enhancement, and performance (Lally et al., 2010).

Goals Come in Different Sizes but, like Shoes, Should Fit the Client

If you go to any coffee shop, you can typically order a variety of different "sizes" of your favorite drink. Goals also can be described as having different "sizes" and features, so being precise with the goals of your client will maximize goal success. Fogg (2012) has summarized a behavioral grid of 15 different goal options that help guide coaches and clients to focus on the best direction addressing their interest and needs (e.g., goals resulting in behaviors to do one time, sometime, or all of the time that might include doing things more frequently, less frequently, differently, starting something new, or stopping an existing behavior). It is important that clients be specific in defining the type of goal and frequency of adoption they desire in order to ensure the possibility of goal striving and successful achievement.

Adopt Strategies to Optimize Goal Success but Avoid Backup Planning

Motivation and commitment to goals are indeed prerequisites for client success in attempting to develop new habits and adhere to goals. Kruglanski, Pierro, and Sheveland (2011) found that thinking about additional strategies for achieving a given goal indeed increases commitment to that goal. However, it is easy to confuse our clients by encouraging them to create strategies to accomplish stated goals instead of urging them to contemplate and develop backup plans in the possible face of failure.

Backup plans, or secondary goals, should not be confused with relapse-prevention strategies used effectively for abstinence-oriented goals related to addiction (Marlatt & Gordon, 1980). Relapse prevention classifies factors contributing to relapse into two categories: proximal determinants (high-stress situations, coping skills, outcome expectancies) and covert antecedents (e.g., urges/cravings, social interactions increasing relapse). Using a cognitive–behavioral framework, relapse prevention helps the client recognize and prepare for high-stress situations in which a lapse or total relapse is likely (Larimer, Palmer, & Marlatt, 1999).

Although making a backup plan may provide practical and emotional benefits in the face of uncertainty, the value may come at a higher cost than previously understood. Results from three studies suggest that the act of reflecting on a backup plan has harmful effects on goal accomplishment (Shin & Milkman, 2016). This research suggests that reflecting on or generating backup plans may actually reduce the probability of successful goal attainment by dampening the initial goal desire (note that goal success that is based on pure luck or innate skill will not be affected). Clients

who are mindful of their goal(s) and stated target behavior(s) will be optimally successful, but challenging clients to come up with alternative or backup plans might actually interfere with subsequent goal success.

Insight and Motivation Are Only Necessary, but Not Sufficient, Conditions for Successful Goal Attainment and Performance Improvement

Not all clients who are self-aware and motivated will successfully change behavior or become more effective on the job (Bacon & Spear, 2003; Chiaburu & Marinova, 2005; Glasgow et al., 2014; Mashihi & Nowack, 2013). In a recent comprehensive review of coaching studies (Grover & Furnham, 2016), nearly all studies investigating the impact of coaching on goal attainment were found to have positive overall results as well as a significant association with enhancing self-efficacy in clients. However, very few positive associations appear to support a relationship between coaching and actual improvement in job performance (Grover & Furnham, 2016).

From both a research and practice perspective, it is important to distinguish between proximal outcomes (e.g., enhanced resilience, self-awareness, skills acquisition) and distal outcomes (e.g., retention, performance) and to identify which ones are realistic and possible with specific behavior-change interventions such as coaching. Finally, based on 360-degree-feedback studies with coaching, effect sizes for observed behavior change are typically modest, suggesting that organizations need to be realistic about the magnitude of behavior change to expect even when clients are highly motivated (Nowack & Mashihi, 2012; Smither et al., 2005).

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