# Whom to hire and how to coach them: a longitudinal analysis of newly hired salesperson performance

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# Whom to hire and how to coach them: a longitudinal analysis of newly hired salesperson performance

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## ABSTRACT

Salesperson hiring decisions are critical for firms, and managers typically accept one of two view-points regarding optimal hiring strategies. The first asserts that prior sales experience allows new salespeople to perform immediately upon hire and represents a valuable hiring heuristic. The second believes lack of prior experience allows managers to mold new salespeople to the hiring firm's needs. Further complicating matters, formal sales education programs are gaining in popularity and may represent an alternative hiring heuristic for sales managers. Using unique multi-source data (from both B2B and B2C firms), the authors explore the effects of these hiring heuristics in driving salespeople's longitudinal performance trajectories, along with the moderating role of post-hire manager coaching behaviors. Results of the longitudinal growth models show the distinct and opposing effects of each hiring heuristic and coaching strategy. The authors also iden-tify critical areas of future research and managerial practice.

While hiring decisions have always been a challenge for sales organizations (Johnston and Cooper 1981; Ryals and Davies 2010), two critical phenomena are converging to make this issue especially salient for companies today. First, the sales profession is expected to be among the fastest growing occu-pations in the United States over the next decade, with nearly 600,000 new sales jobs predicted (US Department of Labor 2017). This is not surprising given the increasing complexity of exchange situations and, therefore, the need for additional manpower to navigate such complexity (Hartmann, Wieland, and Vargo 2018; Plouffe et al. 2016). Second, baby boomers are approaching retirement in large numbers, which will result in a pervasive demand for replacement salespeople (Kramer 2013). Successfully leverag-ing this "hiring boom" is especially critical to firms given the high cost of hiring a new salesperson; estimates range from $54,000 to $200,000 per individual (Cooper 2012). Clearly, managers need to get hiring right if they are to thrive in the coming decade and beyond.

Scholars are also well aware of the consequences of poor hiring decisions, and significant attention has been paid to understanding salesperson turnover (e.g., Futrell and Parasuraman 1984; Sunder et al. 2017). However, research in the domain of hiring salespeople is relatively scarce, par-ticularly in marketing, despite a strong focus on the subject in the practitioner press (Reid and Plank 2004). A wealth of research explores the drivers of sales performance (see Verbeke, Dietz, and Verwaal 2011 for a meta-analysis) and suggests, at least implicitly, that sales hiring is a matter of finding candidates who possess such drivers. However, the applicability of these findings to inform hiring decisions is blurred by the fact that many of these characteristics (e.g., adaptability and cognitive aptitude) can be difficult for man-agers to assess with preemployment screening tools. Thus, managers instead often rely on observable heuristics they believe reflect these drivers of success (Cespedes and Weinfurter 2015).

The present research considers the effect of two such heuristics: prior sales experience and formal sales education. Prior sales experience is the most popular hiring heuristic used by sales organizations (Cespedes and Weinfurter 2015). Advocates of this approach argue that experienced salespeo-ple produce rapid performance gains for the firm and demand less investment in training (Zoltners, Sinha, and Lorimer 2012). Proponents further contend that, by hiring experienced salespeople, a firm can capitalize on another company's investment in training. Indeed, a quick scan of any job-posting website produces a litany of sales positions, nearly all of which require experience (Sweeney 2012). Yet despite this heuristic's popularity, a healthy sense of skepti-cism exists among some practitioners, many of whom instead endorse hiring inexperienced rookies and shaping

them into top salespeople (Searcy 2012). Advocates of this approach suggest that firm performance is enhanced when newly hired salespeople can be easily molded to meet the idiosyncratic demands of a given position without the contextual "baggage" of a prior work environment (see also Groysberg, Nanda, and Nohria 2004).

Regarding our second focal hiring heuristic, formal sales education programs are becoming increasingly prevalent at colleges and universities. This trend has led to greater availability of applicants with a formal sales education (Fogel et al. 2012). These types of programs center on the idea that sales education can provide many of the purported benefits of prior experience without the product-, company-, and context-specific contamination that may impede a salesperson's ability to adapt successfully to a new company. In other words, proponents of hiring salespeople from formal sales education programs agree with those who advocate developing inexperienced salespeople into top performers (Searcy 2012), but, in addition, they believe sales education to be a heuristic comparable to prior experience. Indeed, limited cross-sectional research has demonstrated that formal sales education has a positive effect on objective salesperson performance (Bolander, Bonney, and Satornino 2014). However, a simultaneous comparison of these two heuristics – sales experience and sales education – has not been forthcoming, nor has longitudinal analysis of any kind.

The present work explores these heuristics and is guided by the theory of mental models (TMM; Johnson-Laird 1983) and cognitive load theory (CLT; Sweller 1994). Mental models are formed by individuals on the basis of past experience and are activated when similar situations occur in the present, serving to aid the individual in understanding and reacting effectively (Johnson-Laird 1983). CLT builds upon TMM by factoring in the situational context of learning and how it affects formation and automation of mental models (Sweller and Chandler 1994). On this foundation, we develop and then test hypotheses using unique, multisource, multifirm field data from both business-to-business (B2B) and business-to-consumer (B2C) contexts. We argue that prior sales experience and formal sales education generate divergent schemata and mental models. We further argue that these distinctions shape differences in how salespeople approach work and respond to supervisor coaching behaviors – specifically, reinforcement feedback and indirect feedback via role modeling (Rich 1997) – and that salespeople's performance trajectories reflect these differences. Given the inherent dynamism of sales performance (i.e., Ahearne et al. 2010), the temporal effects of various performance drivers remain critically understudied, with some suggesting that longitudinal research is "easier to advocate than to implement" (Rindfleisch et al. 2008, 262). Our longitudinal approach, therefore, contributes to this deficit in the overall marketing literature and produces concrete, actionable guidance for practitioners involved in hiring or coaching salespeople.

The rest of the article proceeds as follows: First, guided by TMM and CLT, we develop hypotheses by providing details of the learning contexts associated with each of our focal hiring heuristics. Then, in Study 1, we test the effects of prior sales experience and sales education on salesperson performance trajectories utilizing a B2B sample. In Study 2, we replicate our findings with a B2C sample and test the moderating effects of a manager's reinforcement feedback and role modeling behaviors on these relationships. We then conduct post hoc analyses, detailed in Web Appendix A, on two additional data sets to aid future researchers in identifying potential theoretical mechanisms at play in the relationships we detail. We conclude by discussing the implications of this work and recommending avenues for future research.

## Background

### Early development contexts, cognitive load, and mental models

Before developing specific hypotheses about the performance effects of our focal hiring heuristics, we first lay some theoretical groundwork. At the highest level, the path to success in sales is defined within the institution of selling itself. According to Hartmann, Wieland, and Vargo (2018), the institution of sales delineates well-understood rules and practices (e.g., a well-managed sales pipeline, logical selling process, and systematic thinking) that generally lead to successful outcomes. However, for those new to sales, these institutions must be learned, adopted, and practiced for success to occur. Thus, our study investigates how different approaches (i.e., through prior experience or formal training) to instilling the "rules of the sales game" affect the formation of mental models that salespeople draw upon as they navigate the institution of selling and develop in their careers. Thus, to investigate the development of effective selling schemata, we turn to TMM (Johnson-Laird 1983) and CLT (Sweller 1994).

### The theory of mental models and the lasting impact of formative experiences

TMM suggests that mental models assist individuals in understanding complex systems through simplified models (Johnson-Laird 1983). According to the theory, individual behaviors in specific contexts result from the construction of mental models (Palmunen et al. 2013), which are initially generated when individuals encounter something new (e.g., a new work role). These knowledge structures are stored in long-term memory as schemata that, when encountering a new but similar situation, are combined with novel information from the new context to generate a simplified representation of the environment (Johnson-Laird 1983). These resulting schemata create expectations about "how the world works" in a given domain.

To illustrate, consider the selling process as a complex system. The mental model of the sales process can be construed as a conceptual diagram constructed by an individual to describe the sales process as they perceive it (Doyle and Ford 1998; Johnson-Laird 1983) and to explain how the steps in the process relate to each other (i.e., "if A, then B"; Webber et al. 2000). The mental model then allows the

individual to predict future outcomes based on the knowledge structures and the connections between them, which in turn drives behavior (Palmunen et al. 2013). In other words, mental models are a way to convert knowledge into behavior in a given domain. TMM, therefore, provides insight into how formative experiences influence attitudes and behavior in subsequent contexts. However, whereas TMM broadly views human learning and development as the conversion of experiences into a model of perceived reality, CLT hints at how external, contextual factors shape that conversion process and the consequences relating to the resulting schemata or long-term knowledge structures used by the mental model (Holland et al. 1986). Therefore, to understand how the educational and on-the-job formative sales experiences drive differences in mental models and subsequent outcomes, we turn to CLT.

### Cognitive load theory and the development of mental models

CLT extends research on mental models by considering how the context of a learning situation, in addition to the actual learning content, affects learning (Sweller 1994). While mental models form the theoretical underpinnings that underlie our hypotheses, CLT explains how aspects of an individual's development context affect the formation of mental models. Specifically, CLT suggests that individuals engage in two mental activities – schema[1] acquisition and schema automation – that allow them to learn and perform in the face of complexity (Sweller and Chandler 1994).

Schema acquisition involves the hierarchical organization of information by content and domain, which leads to a simplified knowledge structure (schema) that can be used to easily retrieve more specific details from long-term memory (Sweller 1994). Since solving problems without relevant schemata is cognitively taxing, these knowledge structures, or schemata, allow an individual to categorize problems according to similarities or differences. Relatedly, although the mere creation of schemata reduces processing effort, cognitive load can be further decreased via schema automation (Sweller 1994). Even though a schema exists for a given domain, an individual may need to exert substantial and deliberate cognitive effort to process that information. With increased time and experience in a given domain, information processing becomes more automated, resulting in decreased cognitive load and increased performance (van Merrienboer and Sweller 2005). Thus, factors affecting both schema acquisition and automation are important to consider for overall developmental effectiveness.

In addition, cognitive load is an important contextual consideration in understanding learning (Viosca and Cox 2014). Specifically, the processes of schema formation and automation can be hindered by two types of cognitive loads: intrinsic and extraneous. Intrinsic load refers to the innate difficulty of the material being learned, defined as the number of elements to be learned and the extent to which those elements interrelate (i.e., whether one element requires knowledge of others to be understood; Bannert 2002). For example, learning a list of a product features (i.e., elements) involves a lower level of interrelationships among elements (i.e., has lower intrinsic load), while learning a sales method involves a higher level of interrelatedness (i.e., has higher intrinsic load).

Extraneous load refers to the manner and context in which information is presented to individuals (Pollock, Chandler, and Sweller 2002). In other words, two individuals can experience different developmental outcomes when being trained on the exact same content (i.e., with intrinsic load held constant) because of characteristics of their different environments (Sweller 1994). For example, imagine that one of the individuals is given more ambiguous instructional materials or is located in a room with many distractions – such an individual would experience increased extraneous load that is likely to impede learning (Bannert 2002).

Thus, when training with complex material, such as the selling process, CLT posits that learning and development are enhanced when intrinsic and extraneous loads are reduced (Sweller 1994; Viosca and Cox 2014). Furthermore, research on CLT has identified that intrinsic load can be lowered by presenting complex elements sequentially rather than simultaneously (Pollock, Chandler, and Sweller 2002), and extraneous load can be reduced by creating a "goal-free" environment (e.g., one in which immediate performance pressures are reduced; van Merrienboer and Sweller 2005). In summary, the reduction of intrinsic and/or extraneous load enables not only the creation of new schemata but also the automation of existing schemata. The shift from controlled to automated information processing further decreases cognitive load and enhances performance via more efficient and accurate outputs (Sweller 1994).

With this in mind, we now consider how different learning contexts may affect schema acquisition and automation. We do not measure these contextual factors in our study or assess the specific mental models that result from them. Instead, we examine what a manager is capable of observing – the heuristic variables (sales education and prior experience) themselves. Nevertheless, these contextual characteristics, detailed in the next section, allow us to speak to the theoretical elements likely present in each situation.

### Effects of hiring heuristics on salesperson performance trajectories

#### Developmental context of prior sales experience

Given the disparate nature of organizations, formative on-the-job experiences are naturally variable; there is no standardized training curriculum or development procedure to which all firms must adhere. A newly hired salesperson with prior sales experience could have experienced any of the following: no training (Jolles 1999), "ride-alongs" and shadowing (Spiro, Stanton, and Rich 2008), lecture- or office-based training (Jolles 1999; Marshall and Johnston 2013), or some combination of these techniques. Further, this training could have lasted anywhere from a few days (Jolles 1999) to several months (Spiro, Stanton, and Rich 2008). Despite this ambiguity, we can shed some light on the commonalities of this early-career training context.

First, most corporate sales training is on the job (Marshall and Johnston 2013; Spiro, Stanton, and Rich 2008), which involves learning as you work. Despite this instructional method's popularity, it is often described as a "trial by fire" (Oesch 2017) or being "thrown to the wolves" (Brown 2016). Interpreting this in light of CLT, we associate this type of training with an increase in extraneous load because it is precisely the opposite of a goal-free environment (van Merrienboer and Sweller 2005). When attempting to master new skills while simultaneously facing intense performance pressure (Gschwandtner 2007), high cognitive load will lead to suboptimal schema development (Sweller 1994).

Second, when learning inputs originate in less-controlled settings, the opportunity for "split-attention" effects increases (Sweller and Chandler 1994). In the context of sales training, information frequently comes from a myriad of sources (e.g., managers, peers, and customers). As a result, a new salesperson attempting to develop a selling ability is forced to sort through information from sources that may not even agree with one another. In situations where element interactivity is high, such as in a typical sales process, cognitive load is increased when relevant information does not emanate from a common source (van Merrienboer and Sweller 2005).

Third, there is a persistent focus in sales training on teaching product and industry knowledge as opposed to selling skills (Gschwandtner 2007; Miller et al. 2004). This has been critically described as teaching one how to bake a cake by "showing them the finished product, letting them taste it, and then telling them to go bake it" (Jolles 1999, 71). In addition, when training does address selling skills, it is often focused on specific tactics (e.g., prospecting and closing) as opposed to a holistic selling process (Jolles 1999). This type of training has been described as "'tribal knowledge" that is passed down from generation to generation of salespeople (Jason Jordan quoted in Stevens and Kinni 2007, xi). This type of training presents product and process information simultaneously (i.e., in the same day or week), increasing intrinsic load (Pollock, Chandler, and Sweller 2002). This is especially true given the innate connections between the numerous elements of the selling process (Sweller 1994).

Fourth, whereas formal sales education curricula are prone to using the "worked example" instructional method, sales training programs generally subscribe to the "means-end" method, in which problems are addressed one by one, as novel issues. A means-end analysis will often result in a solution that is sufficient but not optimal (Sweller 1994). Furthermore, although it may be an effective strategy for individuals already possessing well-developed schemata, it tends to increase cognitive load for those operating in a new environment (Sweller and Chandler 1994). In turn, this high cognitive load appropriates processing power from the creation of schemata that lead to effective development in the long run.

Despite these disadvantages, those hired with high levels of prior experience have received some benefit from time in the field. For example, these individuals have been able to develop their practical knowledge of how to perform their job sufficiently by applying their mental models, however incomplete they may be, in the field. It is this time and experience that allow for automation (Sweller 1994). Consider that someone who knows most of the letters of the alphabet (i.e., a partial schema) will likely be able to read reasonably well, understanding many words and sentences. However, despite this person's ability to approximate the full act of reading through the flawed but functional mental model, his or her performance will always be suboptimal. Therefore, we suggest that higher levels of prior sales experience will facilitate some degree of competence in selling initially, even if an individual's prior experience does not translate precisely to the context of the new firm (Stevens and Kinni 2007).

In addition, those with prior experience should have spent sufficient time in the field to automate relevant schemata (Kalyuga et al. 2001). Specifically, the schemata produced by on-the-job training allow individuals to increase their working memory capacity through automation (Sweller, Van Merrienboer, and Paas 1998), thereby realizing a reasonable level of performance. However, we expect that, given the disruptive situational factors in the on-the-job schema formation process, performance growth potential will be capped due to an inability of partial schemata to optimally evolve over time (Sweller, Van Merrienboer, and Paas 1998). This aligns with the notion that newly hired salespeople with prior experience will demonstrate superior initial performance outcomes relative to less experienced hires, as many in the popular press have asserted (Zoltners, Sinha, and Lorimer 2012). However, their automation of partial, suboptimal mental models will impair performance growth over time. Formally,

H1: For a new hire, having higher levels of prior sales experience (a) will enhance initial performance but (b) will inhibit the rate of performance growth over time.

### Developmental context of formal sales education

Compared to the relatively diverse nature of formative on-the-job sales experiences, the developmental context of formal sales education is far more standardized. Given the efforts of certification bodies such as the University Sales Center Alliance and the Sales Education Foundation, a great deal is known about the general curriculum experienced by collegiately educated sales students. First, collegiate sales programs typically include one to two years of sales courses in addition to other curriculum and culminate in the student receiving a bachelor's degree, minor, or certificate in sales. Sales students take a minimum of three sales courses (often basic selling, advanced selling, and sales management) but may take more depending on their institution (Sales Education Annual 2017). Importantly, because actual sales performance (and the pressure to meet quota) is not a consideration in the near term, this environment functions as a learning context where extraneous load is reduced due to relatively low performance pressures (van Merrienboer and Sweller 2005).

Second, collegiate sales programs focus heavily on a general sales process that is viewed as a flexible system that can be applied across different goods and services (Bolander, Bonney, and Satornino 2014). Whereas corporate training programs are heavily influenced by the firm's products (Jolles 1999; Stevens and Kinni 2007), sales education programs view product details as contextual elements that do not greatly affect the application of general selling behaviors. Product knowledge, when provided, comes after the student has mastered the components of the generalized sales process (Delpechitre and Baker 2017; Widmier, Loe, and Selden 2007).

From a CLT perspective, both schema formation and automation are enhanced when instruction focuses on "aspects of a task that are consistent from problem to problem" (Sweller, Van Merrienboer, and Paas 1998, 258). In addition to underscoring the importance of the general sales process, this approach serves to separate the domains of product and process knowledge through sequential information presentation, where product details are only introduced after the process is mastered. Such sequential information provision reduces intrinsic load and improves learning (Bannert 2002; Pollock, Chandler, and Sweller 2002). By learning the sales process without a specific product or customer to consider, learning outcomes are enhanced.

Third, sales education programs leverage a variety of tools that create explicit demonstrations of what an ideal sales call should look like (e.g., sales call scripts, see McBane and Knowles 1994; role-play videos, see Delpechitre and Baker 2017). These simple tools are analogous to the "worked example" instructional method that has been shown to reduce exogenous cognitive load and improve learning (Sweller 1994). Under this method, rather than leaving trainees to decipher the solutions to problems from scratch, trainees are presented with examples that have already been worked (either completely or in part). By providing sales students with complete examples of exemplar sales interactions, students are able to understand the elements of the sales call, along with the interactions between elements, despite the high intrinsic load (van Merrienboer and Sweller 2005).

Fourth, sales education programs utilize contextual variability in that students are asked to apply new information in a variety of scenarios (Viosca and Cox 2014). For example, a role-play activity designed to reinforce a particular concept may utilize multiple product or firm contexts (Moncrief and Shipp 1994). This variability encourages schema formation by increasing the probability that individuals will be able to better differentiate and categorize information across settings and enhances transferability of knowledge to different environments via the facilitation of more general schemata (McKeough, Marini, and Lupart 1995).

The preceding discussion paints a favorable picture of the long-term performance potential of sales program graduates. However, we advance our second hypothesis with both a short- and long-term component. First, we expect that sales education will not benefit performance initially as new hires require time to develop and refine their incomplete mental models in a new context. In addition, we suggest that the pre-career mental models, as the basis of an effective sales approach, will be enhanced as new salespeople adapt and refine the initial model to fit the context of their job setting (Sweller 1994).

This notion is grounded in CLT, where a mental model is refined and enhanced by the reduction of intrinsic and extraneous load. In essence, a collegiately educated new hire will already possess a mental model, one which has been acquired and developed in a non-product-specific setting. Then, through experience and learning, the mental model will improve. In this scenario, it is important to note that collegiately educated salespeople arrive at their new job with much of the work of initial mental model formation already completed, which, over time, reduces intrinsic and extraneous load (i.e., they do not have to learn everything; they just need to add to and adapt their already developed model). Thus, within a specific setting, they will systematically enhance their mental models and advance toward schema automation. As a result, their mental models begin to operate with less cognitive effort, which allows for more attention and focus on other sales aspects, such as serving customer needs and developing creative solutions to customer problems.

In summary, we suggest that formal sales education will amplify performance growth over time as automation occurs and working memory capacity becomes available to "work smarter, not harder" through automated mental models that reduce much of the cognitive load of managing the institutional aspects of effective selling (Sujan 1986; van Merrienboer and Sweller 2005). Formally,

> H2: For a new hire, having formal sales education (a) will not significantly impact initial sales performance but (b) will enhance the rate of performance growth over time.

### Content and context

In the preceding sections we refer to relative differences in both content (e.g., product versus process knowledge and so on) and context (e.g., "goal-free" and so on) because the literature reveals these to be salient. However, we acknowledge that it is possible that a content overlap exists between formal sales education and corporate sales training. CLT suggests that, while these content differences can be impactful, they are not required for influencing salesperson development. The differences among contextual elements alone are sufficient to accomplish this purpose (Bannert 2002; van Merrienboer and Sweller 2005).

### Effects of sales manager coaching behaviors on salesperson performance trajectories

#### Defining sales manager coaching behaviors

In addition to assessing the direct effects of our focal hiring heuristics (H1 and H2), we consider the moderating role of sales managers on salesperson performance trajectories through the interaction of manager coaching behaviors with

these heuristic variables. In other words, we seek to understand how managers using these heuristics ought to coach their salespeople to optimize sales performance. Rich (1997) defines sales manager coaching as comprising reinforcement feedback and role modeling.

Reinforcement feedback, also known as negative feedback (e.g., Jaworski and Kohli 1991), consists of observations and subsequent corrections administered by a manager, following poor subordinate performance (MacKenzie, Podsakoff, and Rich 2001). Since it is administered only when correction is needed, it is a reactive behavior and is considered a form of operant learning (Rich 1997). Reinforcement feedback involves the interpersonal act of confronting a subordinate for inadequate performance. Because reinforcement feedback can be painfully direct (Jackman and Strober 2003), some have implicated it as a detriment to learning. The basis of this criticism is simple: when a subordinate feels threatened, learning is hindered and positive behavioral change becomes more difficult (Kluger and DeNisi 1996). Despite this criticism, research has shown reinforcement feedback provides the specific input needed to reduce role ambiguity and enhance performance (MacKenzie, Podsakoff, and Rich 2001).

By contrast, role modeling is defined as "behavior on the part of the sales manager perceived by the salesperson to be an appropriate example" (Rich 1997, 320). When managers provide this type of indirect information to salespeople through their behaviors, and when salespeople are motivated to detect such information (Yaffe and Kark 2011), salespeople can alter their behavior to emulate the work habits of their managers (MacKenzie, Podsakoff, and Rich 2001; Rich 1997). Since the behavior is not constrained to periods of poor performance (i.e., is not contingent), it is considered a proactive form of social learning.

We acknowledge the lengthy list of manager behaviors that have been studied in the sales and marketing literature, but we maintain a focus on reinforcement feedback and role modeling for two critical reasons. First, these two variables have been specifically highlighted as key dimensions of sales manager coaching (Rich 1997). Second, these variables both relate to directing salesperson behavior. Other leadership variables such as charismatic leadership, for example (e.g., Wieseke et al. 2009), may perform a motivational function but would not necessarily convey details regarding appropriate behaviors. Therefore, these two manager behaviors form the focus of our moderation hypotheses.

### Coaching newly hired salespeople with prior experience

We begin by focusing on how reinforcement feedback and role modeling interact with prior sales experience. Corporate sales training does not typically allow for frequent, non-threatening feedback as trainees are aware that failure to perform could result in personal embarrassment, negative evaluations, lower income, and termination (Gschwandtner 2007). These types of pressure, whether real or perceived, are known to adversely affect salespeople's attitudes and behavior (Boichuk et al. 2014; Bolander, Zahn et al. 2017). We suggest that this type of an environment prompts a certain level of fear of feedback because specific, direct feedback

only comes relatively infrequently (Linkner 2017) and is interpreted as a "strike" against one's competence (Dubinsky 1999). In contrast to students in a sales education program, who might receive direct feedback following every task they perform over the course of a year or more, trainees in a corporate sales training program may receive such feedback only on rare occasions, if at all (Jolles 1999).

Using the theoretical lens of CLT, we have posited that highly experienced salespeople have automated imperfect, partial schemata, thus enabling some short-term performance gains but limiting performance growth over time. Drawing from this basis, two main premises guide our hypotheses regarding how sales manager coaching behaviors will interact with new hires' prior sales experience. First, reinforcement feedback represents a potential threat to one's competence and ego (Kluger and DeNisi 1996), which is likely why so many have raised concerns about this management approach (e.g., Brown, Kulik, and Lim 2016). Newly hired salespeople with significant prior experience likely have confidence in their selling capabilities. Such individuals are likely to be resentful of direct feedback, wondering why, despite their superior performance, their manager would correct them. In turn, we expect this negative reaction to have a negative impact on salespeople's performance trajectories. Formally:

> H3: Sales manager reinforcement feedback will amplify the negative effect of prior sales experience on performance growth over time.

Second, we consider how the automation of experienced salespeople's (albeit partial) schemata affects how these individuals seek feedback. Because schema automation frees up an individual's cognitive capacity (Sweller, Van Merrienboer, and Paas 1998), these individuals have the mental bandwidth necessary to observe and respond to subtler forms of manager coaching behaviors. Moreover, since role modeling's effectiveness is predicated on the employee being aware of the behaviors being modeled (Yaffe and Kark 2011), this added cognitive capacity helps ensure that such role modeling does not go unnoticed by the salesperson. In contrast to reinforcement feedback, role modeling is not likely to be interpreted as a slight to one's competence or ego. Thus, highly experienced new hires can observe and process the subtle behaviors being modeled and then decide how to integrate these behaviors to improve future performance. As such, salespeople avoid confrontation regarding performance; essentially, they are able to leverage a role modeling manager to self-manage and avoid injury to their ego. Thus, we expect that such individuals will favor indirect methods of feedback such as role modeling and, in turn, leverage managerial role modeling into improved performance. Formally,

> H4: Sales manager role modeling will reduce the negative effect of prior sales experience on sales performance growth over time.

### Coaching newly hired salespeople from formal sales education programs

Finally, we consider how reinforcement feedback and role modeling interact with formal sales education. Formal sales

education programs create a culture of frequent feedback in a safe environment (Inks, Schetzsle, and Avila 2011; Widmier, Loe, and Selden 2007). This emphasis on direct feedback creates an environment where mistakes are seen as opportunities to learn and where the classroom becomes a laboratory for experimentation (Delpechitre and Baker 2017; Inks, Schetzsle, and Avila 2011). Because participants are able to accept direct feedback without suffering a blow to their ego, learning is enhanced (Kluger and DeNisi 1996). Moreover, this characteristic again reflects a relatively "goal-free" environment (van Merrienboer and Sweller 2005).

However, while those hired from sales educational programs benefit from learning in an environment characterized by lower cognitive load, they have not yet had the opportunity to refine their skills in a real-world setting. In other words, a low cognitive load during educational development allows for the construction of optimal schemata, but the limited time and experience does not allow for the automation of these schemata (Sweller 1994). Without automation, behaviors can be clumsy and ineffective (Sweller, Van Merrienboer, and Paas 1998), which would explain the observation that some sales trainees may potentially behave in an overly deliberate manner when they first enter the workforce (Jolles 1999). In essence, these individuals use a great deal of cognitive processing to enact their schemata initially.

Two main premises guide our predictions regarding how sales manager coaching behaviors interact with new hires' prior experience. First, individuals participating in sales education programs are accustomed to receiving and responding to direct reinforcement feedback (Inks, Schetzsle, and Avila 2011; Widmier, Loe, and Selden 2007). Consider that such individuals have received either positive or negative reinforcement feedback on every single task and assignment they have performed as part of their sales education. As a result, they are not as hindered by perceived threats to their

self-perceptions of competence from direct feedback. Instead of being perceived as a threat, feedback is desired, and even expected. This positive reception of feedback guides the new hires to greater levels of sales performance over time (Inks, Schetzsle, and Avila 2011). Formally,

> H5: Sales manager reinforcement feedback will enhance the positive effect of formal sales education on performance growth over time.

Second, recall that a new hire coming from a sales education program has likely formed high-quality schemata but has not had an opportunity to automate these schemata through experience in the field. This suggests that, while these individuals theoretically would be responsive to role modeling, they do not have the cognitive capacity required to observe and respond to such subtlety (Sweller, Van Merrienboer, and Paas 1998) or may not be able to ascertain which managerial behaviors to mimic. In other words, with all cognitive capacity being devoted to schema automation, these individuals are not able to detect the useful information contained in the manager's role-modeling behaviors. Because these salespeople cannot benefit from what they cannot detect, performance remains unaffected. Formally,

> H6: Sales manager role modeling will have no effect on the relationship between formal sales education and performance growth over time.

To summarize this section, our hypotheses are presented in the conceptual model in Figure 1 below.

## Method

### Sample descriptions and data collection

Data were collected from two firms that hire relatively large numbers of inexperienced college graduates (both with and without formal sales education) and salespeople with
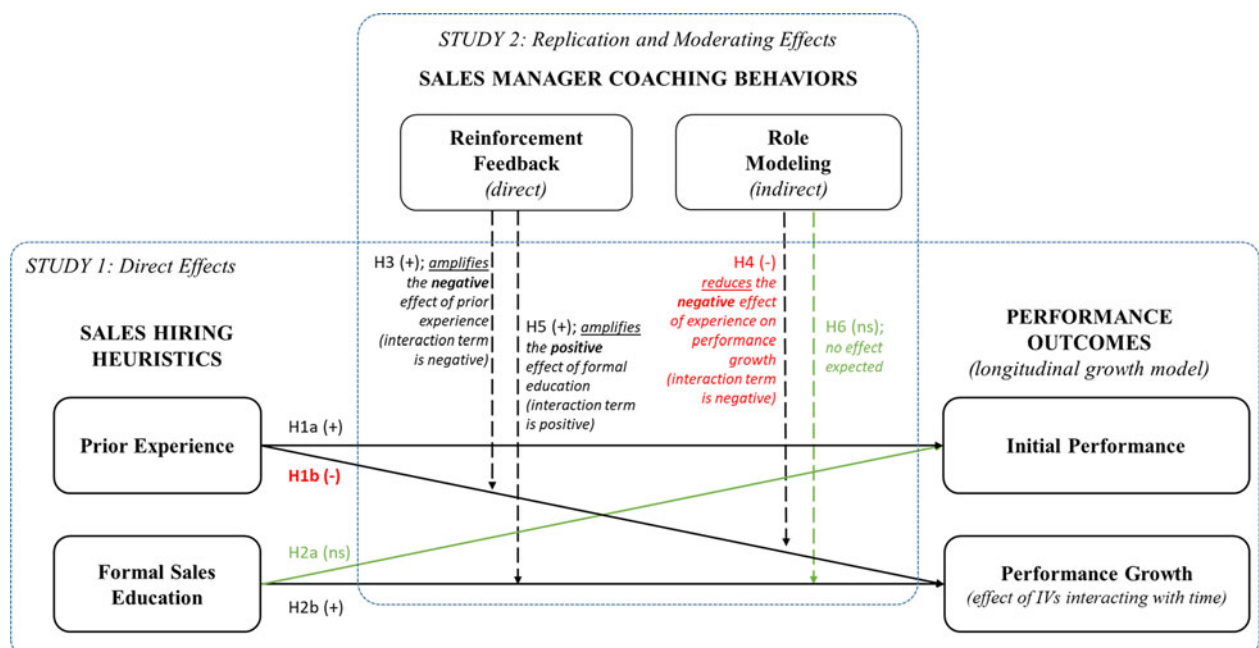


Figure 1. Conceptual model with hypotheses.

significant prior experience. In both firms, newly hired sales-people were subject to extensive screening processes (e.g., aptitude tests, multistage interviews) intended to ensure all candidates were of high quality. Thus, both firms provide an excellent context in which to examine the effects of our focal hiring heuristics – sales education and prior sales experience.

Study 1 (S1) data come from a large B2B warehouse equipment manufacturer operating in the United States. This company employs two types of salespeople – those that sell new equipment and those that sell repair parts for previous purchases – and has some salespeople on a commission-only pay structure and others on a salary-plus-commission pay plan. As a result of these intra-firm differences, we discuss a variety of control variables in the measurement section.

For S1, we use a data set that includes 474 longitudinal data points for a group of 80 salespeople hired in the prior five years who subsequently had tenure of at least 12 quarters (three years) with the organization. Each salesperson was asked to complete a survey to capture demographic and background information. Quarterly performance figures were then provided for each salesperson and matched to the survey data. Of the 80 salespeople solicited, we received complete responses from and were able to match complete quarterly performance data to 50 individuals (62.5% response rate). We were not able to collect data on sales manager coaching behaviors from sample one because these salespeople regularly switch managers. However, we were able to test the direct effects over time (H1 and H2).

To test H3 through H6 (and replicate H1 and H2), we collected additional data for Study 2 (S2). These data come from a large, US-based B2C direct sales organization that sells high-end products. All salespeople are on a single compensation plan, sell the same portfolio of products (in contrast to S1), and are located solely in large metropolitan areas of fairly comparable size and sales potential (e.g., Chicago, Dallas, New York). Salespeople in this firm operate in an open territory structure, with no assigned territories or limits on performance potential. As a result, analysis of our S2 data does not require as many control variables as in S1.

Study 2 consists of 1,909 longitudinal data points from surveys administered to a total of 202 salespeople hired in the prior 24 months. Each salesperson was asked to complete a survey to capture demographic information and their manager's coaching behaviors. In contrast to S1, salespeople at this firm worked under a consistent manager throughout their tenure. Monthly performance figures were then provided for each salesperson and matched to the survey data. Of the 202 salespeople solicited, we received complete responses from and were able to match complete performance data to 86 individuals (42.6% response rate).

## Measures

### Time

In S1 (S2), time was measured as the number of quarters (months) elapsed since the respondent's hire date and was computed from firm records. Quarters (months) were chosen because this firm tracks salesperson performance on this basis. In summary, in S1 (S2), the firm provided three years, or 12 quarters (two years, or 24 months), of post-hire performance data. In terms of time-centering (cf. Singer and Willett 2003), for both samples, a "0" value for time represents the salesperson's first period (i.e., quarter or month) on the job.

### Sales performance

In S1 (S2), sales performance was operationalized as a salesperson's quarterly (monthly) performance in dollars sold during the salespeople's first 12 quarters (24 months) on the job. This information came directly from firm records and, in contrast to the subjective performance measures that permeate the sales literature, represents a hard measure of actual performance (Plouffe et al. 2016). We feel this objective measure strengthens the validity of our models and mitigates concerns over common method bias. To account for nonnormality in the performance data prior to analysis, we performed a square root transformation.

### Prior experience and educational background

In S1, prior experience was reported in response to an open-ended question asking for the salesperson's prior experience in years. In S2, this variable was reported in response to a multichoice question with categories such as "12 months or less," "1 to 2 years," and so on. In both samples, educational background was assessed by asking respondents where they went to college, when they graduated, and whether they were involved in any type of formal sales education. Those who said they were involved in collegiate sales education were cross-referenced with published lists of known collegiate sales programs (e.g., University Sales Center Alliance and the Sales Education Foundation) to ensure valid answers. Those receiving formal sales education were coded as "1" and others as "0."

### Sales manager reinforcement feedback and role modeling

In S2 only, both reinforcement feedback and role modeling were reported by salespeople using established scales from MacKenzie, Podsakoff, and Rich (2001) and Podsakoff et al. (1990), respectively.

### Covariates

In S1, several control variables were collected. Salesperson age was self-reported. Gender was planned as a control but showed little variance and was not modeled. In an effort to control for territory potential and role characteristics, several other controls were collected in S1, including office size (i.e., number of employees), the type of product sold (i.e., new equipment versus maintenance, where 1 = new products), and the salesperson's compensation plan (i.e., whether the salesperson receives a base salary or is on 100% commission, where 1 = base salary). All of these role-related variables were pulled from firm records. In S2, we controlled only for

**Table 1.** Means, standard deviations, and intercorrelations among variables.

| Study 1: B2B equipment sales | M | SD | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 |
|---|---|---|---|---|---|---|---|
| Hiring heuristics | | | | | | | |
| 1.1 Sales education | 0.34 | 0.48 | — | — | — | — | — |
| 1.2 Sales experience | 13.9 | 10.9 | 0.10 | — | — | — | — |
| Salesperson covariates | | | | | | | |
| 1.3 Age | 38.7 | 10.6 | 0.03 | 0.81** | — | — | — |
| 1.4 Office size | 8.62 | 3.97 | −0.09 | −0.01 | −0.20 | — | — |
| 1.5 Product focus | 0.74 | 0.44 | 0.14 | 0.39** | 0.35* | 0.13 | — |
| 1.6 Compensation | 0.90 | 0.30 | −0.04 | −0.01 | −0.08 | 0.04 | −0.20 |
| **Study 2: B2C direct sales** | **M** | **SD** | **2.1** | **2.2** | **2.3** | **2.4** | **2.5** |
| Hiring heuristics | | | | | | | |
| 2.1 Sales education | 0.31 | 0.47 | — | — | — | — | — |
| 2.2 Sales experience | 4.26 | 1.41 | −0.07 | — | — | — | — |
| Manager coaching behaviors | | | | | | | |
| 2.3 Reinforcement feedback | 4.73 | 1.53 | −0.14 | 0.05 | 0.91 | — | — |
| 2.4 Role modeling | 5.44 | 1.46 | −0.07 | 0.06 | 0.04 | 0.93 | — |
| Salesperson covariates | | | | | | | |
| 2.5 Age | 28.9 | 6.72 | −0.22* | 0.77** | 0.00 | 0.11 | — |
| 2.6 Gender (Male = 1) | 0.44 | 0.50 | −0.05 | 0.16 | 0.27* | 0.10 | 0.17 |

Note: Reliabilities for latent variables are on the diagonal. Study 1, Level 1 N = 50, Level 2 N = 474; Study 2, Level 1 N = 86, Level 2 N = 1,909.
*p < .05.
**p < .01.

age and gender (where 1 = male), both of which were pulled from firm records. Since all salespeople in S2 worked in large metropolitan areas and without assigned territories, and since all salespeople were on the same compensation plan and selling the same product portfolio, no additional controls were included. All items are reported in Web Appendix B.

## Growth model analysis

### Measurement model

Across both studies, all but two variables (role modeling and reinforcement feedback, S2) are single item measures that were either pulled from, or verified against, secondary sources. Further, these two survey variables were uncorrelated ($r = 0.04$, ns), making a confirmatory factor analysis unnecessary. Table 1 displays all descriptive statistics and intercorrelations for the variables from each study. A high correlation is noted between age and experience. However, we retain age as a covariate because (1) prior research has implicated it as a key variable in developmental outcomes (Gilleard 2004), and (2) key growth parameters are not influenced by its inclusion or exclusion.

### Model specification

The data in these studies were analyzed in a two-level multi-level growth model where sales performance represents an intra-individual (i.e., time-varying) level 1 dependent variable, and time represents a level 1 predictor variable. Inter-individual factors such as prior experience, sales education, and manager coaching behaviors, along with our covariates, are level 2 predictor variables that do not change over time (Singer and Willett 2003). These level 2 variables have initial effects on sales performance (i.e., effects at the intercept) and effects that interact with time to impact sales performance growth (i.e., effects on the slope). Analysis was conducted in HMLM (Raudenbush and Bryk 2002). Table 2A presents our model specification.

For analysis, all appropriate variables (e.g., age and sales manager behaviors) are standardized (as in Ahearne et al. 2010) so that the level 2 intercepts ($\beta_{00}$ and $\beta_{10}$ for each model) represent the effects of an individual with average levels of these variables. However, prior experience remains unstandardized so that the level 2 intercepts represent effects when it is at zero. In other words, the level 2 coefficients $\beta_{00}$ and $\beta_{10}$ represent the initial performance and performance slope, respectively, of new hires without sales education or prior experience. In both studies, unrestricted error covariance structures were deemed best fitting to control for covariation between timepoints within each individual (Singer and Willett 2003).

## Growth model results

### Direct effects of hiring heuristics on sales performance (H1 and H2; S1 and S2)

Table 2B presents the results of our HLM analysis. Overall results indicate that, in both studies, the performance of new hires without prior experience or sales education increases gradually over time as one would expect ($\beta_{10} = 43.29$, $p < .001$, for S1; $\beta_{10} = 2.440$, $p < .001$, for S2). This predicted trajectory represents a baseline against which we compare our other model effects. In other words, a positive effect on sales performance growth means that this baseline positive trajectory is enhanced, whereas a negative effect means that the positive trajectory is reduced (not necessarily that the effect results in a negatively trending trajectory).

H1 suggested that higher levels of prior sales experience would have a positive effect on initial sales performance (H1a) but a negative effect on performance growth over time (H1b). Again, both samples provide consistent results that support this hypothesis – showing a positive effect of prior experience on initial performance ($\beta_{06} = 7.047$, $p < .01$, for S1; $\beta_{04} = 10.742$, $p < .01$, for S2) but a negative effect on performance growth over time ($\beta_{16} = -1.302$, $p < .001$, for S1; $\beta_{14} = -0.379$, $p < .05$, for S2). H2, by contrast, suggested that pre-hire participation in formal sales

**Table 2.** Effects of hiring heuristics and manager coaching on newly hired salesperson performance over time.

| A: Model specification | | |
|---|---|---|
| | Study 1: B2B equipment sales | Study 2: B2C direct sales |
| Level 1: | $Y_{ti} = \pi_{0i} + \pi_{1i}(TIME_{ti}) + e_{ti}$ | $Y_{ti} = \pi_{0i} + \pi_{1i}(TIME_{ti}) + e_{ti}$ |
| Level 2: | $\pi_{0i} = \beta_{00} + \beta_{01}(AGE_i) + \beta_{02}(SIZE_i) + \beta_{03}(PROD_i)$ $+ \beta_{04}(COMP_i) + \beta_{05}(SLSED_i) + \beta_{06}(EXP_i) + r_{0i}$ | $\pi_{0i} = \beta_{00} + \beta_{01}(AGE_i) + \beta_{02}(GEN_i) + \beta_{03}(SLSED_i) + \beta_{04}(EXP_i) +$ $\beta_{05}(ROLE_i) + \beta_{06}(REIN_i) + \beta_{07}(SLSED_i \times ROLE_i) + \beta_{08}(EXP_i \times ROLE_i) + \beta_{09}(SLSED_i \times REIN_i) + \beta_{010}(EXP_i \times REIN_i) + r_{0i}$ |
| | $\pi_{1i} = \beta_{10} + \beta_{11}(AGE_i) + \beta_{12}(SIZE_i) + \beta_{13}(PROD_i)$ $+ \beta_{14}(COMP_i) + \beta_{15}(SLSED_i) + \beta_{16}(EXP_i) + r_{1i}$ | $\pi_{1i} = \beta_{10} + \beta_{11}(AGE_i) + \beta_{12}(GEN_i) + \beta_{13}(SLSED_i) + \beta_{14}(EXP_i) +$ $\beta_{15}(ROLE_i) + \beta_{16}(REIN_i) + \beta_{17}(SLSED_i \times ROLE_i) + \beta_{18}(EXP_i \times ROLE_i) +$ $\beta_{19}(SLSED_i \times REIN_i) + \beta_{110}(EXP_i \times REIN_i) + r_{1i}$ |

| B: Estimation results | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Level 1 Predictors | | | | | | | |
| | Study 1: B2B equipment sales | | | | Study 2: B2C direct sales | | | |
| | Intercept | | Time | | Intercept | | Time | |
| Level 2 predictors | Covariate only | Full model | Covariate only | Full model | Covariate only | Full model | Covariate only | Full model |
| **Hiring heuristics** | | | | | | | | |
| Intercept | 242.18*** | 99.90 | 17.98* | 43.29*** | 136.32*** | 88.809*** | 1.087*** | 2.440*** |
| | (62.19) | (54.31) | (8.540) | (5.709) | (4.656) | (17.249) | (0.206) | (0.729) |
| Prior sales experience | | 7.047** | | −1.302*** | | 10.742** | | −0.379* |
| | | (1.996) | | (0.185) | | (3.984) | | (0.168) |
| Sales education | | −54.41 | | 8.117* | | 4.056 | | 0.717* |
| | | (27.58) | | (3.004) | | (7.448) | | (0.313) |
| **Manager coaching (S2 only)** | | | | | | | | |
| Reinforcement feedback | | | | | | 3.515 | | 1.022* |
| | | | | | | (12.63) | | (0.545) |
| Role modeling | | | | | | −20.053* | | 1.361** |
| | | | | | | (10.87) | | (0.509) |
| Sales exp. × Rein. feedback | | | | | | 0.651 | | −0.240* |
| | | | | | | (7.140) | | (0.120) |
| Sales exp. × Role modeling | | | | | | 5.703** | | −0.291** |
| | | | | | | (2.386) | | (0.107) |
| Sales ed. × Rein. feedback | | | | | | −5.503 | | −0.047 |
| | | | | | | (7.140) | | (0.301) |
| Sales ed. × Role modeling | | | | | | −8.097 | | 0.150 |
| | | | | | | (7.043) | | (0.291) |
| **Control variables** | | | | | | | | |
| Salesperson age | −1.457 | −93.046*** | −6.347* | 10.823*** | 11.101** | −2.991 | −0.512*** | 0.176 |
| | (17.56) | (22.94) | (2.472) | (2.242) | (3.522) | (5.577) | (0.155) | (0.229) |
| Salesperson gender (S2 only) | | | | | −16.931** | −20.163 | 0.375 | 0.482 |
| | | | | | (7.051) | (7.106) | (0.307) | (0.304) |
| Office size (S1 only) | −4.603 | −33.55* | −4.055 | 1.578 | | | | |
| | (16.69) | (14.33) | (2.251) | (1.432) | | | | |
| Product focus (S1 only) | 302.34*** | 373.81*** | −17.730** | −31.46*** | | | | |
| | (41.17) | (35.56) | (6.017) | (4.099) | | | | |
| Compensation (S1 only) | −226.61*** | −188.16*** | 32.360*** | 27.87*** | | | | |
| | (53.00) | (43.86) | (7.274) | (4.661) | | | | |
| −2LL | 6,314.33 | 6,302.15 | | | 18,971.73 | 18,950.58 | | |
| ΔChi-square | – | 12.18(4)** | | | – | 21.15(16)† | | |

*$p < .05$.
**$p < .01$.
***$p < .001$.
†$p < .10$ (one-tailed significance tests). Note: Dependent variable, $Y_{ti}$, is the level of salesperson i's sales performance (sqrt transformed) at time t. This value is determined at level 1 by time ($TIME_{ti}$) since their individual hire date. At level 2, the intercept and slope terms in our level 1 models are predicted by a new hire's sales education ($SLSED_i$) and prior sales experience ($EXP_i$) along with controls and interactions (S2 only). S1 controls include salesperson age ($AGE_i$), office size ($SIZE_i$), product focus ($PROD_i$), and compensation plan ($COMP_i$). S2 controls include salesperson age ($AGE_i$) and gender ($GEN_i$; 1 = male).

education would have a positive effect on sales performance growth over time (H2b) but no effect on initial performance (H2a). Both samples provide consistent results that support this hypothesis – showing no effect of sales education on initial performance ($\beta_{05} = -54.41$, ns, for S1; $\beta_{03} = 4.056$, ns, for S2) but a positive effect on growth ($\beta_{15} = 8.117$, $p < .05$, for S1; $\beta_{13} = 0.717$, $p < .05$, for S2). These predicted performance trajectories are plotted in Figure 2, where the top panel shows the results for S1 (B2B) and the bottom panel shows the results for S2 (B2C). These trajectories are presented in terms of real (i.e., untransformed) dollars for interpretation purposes.

### Interactive effects of coaching behaviors and hiring heuristics on sales performance (H3 through H6; S2 only)

H3 predicted that reinforcement feedback would amplify the negative effect of prior experience on performance growth
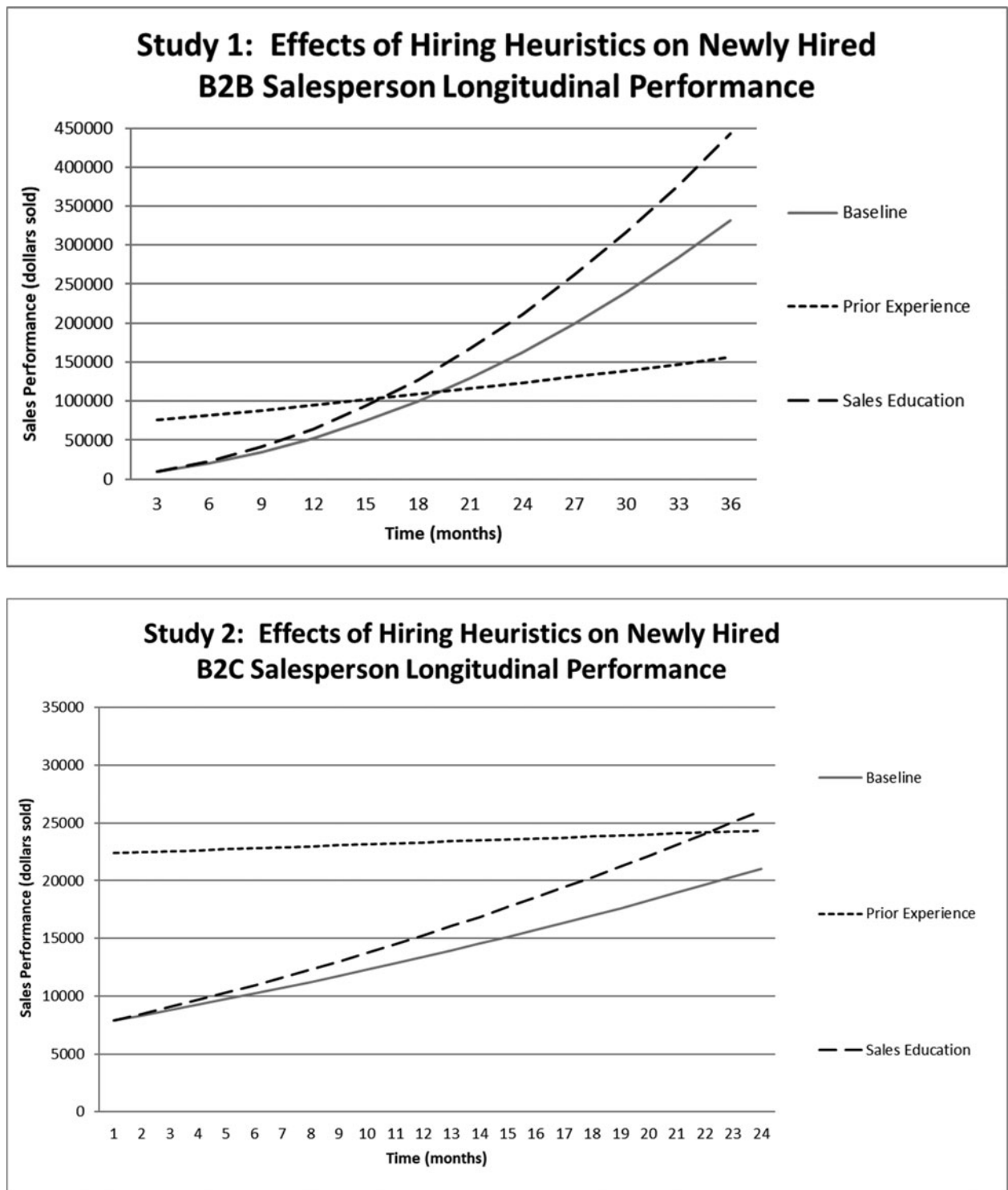
**Figure 2.** Predicted newly hired salesperson performance trajectories.
Note: Results have been re-converted into real dollars for interpretation purposes. "Sales experience" indicates an experience level +1 standard deviation above the sample average. Sample 1 (B2B) includes three years of objective quarterly performance data. Sample 2 (B2C) includes two years of objective monthly perform- ance data.

(i.e., make the relationship more negative). Results support this prediction ($\beta_{110} = -0.240$, $p < .05$), and as described in the preceding paragraph, this negative effect more than attenuates the positive direct effect. Conversely, H4 predicted that role modeling would reduce the negative effect of prior experience on performance growth. Results do not support this prediction, revealing a slight negative effect on growth

instead ($\beta_{18} = -0.291$, $p < .01$). However, while not hypothe- sized, results also reveal a positive effect of role modeling on the relationship between experience and initial performance ($\beta_{08} = 5.703$, $p < .01$). In other words, role modeling does benefit the sales performance of new hires with prior experi- ence but does so by affecting initial performance rather than the growth rate – supporting our sentiment if not our exact

prediction. It may seem peculiar that manager role modeling affects salesperson performance so quickly – seemingly before newly hired salespeople have had much chance to monitor and observe their manager's behaviors – yet this is exactly what the model suggests. We believe that this may indicate that these highly experienced new hires are looking to their managers as role models very quickly, perhaps in an effort to detect some superficial behaviors they can emulate. This would perhaps also explain the negative effect on growth in that without deep learning, performance eventually suffers.

H5 predicted that reinforcement feedback would enhance the positive effect of sales education on performance growth. Results reveal a positive direct effect of reinforcement feedback on performance growth that affects inexperienced salespeople both with and without formal sales education ($\beta_{16} = 1.022$, $p < .05$). This positive effect is nullified for those with prior experience by the negative effect revealed in the preceding in relation to H3 ($\beta_{110} = -0.240$, $p < .05$) and therefore only serves to benefit new hires without prior experience. So, while H5 is not precisely supported, we note that those with sales education do benefit from reinforcement feedback due to reinforcement feedback benefitting those new hires with and without formal sales education but not with significant prior experience.

Conversely, H6 predicted that role modeling would have no effect on the relationship between sales education and performance growth. Instead, we find a negative effect on the initial performance ($\beta_{05} = -20.053$, $p < .05$) and a positive effect on performance growth ($\beta_{15} = 1.361$, $p < .05$) of role modeling when used with inexperienced hires (regardless of sales education). These effects are essentially nullified by the interactive effects discussed in relation to H4 (i.e., $\beta_{08} = 5.703$, $p < .01$, and $\beta_{18} = -0.291$, $p < .01$) and therefore only affect inexperienced new hires. These predicted performance trajectories are plotted in Figure 3, where the top panel focuses on the results of the interaction of sales manager coaching and prior experience and the bottom panel focuses on the results of the interaction of sales manager coaching and sales education. As before, these trajectories are presented in terms of real dollars.

## General discussion

Overall, this research attempts to shed light on sales hiring heuristics. Study 1 utilized a B2B data set to assess the initial performance levels and performance growth of new hires according to their level of prior sales experience and whether they had participated in formal sales education. Results show that one's level of prior experience enhances initial performance while inhibiting performance growth. Conversely, formal sales education enhances performance over time but not initially. These main effects are replicated in S2 using a B2C sample, providing support for the generalizability of the results. We also tested the interaction between prior sales experience and sales education in our analyses and found no significant effects. This is likely due to our data sets revealing very little overlap between these two variables, thus adding further support to our contention

that these two heuristics have differential impact on initial performance and performance growth.

The influence of sales manager coaching is also assessed in S2, revealing that reinforcement feedback amplifies the performance benefit of sales education but not the effect of prior experience level. Conversely, role modeling enhances the performance benefit of prior experience level but has mixed effects with sales education (initially reducing performance but enhancing performance growth). Indeed, the finding of countervailing effects (negative on the intercept, positive on the slope) for inexperienced new hires (both with and without sales education) suggests that role modeling is perhaps a more complicated phenomenon than it may appear at first blush. That is, it may take salespeople time to know which managerial behaviors to emulate and which to ignore. Indeed, initial performance outcomes may be undermined due to inexperienced and confused salespeople blindly modeling managerial behaviors. However, as time goes on, we surmise that salespeople learn to model only those behaviors that lead to measurable performance gains.

Finally, though we do not measure mental models directly, we attempt to shed light on the differences in them by conducting post hoc analyses with two additional data sets (detailed in the Web Appendix A). Results reveal variance in achievement and other relevant individual variables, providing a glimpse into the differences between the mental models associated with each hiring heuristic. The results presented here offer significant implications for both scholars and practitioners, which we discuss in the following.

## Scholarly contributions

We extend the literature on TMM and CLT to assess the impact of experience and education on longitudinal, objective sales performance. Whereas past research has largely considered the direct effects of mental models on outcomes cross-sectionally, we are able to assess performance outcomes over time. Our hope is that, by moving beyond static examinations of model effects to a more dynamic view, scholars will be able to follow our lead by applying these concepts across a variety of marketing phenomena (see Bolander, Dugan, and Jones 2017).

Rather than merely reaffirming the utility of TMM, we offer a critical refinement of the theory by illuminating the importance of accounting for temporal effects and subsequent contextual interactions, an important contribution (Whetten 1989). We also contribute to the work on CLT by suggesting how variance in cognitive loads during the formation of mental models and schemata leads to enduring variance in performance outcomes. We also assert that the cognitive load in a formative context affects the bandwidth available to perceive and process feedback in a new context, an important and previously unknown consideration in selecting appropriate managerial strategies to enhance performance levels of newly hired salespeople.

We also aid scholarship by providing a first step toward specifying the content of salesperson mental models on the
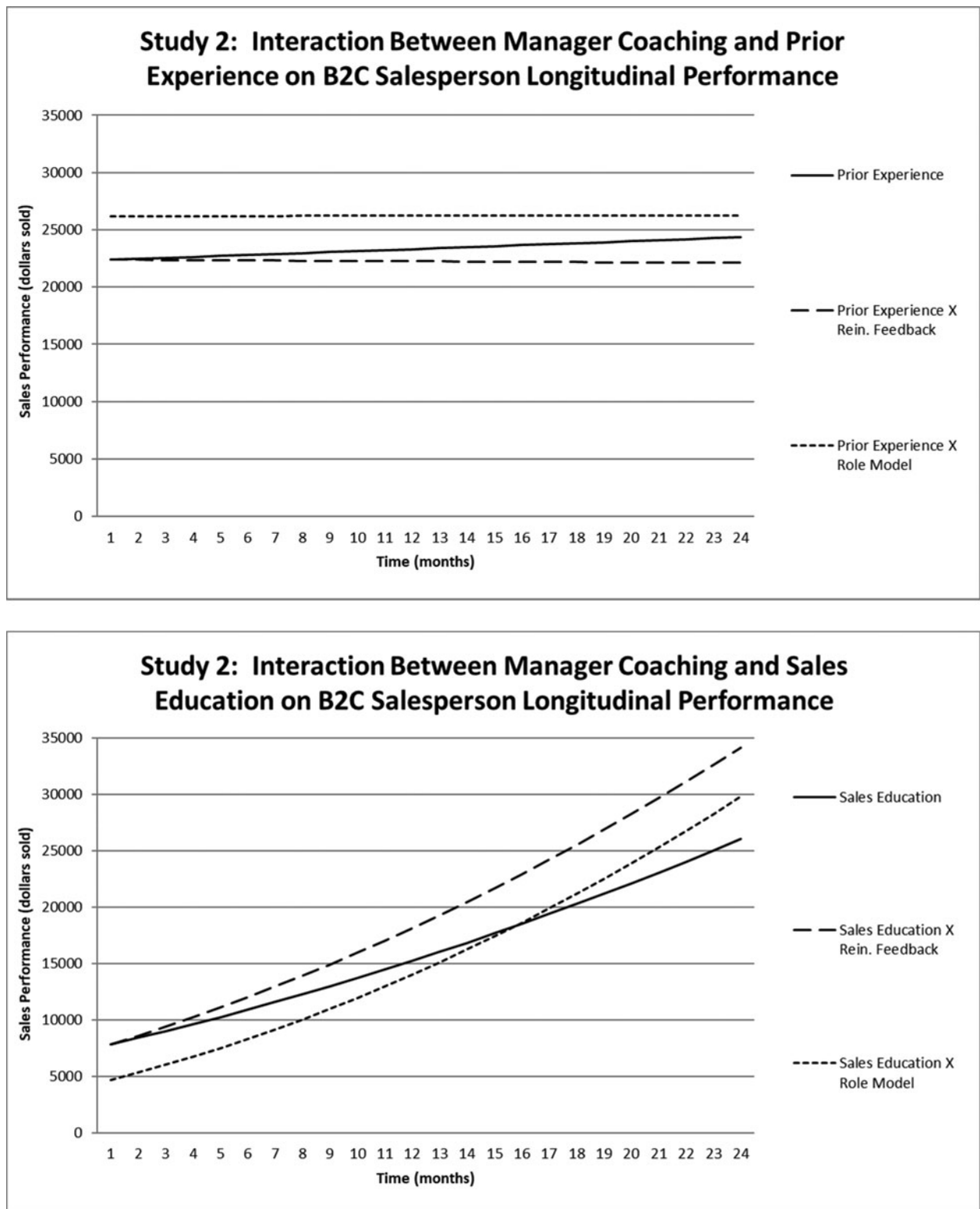
**Figure 3.** Effect of manager coaching on newly hired salesperson performance trajectories.
Note: Results have been re-converted into real dollars for interpretation purposes. "Sales experience" indicates an experience level $+1$ standard deviation above the sample average. Sample 1 (B2B) includes three years of objective quarterly performance data. Sample 2 (B2C) includes two years of objective monthly performance data.

basis of prior experience and educational background. Specifically, Web Appendix A identifies some variables that differ between our focal hiring heuristics and may serve as clues for future research in this area. To summarize briefly, salesperson performance orientation is found to be positively

(negatively) associated with sales education (prior experience). Further, sales education relates positively to both attitude toward connecting and in-group ties, while higher levels of experience relate negatively to external social capital development. Given the considerable attention paid of late

**Table 3.** Mental model characteristics, expected performance trajectories, and recommended organizational characteristics by hiring heuristic, relative to rookies without formal education or prior on-the-job experience.

| | On-the-job experience | Formal sales education |
|---|---|---|
| Mental model characteristics | | |
|   Implicit cognitive load | Higher | Lower |
|   Extraneous cognitive load | Higher | Lower |
|   Schemata optimization | Lower | Higher |
|   Process focus | Lower | Higher |
|   Product focus | Higher | Lower |
|   Field testing | Higher | Lower |
| Expected performance trajectories | | |
|   Initial performance | Higher | Lower |
|   Performance growth | Lower | Higher |
| Recommended for organizations with … | | |
|   Average tenure | <18 months | >18 months |
|   Ideal manager behavior | Role modeling | Reinforcement feedback |
|   Social interdependence* | Low | High |

*(See Web Appendix A for background)

to the importance of social ties (e.g., Bolander et al. 2015; Bolander and Richards 2018; Claro and Ramos 2018; Gonzalez and Claro 2019; Gonzalez, Claro, and Palmatier 2014; Rouziou et al. 2018), these discoveries are important and timely.

## Managerial implications

Practitioners can benefit greatly from this research. First, on a broad level, we address the time-worn question of whether sales organizations should hire individuals with prior sales experience or novices without real-world experience. At the outset of this manuscript, we illustrated that this seemingly simple question has been a matter of enduring controversy for sales organizations (e.g., Searcy 2012; Zoltners, Sinha, and Lorimer 2012). Whereas plenty of practitioners fall on either side of this argument, many of these individuals express only anecdotal justification for their stance; empirical evidence has remained sparse for decades. Grounded in TMM and CLT, the present research makes a significant stride toward resolving this gap and sheds light on what managers should expect if adopting either heuristic approach to hiring.

As with most questions, the answer is not black and white. Experience level and formal sales education have distinct, time-dependent effects on new hire performance. For example, our research supports the popular notion that high levels of prior experience enable initial performance gains (see Zoltners, Sinha, and Lorimer 2012). Of course, this finding does not represent a decisive endorsement for hiring experienced salespeople either as prior experience inhibits performance growth. In fact, Figure 2 reveals the performance trajectory of a highly experienced (+1 SD) new hire to be nearly flat, showing that, despite contributing to strong initial performance, experience level does not bolster salespeople's performance growth over time.

On the other hand, our findings show that sales education does not amplify performance initially but does enhance performance growth. Again, while hiring individuals with formal sales education appears to represent an optimal long-term strategy, these results should not be taken as a universal endorsement of this strategy. For example, some industries (retail, insurance; see Mayer and Greenberg 2006;

Ramaseshan 1997) have little expectation of keeping a newly hired salesperson for the amount of time that would be required to reap superior performance (specifically, a little over one year in S1 and between 1.5 and two years in S2). In these rapid turnover environments, it may be advisable to weigh prior experience more heavily in the hiring decision to better capture some performance benefit. In addition, salespeople in some industries – such as financial securities – may be in a unique position where prior product knowledge is vital, and where burnout and corresponding turnover are high. In this instance, hiring experienced salespeople may also be an optimal hiring strategy. However, it should also be noted that a hiring strategy based on a mix of experienced and collegiately trained salespeople may be appropriate in industries where products are both complex and dynamic (such as technology). In this instance, both prior product knowledge and flexible and adaptable mental schemata would likely contribute to initial and sustained performance success.

Second, we address the interaction of prior sales experience and formal sales education with sales manager coaching behaviors on newly hired salesperson performance. Our results show that the impact of each manager behavior – reinforcement feedback and role modeling – varies greatly depending on the salesperson's prior experience level and sales education. Specifically, reinforcement feedback amplifies the advantages of sales education but exacerbates the negative effects of sales experience. By contrast, role modeling amplifies the performance effects of prior experience level but has a more nuanced relationship with sales education – initially reducing performance but enhancing performance growth over time.

Although we predicted these manager variables would exhibit their effects on performance growth over time, in some cases, these manager behaviors alter the intercept of salespeople's performance. This detail does not change our prescriptions to managers (i.e., to use reinforcement feedback with sales-educated new hires and to use role modeling with experienced salespeople, and perhaps carefully with sales-educated new hires) but does reveal that manager behaviors do not always require much time to take effect. In the long run, and keeping the caveats regarding turnover expectations in mind, the salesperson armed with an

education-based mental model still represents the new hire with the highest long-term performance potential, especially when paired with a manager who provides direct reinforcement feedback and, though perhaps further into the salesperson's tenure, engages in role modeling.

These recommendations, detailed in Table 3, lead us back to our opening dialog, where we discussed the risks associated with poor hiring decisions and the looming mass retirement of baby boomers (Kramer 2013). In the past, prior experience has been the easiest heuristic for sales hiring, but the present research provides evidence of a new heuristic and explicates the tradeoffs associated with the use of each. For wise sales firms, the hiring process of the future will look much different from that of the past, and this research points them in the right direction.

### Limitations and future research

Our work is not without limitations, which, nevertheless, offer fruitful opportunities for future research. First, given our focus on newly hired, early career salespeople, we believe our three-year (S1) and two-year (S2) time frames are highly appropriate for the study context. Nonetheless, longitudinal research always seems to beg the question "what happens next" (Bolander, Dugan, and Jones 2017). For example, our finding (represented in Figure 2) that collegiately educated salespeople begin to "take off" after 15 months (21 months) in the B2B (B2C) sample and surpass in performance their more experienced counterparts begs the question of whether this is contingent upon product or other complexities involved in the sales process. Future research should examine some of these relationships over longer periods, during other stages of a salesperson's career, or in different sales contexts from what was examined here. Moreover, as collegiate sales programs become more common (Sales Education Annual 2017), it may be worth examining whether collegiately educated salespeople from older, more established programs experience quicker ramp-up times than their counterparts from more recently established programs. It should also be noted that students who choose to partake, versus not partake, in collegiate sales education may also differ on other individual difference variables (perhaps such as "grit;" see Dugan et al. 2019) that are beyond the scope of the current study but may be worthy of future examination.

Second, while we use data from both B2B and B2C contexts, additional research examining different types of sales contexts (inside sales, for example) and other industries (e.g., technology, financial instruments) may be warranted. Third, we were not able to verify the theoretical mediators that link our predictors to performance outcomes. While our post hoc analyses suggest some avenues for further exploration (see Web Appendix A), there is very likely more to be learned in this regard. Scholars could go a step further and measure the cognitive loads of different training environments.

Fourth, the focus on this work was on sales manager coaching behaviors (Rich 1997), yet other leadership behaviors may also warrant testing in future work. For example, charismatic leadership behaviors (Wieseke et al. 2009) or servant leadership behaviors (e.g., Jaramillo et al. 2009) may exhibit unique and interesting effects on newly hired salesperson trajectories. Moreover, the managerial variables used in the study were self-reported from the perspective of the salesperson. Future research could utilize other perspectives, such as manager self-reports.

Fifth, while the mental models and heuristics that were examined in this research center on prior experience and sales education, salespeople may employ a variety of schemata and mental models through which they make sense of their professional lives. For example, some salespeople may employ mental models that are derived from their personal lives or macroeconomic factors (e.g., "a great recession mind-set") that are beyond the scope of the present research. Nevertheless, such mental models – and their subsequent effects on sales performance – would be worthy of future examination. Finally, prior experience itself can be conceptualized in multiple ways, from years of overall sales experience to years working within a particular industry or company. Future research could examine whether different forms of prior experience produce different results from what was obtained in the current study.

### Note

1. CLT uses the term "schema" or "schemata" rather than "mental model." For the purposes of this work, we consider them more or less interchangeable, with the caveat that schemata focus on information alone, whereas mental models can be thought of more broadly as including aspects of an individual's mind-set and dispositions (Holland et al. 1986).

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