SALESPERSON INTUITION: ITS CRITICAL ROLE AND ANTECEDENTS

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Zachary Ryan Hall

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SALESPERSON INTUITION: ITS CRITICAL ROLE AND ANTECEDENTS

ABSTRACT

Salespeople's ability to accurately assess customer needs is clearly important for successful salesperson-customer interactions. While adaptive selling is a popular sales approach for assessing customer needs, its foundation appears incomplete. Building on thin slices of behavior research from social psychology, the adaptive selling approach is missing a critical component: salesperson's ability to intuit customers' shopping intentions. Through two essays, we investigate salespeople's ability to predict individual customer's shopping needs prior to the verbal interaction with the customer. We term this ability, salesperson intuition.

In Essay 1, we conduct two studies to investigate both the role and antecedents of salesperson intuition in selling situations with short sales cycles. In study 1, we find that accurately assessing customer needs intuitively and trusting this intuition is critical to sales success. In study 2, we study the origins of accurate intuitive judgments of customer needs and compare it with the origins of accurate judgments based on verbal interactions.

In Essay 2, we investigate how the effects of antecedents of intuition vary at different stages of a salesperson's career. Specifically, despite the overwhelming power of intuitive judgments as shown in Essay 1, expert intuition research suggests that extensive experience within a particular domain is necessary for the proper utilization of intuition. Employing research from social intuition, expert intuition, and learning goals, we seek to identify mechanisms that firms can use to improve the intuition accuracy of both experienced and inexperienced salespeople.

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ABSTRACT

Adaptive selling research suggests salespeople's ability to assess customer needs accurately is important for successful buyer-seller interactions. Employing research on "thin slices of behavior" from social psychology, we argue that a critical, missing component of adaptive selling is salespeople's ability to intuit customers' needs before an interaction, based on nonverbal cues. We conducted two studies in a retail setting, analyzing 330 salesperson–customer dyads to examine salespeople's intuition of customer needs. In Study 1, we find that accurately assessing customer needs intuitively and trusting this intuition is critical to sales success. It increases customers' likelihood to purchase and how much is spent, and reduces the time taken to sell to customers. We found that an accurate assessment of customers' needs following verbal interactions, with first time customers in short-lived retail encounters, does not overcome inaccurate intuitions. In Study 2, we study the origins of accurate intuitive judgments of customer needs and compare it with the origins of accurate judgments based on verbal interactions, and find that these origins tend to be distinct.

INTRODUCTION

"We live in a world that assumes that the quality of a decision is directly related to the time and effort that went into making it...We believe that we are always better off gathering as much information as possible and spending as much time as possible in deliberation. We really only trust conscious decision making. But there are moments, particularly in times of stress, when haste does not make waste, when our snap judgments and first impressions can offer a much better means of making sense of the world… [D]ecisions made very quickly can be every bit as good as decisions made cautiously and deliberately." (Gladwell 2005, p. 13)

A fundamental premise of the marketing concept is the understanding of customer needs (Kotler and Keller 2011). However, little research has studied the customer need identification process at a micro-level. Particularly, studies focused on the customer need identification process at the salesperson-customer level are few and far between (for exceptions, see Homburg, Wieseke, and Bornemann 2009; Weitz 1978).

For salesperson–customer interactions, the adaptive selling sales approach provides a process for assessing customer needs and has received widespread support for positive customer and firm outcomes in the past 30 years, particularly in business-to-business (B2B) sales (Franke and Park 2006; Sujan, Weitz, and Kumar 1994). Adaptive selling is founded on two general principles. First, salespeople should attempt to accurately identify and understand customers' needs (Weitz 1981). Weitz, Sujan, and Sujan (1986) argue that in assessing these customer needs, the use of surface-level information about the customer is far inferior to and less diagnostic than that of underlying information gathered during the salesperson–customer interaction. Second, after assessing customers' needs, salespeople should adapt and personalize their sales strategies to those needs. This research suggests that (1) accuracy in salespeople's assessments of customers' needs is important for their success and (2) this accuracy is

compromised if salespeople rely on surface characteristics of customers. The purpose of this research is to challenge the validity of the second suggestion.

Although adaptive selling has received much attention in B2B research, little research has attempted to test the efficacy of adaptive selling sales in a retail setting. Retail sales differ significantly from B2B sales in ways that may limit the applicability of adaptive selling principles. In retail sales, sales cycles are significantly shorter than those in B2B sales. Thus, salespeople have limited time to gather information on customer needs; they often must be quick in making these assessments either because the customer or they themselves have other things that need to be done (Surprenant and Solomon 1987). Much of the information gathered in the time-constrained world of retail sales is based on surface-level, non-verbal cues (e.g., facial expressions, expressive behaviors, style of dress, ethnicity, gender). Indeed, retail management practice confirms the importance of accurate first impressions; for example, Best Buy trains its sales associates to use surface-level cues to profile customers quickly into various buying types so that they can apply the appropriate selling strategy (Boyle 2006).

Through two studies, we examine how salespeople in a single retail-selling situation personalize their sales approach for each customer. Study 1 investigates how a salesperson's accuracy in being able to judge customer needs based on intuition and based on a subsequent verbal interaction interacts in determining a given customer's likelihood of purchase and how much he or she spends. Is salesperson accuracy following a verbal interaction sufficient to achieve these performance outcomes? Also, can good intuition be wasted; that is, does accurate salespeople's first impressions of their customers, when discarded during the verbal interaction, compromise the performance

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outcomes? Study 1 also investigates the interactive effect of intuitive and knowledge judgments on the duration of the sales encounter. Do accurate knowledge judgments different from intuitive judgments lengthen the duration of the sales encounter? Finally, the study tests the folklore that retail salespeople tend to be accurate in intuiting their customers' budgets and purchase intentions. Subsequently, Study 2 provides a glimpse at the mechanisms that drive accurate salesperson intuitions. Specifically, what factors affect the accuracy of salespersons' intuitive judgments? Then, do these factors differ from those that lead to accurate knowledge judgments?

To investigate the applicability of accurate first impressions in retail sales settings, we draw on research on person perception from social psychology. For social interactions, accurately identifying aspects about a person is critical to the success of the interaction (Bodenhausen, Macrae, and Hugenberg 2003; Funder 2003). Earlier research suggested that attaining more information about a person increases a perceiver's accuracy. More recently, research on first impressions, specifically thin slices of behavior, or the ability to make judgments based on "thin slices" or narrow windows of experience, has consistently demonstrated that people are able to make accurate predictions about strangers' traits, intentions, and behaviors based only on small amounts of information (Ambady, Krabbenhoft, and Hogan 2006; Ambady and Rosenthal 1992; Gray 2008; Jussim et al. 2009; Lee, Jussim, and McCauley 1995). These thin slice judgments are often as accurate as and more efficient (i.e., require less time) than those based on more information and deliberative thinking (Gladwell 2005).

With a comprehensive data set involving dyadic data from salespeople and customers before, during, and after salesperson–customer interactions, we investigate the

level of accuracy of salespeople's first impressions of potential customers, the effect of this accuracy on the outcome of the salesperson–customer interaction, and the origins of salesperson intuition. The findings make three important contributions to the sales and marketing literature. First, being able to accurately assess customer needs intuitively, before a verbal conversation, is critical to sales success. Accurate intuitions increase a customer's likelihood to purchase and how much he or she spends unless these accurate intuitive judgments are discarded during the course of verbal interactions. Even if salespeople accurately assess customers needs following verbal interactions, inaccurate intuitions lead to lower likelihoods of purchase and purchase amounts. Second, when salespeople have accurate intuitions and do not discard this intuition, the duration of the sales encounter is less than those situations where salespeople begin with inaccurate judgments and correct their judgments over the course of the verbal interaction. These are powerful findings because they suggest that accurate intuition enables salespeople not only to be more effective but also to take less time with a customer: intuition enables working smarter! Third, while some similarities exist, factors that drive accurate salesperson intuitive judgments are distinct from those associated with accurate knowledge judgments.

We organize this paper as follows: We first provide a summary of how person perception applies to retail sales. Here, we theorize how previous research on thin slices of behavior applies to salesperson effectiveness in retail sales settings. Then, we present the research hypotheses, describe our methodology, and report our empirical results. We conclude with a general discussion of implications and directions for future research.

PERSON PERCEPTION IN RETAIL SALES SITUATIONS

Person perception, also known as social perception, is the process by which a person uses information about another person to perceive traits, characteristics, states, behaviors, and intentions of that person. The importance of person perception for successful social interactions is well documented in social psychology (Funder 1987; Heider 1944; Morrison and Bellack 1981; Nisbett and Ross 1980; Ones, Viswesvaran, and Schmidt 1993). According to Bodenhausen, Macrae, and Hugenberg (2003, p. 257), "[the] capacity to understand the minds of others is so central to successful human functioning that when it is compromised, the consequences are often devastating." Two important aspects regarding person perception are (1) the process by which people make judgments about others and (2) the accuracy of these judgments. In the following sections, we use the sales literature to show that these two aspects of person perception play an important role in successful sales exchanges.

Person Perception Process

Building on the work of Trope (1986) and Quattrone (1982), Gilbert et al. (1988) recommend a process of person perception that consists of three distinct stages: categorization, characterization, and correction. As personal selling is a social process, salespeople should follow the same person perception process when making judgments about customers as individuals do in other social interactions.

Categorization. Categorization is an automatic process (Gilbert, Pelham, and Krull 1988) by which people classify an individual target on the basis of that target's similarity to a group (Macrae and Bodenhausen 2000). The process of categorization is a necessary means for people to make simple, efficient judgments about others because humans are constrained by cognitive resources (Bodenhausen 1988). In their discussion

on effective selling, Weitz, Sujan, and Sujan (1986, p. 178) describe a similar situation in which "people naturally divide the world into categories so that objects, people, or events within a category can be treated similarly and differentiated from objects, people, or events in other categories."

Characterization. After people categorize a target, they draw on relevant knowledge to make predictions about the target's behavior (Ross and Spalding 1994). This characterization is an automatic process based on overlearned past experiences and knowledge (Gilbert, Pelham, and Krull 1988). Thus, while adaptive selling suggests that judgments of customers should come from deep knowledge obtained during the sales interaction, person perception literature argues that salespeople automatically categorize and characterize customers based on surface cues (i.e., non-verbal cues and/or pattern recognition) prior to even verbally interacting with the customer.

Correction. The correction stage of person perception is a controlled, effortful, and cognitive process by which people correct their initial categorization and characterizations if they believe it is wrong (Gilbert, Pelham, and Krull 1988). The process of person perception is an automatic and relatively effortless process when initial perceptions are correct. However, when people believe they made incorrect, initial person perceptions, they undergo an effortful process to correct those perceptions. For example, Sujan, Bettman, and Sujan (1986) find that customers paid careful, effortful attention to a salesperson's product arguments *only* when their characterization of the salesperson was contradicted by the behavior they observed.

Accuracy in Person Perception

Jussim (2005) argues that the key aspect of person perception is not the process itself but rather the accuracy of the categorization and characterizations. Typically, accuracy involves evaluating judgments of sTable 1.criterion, usually a person's traits. In sales, salespeople must accurately assess many relevant criteria beyond customer traits, such as the customer's purchase likelihood, how much the customer is likely to spend, and his or her needs, so that they can select the appropriate selling strategy. While self-reported criteria by targets typically include many biases that become problematic when assessing accuracy, in the sales context, only customers can evaluate their own intentions. Consistent with Ambady and Rosenthal's (1992) observation that most criteria involve judgments as well, customers' self-reported responses should be considered the truth and are the best representation of their shopping intentions.

Conventional wisdom would suggest that perceptual accuracy should increase with more information, higher quality information, and more time spent interacting with the customer. Sujan, Weitz, and Sujan (1988) make this same assumption in their discussion of adaptive selling in B2B sales. Despite the logic that more information should lead to increased accuracy of personal judgments, research on accuracy of first impressions has shown that this is not necessarily the case.

The terms "stereotype," "first impression," "thin slices of behavior," and "zero acquaintance" have been used interchangeably to describe situations in which people make quick, person perception judgments about others. A growing body of research demonstrates that in many contexts, these judgments are extremely accurate (Ambady and Rosenthal 1992; Carney, Colvin, and Hall 2007; Jussim 2005; Jussim et al. 2009).

The ability to make accurate first impressions is an important social skill that is independent of other cognitive skills and can be trained (Hall and Andrzejewski 2008; Rosenthal 1978). According to previous research, people who possess this skill of higher accuracy of first impressions receive larger salary raises (Byron, Terranova, and Nowicki Jr 2007), achieve higher ranks in organizations (Hall and Halberstadt 1994), and receive higher ratings from supervisors (Elfenbein and Ambady 2002).

STUDY 1: EFFECT OF INTUITIVE JUDGMENTS ON SALES PERFORMANCE

Study 1 was designed to answer our first three research questions – What is the interactive influence of accurate first impressions and later impressions on sales outcomes, do accurate first impressions coupled with accurate later impressions shorten the duration of the sales encounter, and is the folklore that retail salespeople are accurate in estimating customers' budgets and buying intentions valid? The principal focus in Study 1 was the first question. We suggested that an intuitive, accurate assessment of customer needs is critical in retail encounters. Unlike protracted encounters typical of B2B sales when accuracy in assessing needs can be achieved late in the sales process, in retail encounters it is necessary to get it right early, very early, even before the salesperson has the opportunity to verbally interact with the customer. Salesperson actions such as the first brand shown to customers irrevocably shapes retail transactions (Simonson and Tversky 1992), and customers may fail to fully update their negative first impressions of the salesperson. This suggestion is also supported in research by Evans et al. (2000). They found that good first impressions provide a good start to the sales interaction. Specifically, a good start can help guide the customer to the appropriate

product or product class. Second, accurate first impressions can expedite the trust- and commitment-building process, both of which improve relationship quality and lead to positive customer outcomes (Palmatier et al. 2006).

Homburg, Wieseke, and Bornemann (2009) defined "customer need knowledge", (CNK), as the extent to which salespeople form accurate perceptions of customers' hierarchy of product needs (i.e., those that are the most important and those that are the least important). They demonstrated that this knowledge enables superior outcomes, such as greater customer satisfaction and willingness to pay. Customer need knowledge, in their research, was acquired after verbal interactions. We define a parallel concept relating to accurate perceptions before verbal interactions and call it "customer needs intuition": CNI in contrast to CNK. This concept captures the accurate perception of customers' hierarchy of product needs based on non-verbal cues. We suggest that in retail encounters CNK is too late: performance requires a high CNI.

While high CNI and high CNK should provide the ideal sales situation, three other combinations exist. First, what happens when a retail salesperson has a high CNI but based on verbal interactions develops a low CNK? Although the salesperson may have started the sales process right, creating a good first impression and leading the customer to an appropriate brand or product, the salesperson is now likely to act in a way that the customer considers inappropriate. For example, during the sales interaction, a salesperson attempts to "push" a customer to evaluate a brand that is not inline with the customer's needs. This customer is likely to then revise his or her initially positive first impression of the salesperson. While accurate intuitions starts the interaction on the right foot and expedites that trust building process, the incongruity of the salesperson's

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behavior with the first impression the customer is likely to result in the customer's engaging in effortful, controlled processing to update his or her positive first impressions. Thus we suggest that should salespeople waste their intuition; a high CNI followed by a low CNK, it will lead to suboptimal sales outcomes.

Second, what happens when a retail salesperson has a low CNI but based on verbal interactions develops a high CNK? Do customers recognize the incongruity and engaging in effortful, controlled processing update their negative first impressions? Wong and Weiner (1980), among others, suggest that negative information is more likely to be processed with more effort than positive information. Thus, it is likely that retail customers update a high CNI low CNK more than they do a low CNI and high CNK. This coupled with irrevocable first acts in retail encounters suggests that under a low CNI and high CNK sales outcomes are less positive than under a high CNI and high CNK.

Third, salespeople with a low CNI and a low CNK, simply because they never get the customer's needs right, are unlikely to be successful.

Our principal hypothesis for this study is:

H_1:   A salesperson's CNI and CNK interactively influence positive sales
outcomes, the likelihood of purchase and the amount of purchase. Both
CNI and CNK need to be high for better outcomes.

This contradicts previous research that would suggests that a high CNK even with a low CNI would be sufficient to enable positive sales outcomes.

Time. In person perception, the categorization and characterization of a person are immediate, automatic, and unconscious processes (Gilbert, Pelham, and Krull 1988). These processes involve drawing on past knowledge and pattern recognition to make judgments. Research on thin slices of behavior (Ambady and Rosenthal 1992; Ambady

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and Skowronski 2008) suggests that surface-level information, such as facial expressions and other nonverbal cues (e.g., hand gestures, jewelry, clothing, environment), are utilized in pattern recognition for first impression judgments. First impressions are quickly formed and do not need elaborate, time-consuming information processing. Should the first impressions need correction then elaborate and more time-consuming information processing is required.

A high CNI followed by a high CNK, which we hypothesize leads to the best outcomes, does not require correction. In contrast, a low CNI followed by a high CNK does require correction. We consequently suggest that a low CNI and a high CNK leads to sales encounters of longer duration than a high CNI and a high CNK. That is, failing to "get it right" in the first place in retail sales encounters not only compromises outcomes but also takes up more time. In terms of working smarter, getting it right initially enables not just success but efficient success!

A high CNI followed by a low CNK, although it involves correction, is not a thoughtful correction. This correction is one of discarding good intuition, not having faith in it. These sales encounters may not take longer than a high CNI followed by a high CNK.

> H_2: A salesperson's CNI and CNK interactively influence the time taken to complete a sales transaction. A low CNI and a high CNK takes longer than a high CNI and a high CNK.

Intuitive accuracy of a customer's expected value. The challenge in adaptive selling is accurately assessing customers' needs. In his initial investigation of the effect of adaptive selling, Weitz (1978) evaluated the effect of accurately assessing needs and discovered they explained 20% of the variance in performance. In the previous section

and consistent with this research tradition, we evaluated intuitive judgments among retail salespeople in terms of assessing customer needs. More common than assessing customer needs, salespeople assess customers' expected value (e.g., purchase likelihood and amount of purchase). They use this information to select which customers to spend time with and which customers to avoid (Martin 2006) more than they do to identify ways to adapt to the customer. Is the folklore that salespeople in general are good at this valid? Can they do so based on nonverbal cues: Are retail salespeople in fact good at intuiting customers' purchase likelihood and amount of purchase? Our data permitted us to evaluate this interesting question and we did so, even though it would do little to illuminate our primary hypotheses.

> H_3: Based on non-verbal cues, salespeople's intuition of their customers' purchase likelihood and amount of purchase is positively related to their customers' expectations for these outcomes.

Procedure

Study 1 is a field study involving salespeople and customers from a midsize U.S.-based specialty retailer. We intercepted salespeople and customers before and after their sales interaction. We received completed surveys from 356 of the 365 salesperson-customer dyads resulting in a response rate of 97.5%. To test our hypotheses of intuition, we removed 26 dyads from our analysis where the salesperson had previously interacted with the customer leaving us with 330 first-time encounter salesperson-customer dyads. A total of 48 salespeople participated in this study.

This retailer provided an ideal context to investigate the accuracy of intuition and knowledge for five reasons. First, this retailer primarily sells one product line, mattresses, which consist of 6–10 brands ranging in price from $199 to $4,349. The retailer's product

selection has enough variance in brand and price to assess whether intuition and knowledge play key roles in the final purchase decision but is not so complex as to prevent the measurement of these two constructs. Second, the firm operates approximately 100 stores in our research area that cover a wide range of demographics (e.g., ethnicity, income). To make our sample as balanced as possible and to control for external factors that might bias our results, we included stores that serve diverse customer types. Third, the retail context involves close salesperson–customer interactions, which enable us to test the hypotheses of our model. Fourth, salespeople are primarily incentivized through commission. Thus, salespeople are motived to efficiently identify the customers with the highest value for both their benefit and the firm's. Fifth, all of the locations of this retailer permit the salesperson to view customers before they enter the store. As seen in Appendix 1.1, each store location has a glass window exterior. As seen in Web Appendix 1.2, sitting at the front desk, salespeople we close enough to the glass exterior to easily see customers as they drive up to the store, park, and enter the store.

Data Collection

We collected data for this Study 1 in two stages. First, we conducted a series of qualitative, in-depth interviews on the basis of the principles of Kvale and Brinkmann (2008). In total, we completed 45 semi-structured interviews with 2 sales and marketing executives, 3 store managers, 10 sales associates, and 30 potential customers. Each interview was approximately 30 minutes long. The purposes of the qualitative interviews were to confirm our hypotheses regarding the role of intuition and to generate the list of product needs of a typical prospective customer of a mattress. To validate the list of needs and the other items in our survey instrument, we conducted a pretest with 5 sales

associates and 85 customers before finalizing the six primary shopping needs for buying

a mattress (i.e., brand, feel, financing availability, price, product return, and salesperson

service quality). A full list of these needs appears in Appendix 1.3.

Second, we conducted an intensive field study over four months at 15 store

locations. At different times during each week, pairs of trained interviewers (Research

Assistant 1 and 2, or RA1 and RA2 for short) intercepted and observed customers and

salespeople to collect five distinct pieces of data. RAs received 2 months of training to

administer the survey; however, they were blind to the research hypotheses to reduce

potential biases. Before completing any survey, customers and salespeople were informed

that their responses were confidential and would not be shared with anyone outside the

research team. Table 1.1 provides a summary of all data sources.

- - - - - - - - Insert Table 1.1 about here - - - - - - - -

The field study proceeded in five steps:

1. Customer Pre-Interaction Survey. As customers approach the store, RA1 would

intercept the customer before they entered at the front door (see point A in Appendix 1.2)

and asked them to participate in a two-part, five-minute, university-sponsored research

study. We restricted ourselves to individual customers who were purchasing a mattress

for themselves. After a customer consented to participate in the study, RA1 administered

the pre-interaction customer survey. The purpose of the survey was to capture the

customer's initial product needs, budget expectations, and purchase likelihood before he

or she entered the store and interacted with the salesperson.

2. Salesperson Pre-Interaction Survey. At this firm, a salesperson would always

be "waiting on deck" at the front desk for the next customer (see point B in Appendix

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1.2). As soon as RA1 began administering the pre-interaction survey to a customer, RA2, who was also sitting at the front desk, administered the pre-interaction salesperson survey to the salesperson on deck. In this survey, the salesperson attempted to predict the customer's product needs, budget expectations, and purchase likelihood. Since this salesperson would be sitting at the front desk and the customer was still outside with RA1, the salesperson made his or her judgments about the customer's shopping intentions solely based on viewing the customer park their car, walk up to front of the store, and interact with RA1. We investigated each store location to make sure the front desk was close enough to the window exterior so that the salesperson could clearly see the parking lot and the area outside of the store. Also, the length of the salesperson survey was shorter than the customer survey to ensure that the salesperson finished first so that the customer would be unaware that the salesperson was also filling out a survey. We used the pre-customer and pre-salesperson surveys to assess the salesperson's ability to intuit the customer's initial product needs, budget, and likelihood to purchase.

3. During the interaction. After the pre-interaction surveys were complete, RA2, who was dressed as a salesperson, inconspicuously observed the customer-salesperson interaction. RA2 collected demographic data about the customer, noted if any other customers were in the store, documented details regarding the first mattress that the salesperson showed the customer, and documented the length of the customer–salesperson interaction.

4. Customer Post-Interaction Survey. When the customer left the store, RA1 intercepted him or her again outside the store to administer the post-customer survey.

This survey asked the same questions as the pre-survey as well as questions regarding outcomes of the interaction.

5. *Salesperson Post-Interaction Survey.* As soon as the interaction with the customer was complete, RA2 administered the post-salesperson survey, which asked the same questions as the pre-salesperson survey to the salesperson. We used the post-customer and post-salesperson survey to assess CNK. On completion of the interaction, we paired the pre- and post-interaction responses for the customer and salesperson with both observation data and purchase information (for customers who made a purchase).

Measures

To measure CNK, we followed the dual-perspective approach in accordance with Homburg, Wieseke, and Bornemann's (2009) pioneering work on CNK. Customers were asked after interacting with the salesperson to rank in order of importance six product needs, which emerged through our qualitative interviews. Concurrently, salespeople were asked to rank their perception of the importance of the customer's product needs. We then calculated CNK by summing the absolute value of the difference of the customer's rank for need i and the salesperson's rank for need i. This method creates a *discrepancy index*[1], which measures a salesperson's ability to determine the magnitude or importance of a need over a set of needs (Tiggle et al. 1982). With six needs, perfect accuracy would equal 0 and perfect inaccuracy would equal 18. As such, we performed a transformation of CNK by taking 18 less the absolute differences in rank so that higher CNK scores

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[1] Tiggle et al (1982) outlines *profile accuracy index* as an alternative method to calculating perceptual accuracy. This approach involves correlating the set of responses from both the perceiver and target. Profile accuracy measures the ability of a salesperson to distinguish between those needs that are most important and least important. The correlation of discrepancy indices and profile accuracy indices for pre- and post-assessments of product needs was .93 and .94 respectively. Also, we ran all the models using the profile accuracy index and the results held. Thus, to maintain consistency in the marketing literature, we focus on discrepancy index for the calculation of CNI and CNK.

represented higher accuracy. We measured CNI in the same way as CNK; however, we

gathered the customer and salesperson's responses *before* the customer–salesperson

interaction. In summary, the calculation for CNK and CNI is as follows:

$$\text{CNK and CNI} = 18 - \sum_{i}^{6} |(\text{CustRank}_i - \text{EmpRank}_i)|.$$

All other measures were either adapted from previous studies or were objective measures.

Appendix 1.3 presents a complete list of our measures and Appendix 1.4 provides

descriptive statistics for all variables including means, standard deviations, and

correlations. *For our customer's budget,* customers were asked before the sales

interaction to estimate the maximum amount they were willing to spend on a mattress.

Concurrently, to assess *intuition budget*, salespeople were asked their perception of the

customer's maximum budget. For *purchase likelihood*, customers were asked to indicate

how likely they were to purchase a mattress today from 0 to 10, where 0 indicates no

chance that the customer will purchase today and 10 indicates that the customer will

definitely purchase today. Concurrently, to assess *intuition of purchase*, salespeople were

asked their intuitions of the customer's likelihood to purchase. For *purchase*, we coded

the customer–salesperson interaction as a purchase only if the interaction resulted in a

sale of a mattress as opposed to mattress accessories. *Purchase amount* was measured as

the amount spent on a mattress. *Interaction duration* was measured as the amount of time

in minutes the salesperson and customer interacted from the start of the interaction up to

the point at which the customer decided to buy or not to buy. The distribution of

interaction duration displayed right-tail skewness; thus, we used the log of interaction

duration for our analysis.

We controlled for differences in sales contexts (multiple customer situations) by adding a contextual control variable. We included the dummy variable *other customers present*, coded as 1 if other customers were in the store at the time of either the pre-survey or the post-survey, to account for the possibility of the salesperson's attention being divided among multiple customers

Analytical Procedure

We tested the data in this study to determine whether they followed a multilevel framework with salesperson–customer interaction data varying within-salesperson or within-store (i.e., Level 1) that were subject to the between-salesperson or between-store (i.e., Level 2) influences. To do this, we examined how much variance of our customer outcomes were explained between salespeople and between stores. To test whether these dependent variables varied by salesperson or store, we ran a random intercept model using SAS PROC MIXED for each dependent variable, with nesting salesperson–customer interactions at both the salesperson and the store level (Hox 1995; Singer 1998). However, little variance in the dependent variables exists at Level 2. Duration had the most variance at Level 2, with a variance explained between-salespeople of .03. In general, a multilevel model is only necessary when intraclass correlation is greater than .05 (Luke 2004). This indicates that the variance in customer outcomes in our data is contextual; that is, the vast majority of the variance resides at the salesperson–customer interaction level rather than the store or salesperson level. As such, we chose to employ linear and logistic regressions for analysis.

Results

Role of assessing customer needs: main effects. Table 1.2 presents estimation

results of the interactive influence of CNI and CNK for nine models: a CNK-only model,

a main-effects model, and a full model (including moderation tests for CNI × CNK) for

each of the three dependent variables. Because purchase is a binary variable (1 =

purchase, and 0 = no purchase), we modeled probability of purchase with binary logistic

regression. For the continuous dependent variables (amount purchased and interaction

duration), we employed linear regression. We found support for all of our hypotheses

- - - - Insert Table 1.2 about here - - - -

Consistent with prior work on CNK, the CNK-only model shows that CNK was

positively related to probability to purchase (β=.182, $p < .01$) and amount purchased

(β=70.39, $p < .01$). Thus, even in retail settings adaptation following verbal interactions is

found to enable higher sales performance. However, high CNK comes at the cost of a

longer duration of the sales interaction (β=.022, $p < .05$).

Role of assessing customer needs: The interactive influence of CNI. We provide

the shape and form of each hypothesized interaction in Figure 1.1, Panels A–C. The

interaction plots demonstrate that when CNI is high, the effect of CNK is positive and

significant for both probability of purchase (β=.027, $p < .05$) and amount purchased

(β=8.281, $p < .05$); therefore, H_1 is supported. As we expected, the interaction between

CNI and CNK was negatively related to interaction duration (β= -.0061, $p < .05$), in

support of H_2.

We further examined the moderating role of CNI. Our goal was to identify if high

CNI and high CNK was clearly superior to all other combinations of CNI and CNK. To

do this, we performed a planned comparison analysis of variance (ANOVA) to compare high and low levels of both CNI and CNK on two dependent variables: customer value and interaction duration. We calculated customer value by multiplying if the customer purchased or not (0 or 1) and the amount he or she spent on a mattress. Consistent with H_1, high levels of both CNI and CNK resulted in significantly higher customer value than the other three combinations. Also, customer values in the other three combinations were not significantly different from one another. We also found further support H_2. Particularly, high levels of both CNI and CNK were more efficient to the combination of low CNI and high CNK (mean difference of log minutes -.352, $p < .05$) Thus, high CNI and high CNK results in shorter interactions than low CNI and high CNK (supporting H_2). Results from the planned comparison ANOVA appear in Table 1.3.

- - - - Insert Table 1.3 about here - - - -

The interactive influence of CNI: Starting the sales interaction right. We examined our rationale for the interactive influence of CNI on CNK (H_1 and H_2) where we suggested that intuition, specifically CNI, starts the sales interaction right by showing the customer the correct product class early in the sales interaction. We conceptualized a correct product class as one that matches the customer's initial brand and budget preferences. CNI starts the sales interaction off right if this brand match and budget accuracy is predicted by a salesperson's CNI for a given customer.

In Study 1, prior to the salesperson-customer interaction, RA1 asked the customer which specific brand of mattress they were interested in buying. Also, while observing the interaction, RA2 collected data on the first mattress that the salesperson showed the customer. RA2 captured data on the mattress brand and retail price of the first bed.

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Brand match was coded as a 1 if the brand of the first mattress shown was the same as that the customer reported that they wanted prior to the sales interaction. *Budget accuracy* was calculated as the absolute difference of the customer's budget and retail price of the first mattress. We then standardized this by the customer's budget to obtain an inaccuracy percentage. Because of the right-tail skewness of this measure, we took the log of this inaccuracy. Next, we transformed each inaccuracy score by the log of the maximum inaccuracy score in our data such that higher values represented higher accuracy. Budget accuracy was calculated as follows:

$$\text{Budget Accuracy} = \log(\text{maximum inaccuracy}) - \log\left(\frac{|(\text{Customer Budget}_i - \text{Retail First Mattress}_i)|}{\text{Customer Budget}_i}\right)$$

As seen in Table 1.4, CNI was positively related to brand match (β=.265, *p* < .01) and budget accuracy (β=.070, *p* < .01). This provides support that CNI does start the sales interaction right by enabling the salesperson to show the customer the correct product class as suggested in our rationale for H_1 and H_2.

- - - - Insert Table 1.4 about here - - - -

Intuiting customers' expected value. Table 1.5 presents the results of a salesperson's ability to intuit a customer's expected value. To model our dependent variables (customer's purchase likelihood and budget), we employed linear regression. Intuition to purchase and intuition of budget was positively related to purchase likelihood (β=.325, *p* <.01) and to budget (β=.580, *p* <.01), in support of H_3. We performed one additional analysis to directly test our claim that salespeople can intuit a customer's expected value. As seen in the last column of Table 1.5, a salesperson's intuition of a

given customer's expected value was positively related to that customer's expected value (β=.356, p <.01), providing further support for H_3.

To further investigate accurate judgments in retail sales, we investigated whether salespeople's CNI and CNK is better than random chance. For this analysis, we performed a paired t-test to compare the observed CNI and CNK scores for each salesperson with a CNI and CNK scores that we calculated with random ranks of customer needs. Consistent with our notion that salespeople make accurate intuitive judgments regard a customer's expected value (H_3), the observed CNI scores were greater than chance (mean difference = 2.74, $p < .01$). This finding provides support that salespeople are accurate in their intuitive assessment of customers' product related needs. Similarly, the observed CNK scores were also greater than chance (mean difference = 3.97, $p < .01$), signifying that salespeople are accurate in their post verbal assessment of customers' product related needs.

- - - - Insert Table 1.5 about here - - - -

STUDY 2: THE ORIGINS OF SALESPERSON INTUITION

In Study 2 we evaluate our fourth and fifth research questions – What enables salespeople to make accurate intuitive judgments (CNI) and are these factors different from what enables accurate knowledge judgments (CNK)? First, we draw on research on intuitive judgments and thin slices of behavior research to identify factors that have been theoretically and empirically linked to influencing the accuracy of intuitive judgments and test to see if they influence CNI. We also test to see if they influence CNK. Then, we identify factors that have been linked to accurate knowledge judgments and test to see if

they influence CNK, and CNI. We conclude by testing if the influence of these factors on CNI and CNK are significantly different.

Origins of CNI

Salesperson intuition is the ability to accurately predict customers' needs prior to verbally interacting with them. Broadly, two factors are linked to accurate intuitive social judgments: experience because it enables the ability to develop the skill to read nonverbal cues, and the innate ability to decode nonverbal cues. Through experience salespeople can develop the ability to identify patterns—in facial expressions, hand gestures—and match these patterns with the nonverbal cues exhibited by their customers (Dane and Pratt 2007; Gore and Sadler-Smith 2011; Klein 2003; Simon 1987). Beyond experience, perceivers can innately have greater ability to identify these patterns in similar people; similar by virtue of ethnicity, gender or age (Ambady, Hallahan, and Conner 1999; Fiske 1993; Ostrom and Sedikides 1992). Beyond similarity, we evaluated empathy as an innate ability that enables accurate intuitive judgments. A perceiver's empathy has been associated with accurate intuitive judgments (Bastick 1982; Gore and Sadler-Smith 2011). Females, more than males, have been identified as high in empathy; so being female has been associated with accurate intuitive judgments (Hall and Andrzejewski 2008; Montagne et al. 2005). In sum, thin slices of behavior research has suggested that through experientially derived ability and through innate ability individuals can make accurate judgments about strangers based on viewing a glimpse, or thin slice, of non-verbal information (Ambady and Rosenthal 1992; Ambady and Skowronski 2008).

We hypothesize:

$H_{4a\text{-}d}$ A salesperson's CNI is positively related to the salesperson's (a) domain-specific experience, (b) similarity with the customer, (c) empathy, and (d) gender.

Antecedents of CNK

In contrast to CNI, CNK measures the salesperson's ability to accurate assess customers' needs after verbal interaction with them. Antecedents of CNK are abilities that better enable salespeople to judge customer needs from information gathered, verbally. Homburg, Weiseke, and Bornemann (2009) investigating antecedents to CNK found that salespeople's customer orientation (focusing on customer needs) and empathy (the ability to understand customer needs) lead to higher levels of CNK. Quite evidently, listening skills, hearing well what the customer has to say, raises CNK. Research has linked listening skills to higher perceptual accuracy (Garland 1981) and the uncovering of customer's implicit and explicit needs (Drollinger, Comer, and Warrington 2006).

We hypothesize:

$H_{5a\text{-}c}$ A salesperson's CNK is positively related to the salesperson's (a) customer orientation, (b) empathy and, (c) listening skills.

Sample and Data Collection

To investigate the origins of salesperson intuition, we surveyed all 48 of the salespeople who had participated in Study 1 immediately following the completion of the initial study. This questionnaire asked them about traits and competencies as well as demographic information. All 48 completed their surveys; a 100% response rate. More of the salespeople were men (60%). The average age of the salespeople was 30.7 years with an average 3.77 years of sales experience at the firm. We paired these 48 responses with the responses from the 330 salesperson-customer dyads from Study 1.

Measures

All measures and their sources can be found in Appendix 1.5 and a descriptive

statistics can be found in Appendix 1.6. Our dependent variables, *CNI* and *CNK*, were

taken from the data in Study 1. We measured salesperson-customer similarity in three

ways: *gender similarity, ethnic similarity* and *age similarity*. For gender and ethnic

similarity, we coded each customer-salesperson pair as "1" for a match and "0" for a

mismatch. For age similarity, we used the absolute difference in the salesperson and

customer's age. So that higher values would represent the least difference, we subtracted

this absolute difference from the maximum absolute difference in our sample. We coded

salesperson gender as "1" for females and "0" for males. We measured three latent

constructs, *customer orientation, empathy,* and *listening skills* using seven-point Likert

scales. Constructs had an average coefficient alpha of .93, .87, and .82, respectfully; thus,

demonstrating good internal reliability. All constructs demonstrated divergent validity

according to the Fornell and Larcker (1981). *Domain experience* was measured as

number of years working with the firm in a sales position as reported by the

organization's records. We added the covariate, salesperson age, in order to tease out age

from domain-specific experience.

To account for the possibility for multicollinearity, we examined the variance

inflation factors of all variables in Study 2. The variables in our study yielded variance

inflation factors between 1.0 and 2.4, providing support that there are no problems with

multicollinearity (Kleinbaum et al. 1998).

Analytical Procedure

Following the same procedure in Study 1, we initially tested the data in this study to determine whether they followed a multilevel framework, with salesperson–customer interaction data constituting the within-salesperson temporally varying measures (i.e., Level 1) that were subject to the between-salesperson (i.e., Level 2) influences. The data structure in Study 2 did follow a multilevel framework with 17.4% and 31.3% of the variation in CNI and CNK residing at Level 2, the salesperson level. Thus, we matched the customer interaction (Level 1) with salesperson (Level 2) and centered all predictor variables by their grand mean where applicable. We conducted our analysis for the multilevel framework using SAS PROC MIXED (Singer 1998).

Results

Table 1.6 presents the results of the origins of CNI and CNK. For CNI, we found support for the effect of experience, similarity, empathy but not gender. Sales experience with the firm was positively related to CNI (β=.215, p <.01) in support of H_{4a}. We found qualified support for H_{4b}. Gender similarity (β=1.266, p <.01) and ethnic similarity (β=.961, p <.01) were positively related to CNI; but, age similarity was not (β= -.003, *ns*). Empathy was positively related to CNI (β=.599, p <.01), in support of H_{4c}. Although in the hypothesized direction, females did not have higher levels of CNI (β= .322, *ns*), failing to support H_{4d}.

For CNK, we also found support for all three of the hypothesized relationships. Customer orientation (β=.903, p <.01), empathy (β=.421, p <.01) and listening skills (β=.622, p <.01), were all positively related to CNK, in support of H_{5a-c}.

We evaluated too if the effect of these six antecedents differs between CNI and CNK. Empathy, which we had identified as the only common antecedent for both CNI and CNK, did not differ between the two (z=.65, ns). Domain experience, which we had identified as an antecedent only of CNI, and customer orientation and listening skills, which we had identified as antecedents of only CNK did differ (z=2.05, p<.05; z= -1.99, p<.05; z= -2.44, p<.05, respectively). Gender similarity, which we had identified as an antecedent of only CNI, did differ (z=2.46, p<.05) but ethnic similarity, which we had also identified as an antecedent of only CNI, did not differ. In the last column of Table 1.6, we provide these results. In sum, we identified several antecedents of intuitive judgments that were not antecedents of knowledge judgments and vice versa, several antecedents of knowledge judgments that were not antecedents of intuitive judgments. Not only were the origins, for the most part, different but also their influence was significantly stronger for one or the other type of judgments.

- - - - Insert Table 1.6 about here - - - -

DISCUSSION

Summary of Findings

The adaptive selling paradigm suggests that successful selling requires developing and updating impressions of customers during a sales interaction until, eventually, the customer's needs are accurately assessed. In this research we suggest that while this may be true in much of B2B selling, in retail selling where sales interactions are short and customers are strangers, this is not the case. In these sales situations it is necessary to accurately assess customer needs based on first impressions and to do so even before there is the opportunity for verbal interactions. We define customer needs intuition (CNI)

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as salespeople's judgments of customer needs on thin slices of behavior, non-verbal cues, and define customer needs knowledge (CNK) as salespeople's judgments of customer needs following a verbal interaction. If we evaluate only CNK we find, consistent with the adaptive selling paradigm, CNK influences the likelihood of selling and the dollar amount purchased. But if we evaluate the effect of CNI too we find that an accurate CNK positively influences performance only when it follows an accurate CNI. An accurate CNK following an inaccurate CNI, implicitly the adaptive selling paradigm, leads to a considerably lower level of performance. In retail settings (and this may be true in some B2B settings too) getting it right early without even having the opportunity to talk with the customer is critically important! This finding is consistent with recent research in psychology on the benefits of intuitive or thin slice judgments (Ambady and Rosenthal 1992; Ambady and Skowronski 2008) and the importance of intuitive judgments spelled out in the best selling book titled "Blink".

Qualifying this finding is our discovery of the concept of wasted intuition. It seems that salespeople with an accurate CNI could lose faith in their judgments and develop an inaccurate CNK after verbal interactions with a customer. When this occurs, salespeople's performance, both in terms of likelihood of sales and dollar amount sold, drops to the level of that of the situations where salespeople we only accurate late (low CNI and high CNK) and not accurate at all (low CNI and low CNK). Thus, our research suggests that not only is it important for salespeople in retail situations to make accurate thin slice judgments but also it is important for them not to discard these judgments during the process of verbal interactions. Consistent with this idea, some sales research has suggested that though adaptive selling can improve effectiveness—in some sales

situations, particularly those requiring a quick response—it can lead to misjudgments of customers' needs and, consequently, to inappropriate behaviors (Dietvorst et al. 2009).

Because retail salespeople, more than B2B salespeople, need to manage not only sales but also time spent with a customer, we evaluated too the effect of CNI and CNK on the duration of the sales transaction. We found that the combination of a high CNI and CNK, the only combination that enables higher sales performance, leads to lower durations than a low CNI and a high CNK or CNK-only—the situation implicitly recommended by the adaptive selling paradigm.

In an attempt to understand why a high CNI and CNK enables better performance and a shorter duration, we evaluated whether or not having a high CNI relates with salespeople's likelihood of showing first the customer's preferred brand and at a price close to the customers budget. We found that this is the case. Being right about brand and budget at the start of the interaction is not only likely to improve the probability of sales success but make it unnecessary to spend a longer time with the customer.

Beyond these findings, our principal findings, we evaluated if salespeople in general have a high intuition about customers' budgets and likelihood of buying, for long this has been the folklore. We found that this is indeed true; salespeople are able to differentiate a customer's expected value prior to a verbal interaction.

We also evaluated, in a second study, if the origins of intuitive judgments and knowledge-based judgments are different, looking at abilities that may enable the better reading of non-verbal cues. We separated out abilities learned through experience from inherent abilities. We found that empathy enabled both CNI and CNK, that experience and similarity enabled only CNI while listening skills and a customer orientations,

strongly touted in previous research as key to effective selling, influenced only CNK. That is, we found that the origins of CNI and CNK are different in many cases.

Together, our findings suggest that it is important in retail sales, and perhaps some kinds of B2B sales, for salespeople to have the ability, developed or inherent, to intuit customer needs and expected value before they verbally interact with a given customer. It enables better identify the highest potential customers, improve sales performance for these customers, and complete the sale in a shorter time.

Salesperson Intelligences

Our findings indicate that for successful performance salespeople may need to develop or inherently possess multiple intelligences or abilities. This is consistent with recent developments in research on human intelligence. Sternberg (1996) has argued that adaptation needs to be supplemented with better selection of the situations one places oneself in and the shaping of these situations, and this contextual intelligence needs to be supplemented with creative and analytical intelligence—for success in real world pursuits. Research on emotional intelligence suggests that social intelligence (of which intuition and emotional intelligence is a part) needs to be included in a broader framework of human intelligence (Myers 2002). In perspective our finding that both CNI and CNK are needed for successful selling prompts the need for research on complementary or multiple abilities of salespeople. This is consistent with the suggestion made by Cron et al. (2005) that selling is a challenging profession that requires high levels of skill.

Changing the Emphasis in Research on Person Perception

Models of person perception (e.g., Gilbert 1998) suggest that initial impressions are often wrong; they are stereotypic judgments and all too often to superficial to be accurate. These models focus on the correction of initial impressions as the way to improve person perception. Following research on thin slice judgments, we suggest otherwise. We argue that initial impressions are more often right than has been suggested in this research. More importantly we argue that in some (possibly many) situations initial impressions carry outcomes. Corrections to faulty initial impressions occur so late that they do not alter the outcomes.

We also contribute to research on person perception by suggesting that good intuition can be wasted. Intuitive judgments are made with little or no deliberation. On reflection, they may be difficult to justify. When judgments have important consequences, as with sales outcomes, the inability to justify their intuition may cause salespeople to abandon these judgments and replace them with over-thought-out, over-justified, alternatives, and wrong judgments. Our findings show that abandoning accurate intuitive judgments can be disastrous. Thus, an important issue with person perception is the inability to trust one's first impressions. The question of what helps salespeople and other social perceivers listen to their intuitive judgments, a question we raise herein, is an important one for further research. This research may show, ironically, that malleable, loosely held first impressions are less likely to be abandoned for a lack of justification (Plaks et al. 2001).

Our suggestion that retail selling requires not just adaptation but also intuition raises the need to identify whether intuition can be learned or whether it depends

primarily on the salesperson's traits. We suggested that intuitive judgments are based on the ability to read facial expressions, gestures, and tone of voice (Ambady 2010). Tests that measure these nonverbal reading skills and programs to enhance these skills exist. Thus, this research could serve as a springboard for research intended to explore how firms can select and train salespeople to achieve strong intuition.

We also discovered that experience enables good intuition. This raises the question of how salespeople can develop a good intuition faster. What form of motivation encourages the development of good intuition? Do learning goals in preference to proving goals enable the faster development of intuition (Sujan, Weitz, and Kumar 1994).

We found that salesperson-customer similarity is a driver of salesperson intuition. This suggests that the origins of good intuition may depend not only on the characteristics of the salesperson but also that of the customer and their relationship. Thinking about the effect of customer characteristics, customers can, for example, purposely conceal their true shopping intentions (Grayson and Shulman 2000), and some customers are better or worse targets for accurate perceptual judgments (Funder 1995). As such, two important avenue of research are determining which customer-specific characteristics enable or inhibit salespeople's intuition ability during a given interaction and which cues salespeople are better or worse at decoding.

In conclusion, although we feel that our finding of intuitive judgments in retail settings, and perhaps in other sales settings too, are necessary for effectiveness and efficiency, is important, we believe the heuristic value of this research, the raising of questions of when intuition matters and how it can develop, may be even greater than the contribution of its findings.

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Table 1.1
DATA SOURCES

Source	Gathered by	Information Gathered	Primary Purpose
1. Customer preinteraction survey	RA1	Customer's initial • Likelihood to purchase • Budget • Product needs	Assess Salesperson Intuition of customer's • Likelihood to purchase • Budget expectations • Product needs (CNI)
2. Salesperson preinteraction survey	RA2	Salesperson's intuition of customer's initial • Likelihood to purchase • Budget expectations • Product needs	
3. Customer postinteraction survey	RA1	• Customer's product needs • Demographics • Other outcome measures	Assess salesperson knowledge of customer's product needs (CNK)
4. Salesperson postinteraction survey	RA2	• Salesperson's perception of customer's product needs	
5. Observational data	RA2	• Sale information • Observations regarding customer • Observations regarding interaction	Gather data regarding • Customer outcome: duration • Control variables • First bed shown to customer
6. Objective data		• Sale information	Gather data regarding customer outcomes • Purchase • Purchase Amount

Table 1.2

MODEL RESULTS: INTERACTIVE INFLUENCE OF CNI AND CNK ON SALES OUTCOMES

	Purchase (BUY)			Purchase Amount (PA)			Duration (DUR)		
	CNK Only	Main Effects	Full Model	CNK Only	Main Effects	Full Model	CNK Only	Main Effects	Full Model
	β (SE)	β (SE)	β (SE)	β (SE)	β (SE)	β (SE)	β (SE)	β (SE)	β (SE)
Predictor Effects									
Intercept	.091 (.131)	.101 (.136)	.063 (.139)	1301.92** (63.35)	1281.36** (63.13)	1258.32** (63.45)	3.379* (.033)	3.380** (.033)	3.404** (.035)
CNI	--	.200** (.046)	.202** (.046)	--	38.97* (17.36)	31.42 (17.56)	--	-.011 (.011)	-.009 (.010)
CNK	.182** (.041)	.138** (.043)	.159** (.043)	70.39** (17.37)	55.52** (18.36)	47.87* (18.54)	.022** (.010)	.026** (.010)	.023* (.010)
CPL	.275** (.051)	.276** (.053)	.278** (.053)	-33.807 (23.468)	-34.31 (23.14)	-36.75 (22.92)	.018 (.012)	.019 (.012)	.020 (.012)
CB	-.00016 (.00012)	-.00014 (.00012)	-.00013 (.00012)	.663** (.060)	.670** (.059)	.665** (.058)	.00004 (.00003)	.00004 (.00003)	.00004 (.00003)
IP	.067 (.059)	.087 (.062)	.088 (.063)	-48.37 (27.02)	-46.21 (26.66)	-45.72 (26.37)	.023 (.015)	.022 (.015)	.022 (.015)
IB	.000002 (.0002)	-.00002 (.0001)	-.00001 (.0002)	.174* (.075)	.169* (.074)	.175* (.073)	.00005 (.00005)	.00008 (.00005)	.00006 (.00005)
OC	-.076 (.266)	-.159 (.277)	-.124 (.279)	-3.79 (111.72)	-17.33 (110.32)	-3.33 (109.32)	-.031 (.068)	-.027 (.068)	-.029 (.068)
Interaction Effects									
CNI × CNK			.026* (.012)			8.326* (4.068)			-0.0063** (0.0024)
Cox & Snell R²	.228	.278	.289						
Nagelkerke R²	.303	.371	.386						
R²				.553	.569	.581	.055	.058	.078
Adj R²				.535	.547	.557	.035	.036	.052

*$p < .05$ (two-tailed).
**$p < .01$ (two-tailed).
Notes: Buy = Purchase, PA = purchase amount, DUR = log of duration, CPL = customer's purchase likelihood, CB = customer's budget, IP = intuition of purchase, IB = intuition of budget, OC = other customers present.

Table 1.3
MODEL RESULTS: PLANNED COMPARISON ANOVA[a]

Baseline[b]	Comparison	Customer Value Mean Difference (SE)	Interaction Duration Mean Difference (SE)
Low CNI × low CNK	High CNI × low CNK	-112.03 (133.64)	-.215 (.088)
	Low CNI × high CNK	-25.61 (146.93)	-.343** (.097)
	High CNI × high CNK	-554.63** (132.16)	-.085 (.084)
High CNI × low CNK	Low CNI × low CNK	112.03 (133.64)	.215 (.088)
	Low CNI × high CNK	86.41 (155.65)	-.222 (.102)
	High CNI × high CNK	-442.60** (141.79)	.130 (.089)
Low CNI × high CNK	Low CNI × low CNK	25.61 (146.93)	.343* (.097)
	High CNI × low CNK	-86.41 (155.65)	.222 (.102)
	High CNI × high CNK	-529.01** (154.38)	.352* (.098)
High CNI × high CNK	Low CNI × low CNK	554.63** (132.16)	.085 (.084)
	High CNI × low CNK	442.60** (141.79)	-.130 (.089)
	Low CNI × high CNK	529.01** (154.38)	-.352* (.098)

*p < .05 (two-tailed).
**p < .01 (two-tailed).
[a]Tukey Honestly Significant Difference (HSD) method.
[b]High and low levels of CNI and CNK determined by median split.

Table 1.4

MODEL RESULTS: STARTING THE SALES INTERACTION RIGHT

A. Model Specification	
Model Specification	
Brand Match: Binary Logistical Regression	$\text{Prob}(BM_i) = \frac{1}{1+e^{-(\alpha+\beta_1 CNI+\beta_2 IP+\beta_3 IB+\beta_4 OC+\epsilon)}}$
Budget Accuracy: Linear Regression	$BA_i = \alpha + \beta_1 CNI + \beta_2 IP + \beta_3 IB + \beta_4 OC + \epsilon$

B. Estimation Results

Predictors	DV = Brand Match (BM_i) β (*SE*)	DV = Budget Accuracy (BA_i) β (*SE*)
Intercept	-.796 (.209)	3.018** (.065)
CNI	.265** (.060)	.070** (.019)
IP	.078 (.087)	.009 (.028)
IB	.00079** (.00022)	.00005 (.0008)
OC	-.799* (.410)	.081 (.131)
Cox & Snell R^2	.241	
Nagelkerke R^2	.329	
R^2		.049
Adjusted R^2		.035

*$p < .05$ (two-tailed).
**$p < .01$ (two-tailed).
Notes: DV = dependent variable, BM = budget match, BA = budget accuracy, CNI= customer need
intuition IP = intuition of purchase, IB = intuition of budget, OC = other customers present.

Table 1.5

MODEL RESULTS: INTUITION OF A CUSTOMER'S EXPECTED VALUE

A. Model Specification	
Model Specification	
Purchase Likelihood	$PL_i = \alpha + \beta_1 IP_i + \beta_2 IB_i + \beta_3 OC_i + \epsilon$
Budget	$B_i = \alpha + \beta_1 IP_i + \beta_2 IB_i + \beta_3 OC_i + \epsilon$
Expected Value	$EV_i = \alpha + \beta_4 IEV_i + \beta_3 OC_i + \epsilon$

	B. Estimation Results		
	DV = Customer's Purchase Likelihood (CPL_i)	**DV = Customer's Budget** (CB_i)	**DV = Customer's Expected Value** ($CEV_i = CPL_i * CB_i$)
Predictors	β (SE)	β (SE)	β (SE)
Intercept	4.040** (.577)	788.476** (231.737)	4021.656** (813.462)
IP	.325** (.069)	-29.811 (27.941)	
IB	-.00029 (.00020)	.580** (.080)	
OC	-.253 (.326)	10.453 (130.551)	166.883 (894.060)
IEV			.356** (.061)
R^2	.070	.148	.100
Adjusted R^2	.061	.140	094

*$p < .05$ (two-tailed).
**$p < .01$ (two-tailed).
Notes: DV = dependent variable, CPL = customer's purchase likelihood, CB = customer's budget, CEV = customer's expected valueIP = intuition of purchase, IMB = intuition of budget, OC = other customers present, IEV = intuition of expected value.

Table 1.6
MODEL RESULTS: ORIGINS OF INTUITION

	DV=CNI Unstandardized Coefficients		DV=CNK Unstandardized Coefficients		Coefficient Difference Test t-statistic
Intercept	7.297** (.907)	9.035** (1.114)	9.709** (.984)	11.424** (.967)	-1.61
Customer-Level Predictors					
Gender Similarity	1.630** (.347)	1.276** (.343)	.3648 (.357)	.066 (.345)	2.46*
Ethnic Similarity	1.298** (.357)	.961** (.345)	.440 (.377)	.277 (.349)	1.39
Age Similarity	.006 (.016)	-.003 (.016)	.0004 (.0165)	-.014 (.015)	0.48
Employee-Level Predictors					
Experience		.215** (.047)		.073 (.051)	2.05*
Empathy		.605** (.184)		.421* (.196)	0.65
Customer Orientation		.070 (.286)		.903** (.306)	-1.99*
Listening Skills		-.256 (.241)		.622* (.266)	-2.44*
Age		-.022 (.028)		-.016 (.030)	-.15
Gender		.322 (.393)		.025 (.423)	-.51
Increase in Model Fit	$\Delta\chi^2 = 38.78$ (d.f. = 6)**		$\Delta\chi^2 = 64.28$ (d.f. = 6)**		
Pseudo R^2					
Kreft and Leeuw (1998)	.246		.324		
Snijders and Bosker (2011)	.269		.323		

Figure 1.1
INTERACTIVE INFLUENCE OF CNI AND CNK ON SALES OUTCOMES

Figure 1.1A: Interactive Influence of CNI and CNK on Probability of Purchase

Figure 1.1B: Interactive Influence of CNI and CNK on Purchase Amount

Figure 1.1C: Interactive Influence of CNI and CNK on Interaction Duration
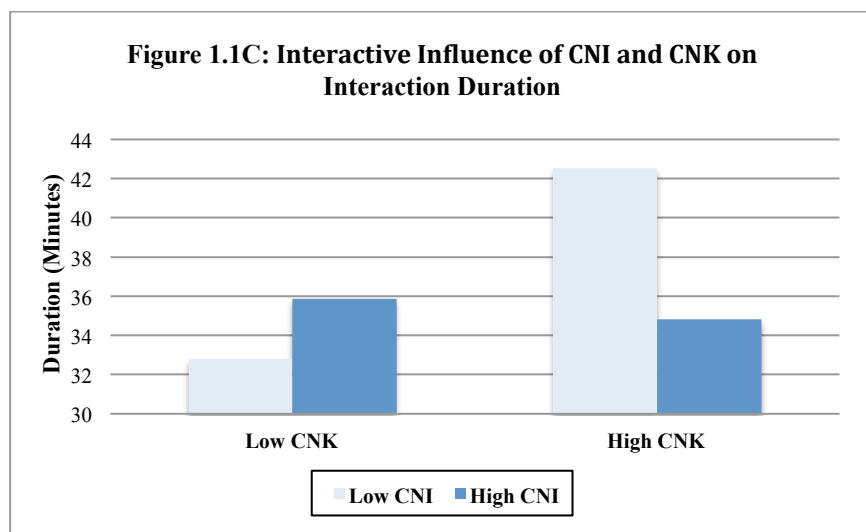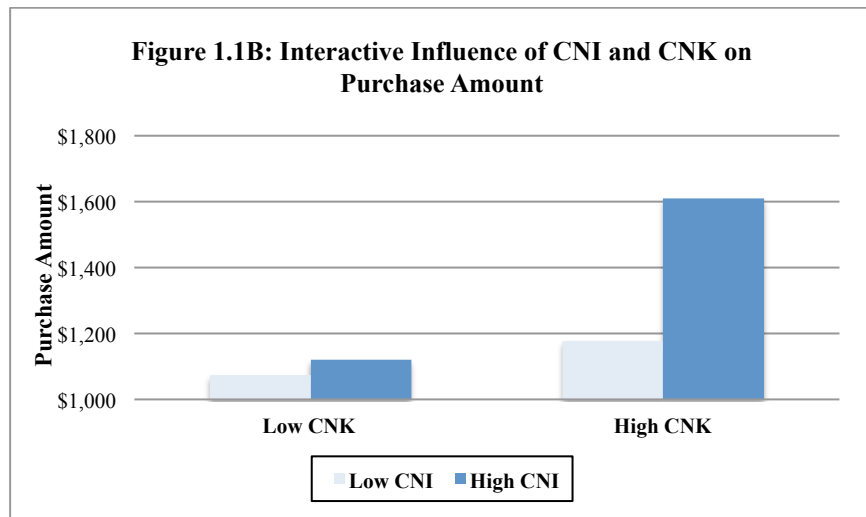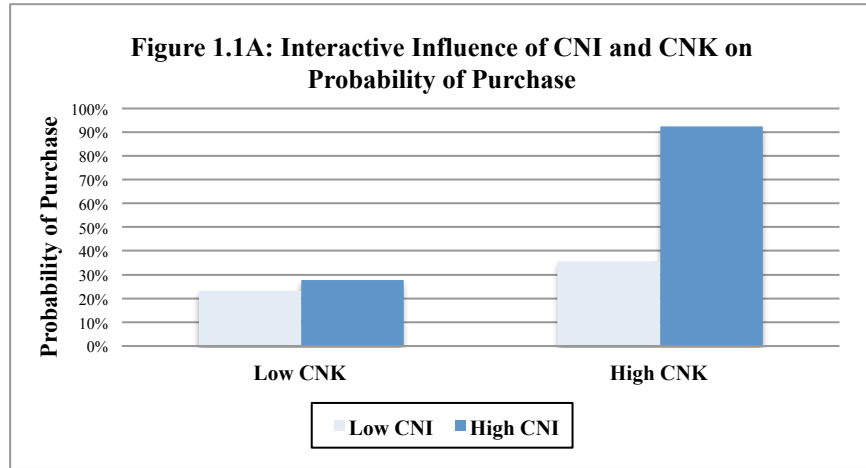
APPENDIX 1.1: STORE EXAMPLE

APPENDIX 1.2: STORE LAYOUT
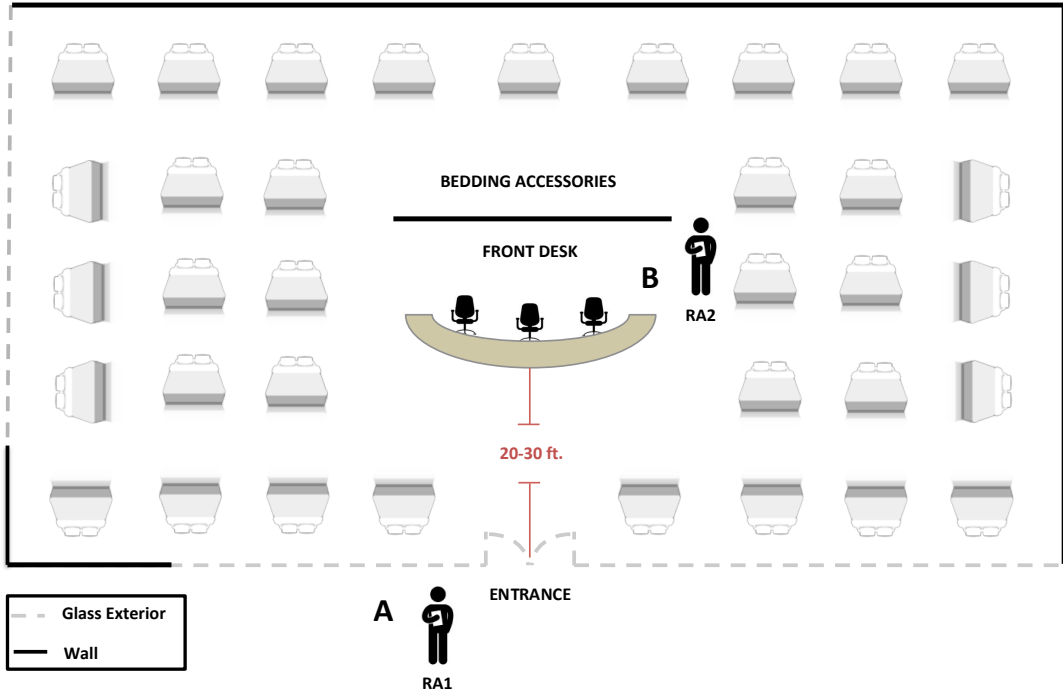
APPENDIX 1.3: STUDY 1 - SCALES FOR CONSTRUCT MEASURES

Constructs/Measures (Scale Source) – Respondent

Study 1 Constructs

Customer'Purchase Likelihood – Customer Reported
    From 0 to 10 with 0 being no chance of purchasing today and 10 being will purchase today how likely are you to purchase this mattress today?

Intuition of Purchase – Salesperson Reported
    From 0 to 10 with 0 being no chance of purchasing today and 10 being will purchase today, how likely will the customer purchase this mattress today?

Budget – Customer Reported
    If you found the perfect mattress today, what would be the most that you would spend for that mattress?

Intuition of Budget – Salesperson Reported
    What is your estimate on, if the customer found the perfect mattress today, what would be the most that this customer expects to spend on this mattress?

CNI and CNK (Homburg, Wieseke, and Bornemann 2009) – Dyadic: Salesperson and Customers Reported
    <u>Customers</u>: Please rank how important the following factors are to you when shopping for this mattress with 1 being most important to 6 being least important.
    <u>Salespeople</u>: Please indicate how important *you believe* the following factors are to the customer's purchase of a mattress today.
- The brand of the mattress
- The overall feel (support, firmness, comfort) of the mattress
- The ability to easily obtain financing
- The overall price of the mattress
- The ability to easily return or exchange the mattress
- The quality of salesperson assistance

$$\text{CNK and CNI} = 18 - \sum_{i}^{6} |(\text{CustRank}_i - \text{EmpRank}_i)|$$

Purchase – Objective Sales Data
    An interaction was considered a purchase, coded as (1), only if it resulted in a sale of a mattress.

Amount Purchased - Objective Sales Data
    Actual amount spent on a mattress.

Interaction Duration – Observational
    Length in minutes of interaction between employee and customer

Other Customers Present - Observational
    Length in minutes of interaction between employee and customer

Initial Brand Preference – Customer Reported
    Please select the **one** brand that you are most interested in today? (*Select one*)
- Sealy
- Simmons
- Stearns and Foster
- Tempur-pedic
- Generic
- Other _____

Brand Match – Dyadic: Customer Reported and Observational
    An interaction was considered a brand match, coded as (1), only if the first mattress the salesperson to the customer to matched the customer's initial brand preference.

Budget Accuracy – Dyadic: Customer Reported and Observational

    Log of the percentage difference in the retail of first mattress shown and the customer's stated budget.

$$\text{Budget Accuracy} = \log(\text{maximum inaccuracy}) - \log\left(\frac{|(\text{Customer Budget}_i - \text{Retail First Mattress}_i)|}{\text{Customer Budget}_i}\right)$$

APPENDIX 1.4: STUDY 1 - DESCRIPTIVE STATISTICS AND INTERCORRELATION MATRIX

Variables	1	2	3	4	5	6	7	8	9	10
1. Buy										
2. PA	.05									
3. DUR	.31	.20								
4. CPL	.40	-.05	.09							
5. CMB	-.12	.68	.11	-.06						
6. IP	.15	-.07	.12	.25	-.01					
7. IB	-.05	.42	.14	.00	.38	.12				
8. CNI	.34	.15	.01	.19	.03	.01	-.01			
9. CNK	.33	.11	.11	.19	-.10	.01	-.06	.33		
10. OC	-.04	.02	.01	-.01	.03	.01	.04	.02	-.04	
Mean	.51	1,203	34.36	5.87	1,333	7.30	1,311	9.10	10.33	.42
Std. Dev	.50	1,001	20.49	2.95	1,211	2.30	806	3.34	3.49	.50

Correlations greater than |.10| are significant with $p < .05$

Notes: *Buy* = Purchase, *PA* = purchase amount, *DUR* = Duration, *CPL* = customer's purchase likelihood, *CB* = customer's budget, *IP* = intuition of purchase, *IB* = intuition of budget, *OC* = other customers present.

APPENDIX 1.5: STUDY 2 - SCALES FOR CONSTRUCT MEASURES

Study 2 Constructs	Item Loadings	α
Gender Similarity – Dyadic: Salesperson and Customers Reported		
Coded as similar (1) if gender salesperson and customer gender matched and dissimilar (0) if mismatched.		
Ethnic Similarity – Dyadic: Salesperson and Customers Reported		
Which *best* describes your ethnicity? Caucasian, Hispanic, African, Asian, Middle Eastern, Other		
Coded as similar (1) if gender salesperson and customer gender matched and dissimilar (0) if mismatched.		
Age Dissimilarity - Dyadic: Salesperson and Customers Reported		
Absolute difference of salesperson and customer's reported age.		
Experience - Salesperson Reported		
How much experience do you have at this firm in a sales role?		
Empathy (Barrett-Lennard 1981) - Salesperson Reported		.87
I always sense exactly what customers want.	.73	
I realize what customers mean even when they have difficulty saying it.	.81	
It is easy for me to take the customer's perspective.	.95	
Listening Skills (Drollinger, Comer, and Warrington 2006) - Salesperson Reported		.82
I assure others that I will remember what they say by taking notes when appropriate.	.72	
I summarize points of agreement and disagreement when appropriate.	.79	
I keep track of points that others make.	.91	
Customer Orientation (Saxe and Weitz 1982) - Salesperson Reported		.93
I try to figure out what a customer's needs are.	.81	
I try to help customers achieve their goals.	.77	
I have the customer's best interests in mind.	.81	
I take a problem solving approach in selling products or services to customers.	.83	
I offer the product of mine that is best suited to the customer's problem.	.87	
I try to find out which kinds of products or services would be most helpful to customers.	.85	

APPENDIX 1.6: STUDY 2 - DESCRIPTIVE STATISTICS AND INTERCORRELATION MATRIX

Variables	1	2	3	4	5	6	7	8	9	10	11
1. CNI											
2. CNK	.33										
3. Gender Similarity	.28	.12									
4. Ethnic Similarity	.23	.14	.03								
5. Age Similarity	.05	.04	.01	.01							
6. Experience	.32	.19	.20	.14	.13						
7. Empathy	.33	.46	.16	.19	.16	.17					
8. Customer Orientation	.20	.49	.09	.13	.10	.11	.68				
9. Listening Skills	.18	.47	.14	.12	.13	.29	.67	.73			
10. Salesperson Gender	-.20	-.12	-.04	-.23	-.04	-.16	-.26	-.14	.08		
11. Salesperson Age	-.14	-.08	-.12	.02	.05	-.04	-.17	-.02	-.01	.41	
Mean	9.10	10.33	.53	.48	52.91	3.77	5.67	6.15	5.57	.60	31.76
St. Dev	3.34	3.49	.50	.50	10.93	3.80	1.37	.91	1.14	.48	6.61

IMPROVING INTUITION ACCURACY FOR INEXPERIENCED AND EXPERIENCED SALESPEOPLE

ABSTRACT

Intuitive judgments have been demonstrated to enhance the performance of salespeople, particularly salespeople with a short sales cycle. Considerable research suggests that the development of intuition depends on domain specific experience. This research implies that inexperienced salespeople cannot be as effective as experienced salespeople in jobs that rely significantly on accurate intuitive judgments, leaving new sales recruits—many of them graduating college students—to face even greater difficulty in the initial years as a salesperson.

Drawing on expert intuition, social intuition, and learning goals literature, we aim to find mechanisms that improve intuition accuracy for experienced and inexperienced salespeople. We find that inexperienced salespeople who have both learning goals and social intuition ability (either the ability to read nonverbal cues or empathy) make intuitive judgments as accurate as experienced salespeople who lack either learning goals or ability. Also, a longer exposure to the customer adds to inexperienced salespeople's intuitive accuracy while not helping experienced salespeople. The present research provides crucial insights for managers for hiring and training salesperson intuition.

INTRODUCTION

"The only real valuable thing is intuition." – Albert Einstein

Intuitions enable people to simplify and synthesize complex information into quick, and surprisingly, accurate judgments (Ambady 2010). The power and folklore of intuition is present in a number of domains. In an arena where time is critical to life and death, nurses reportedly rely on their intuition to process a complex set of symptoms to quickly diagnose a patient's illness (Cioffi 2008; McCutcheon and Pincombe 2001). Executives rely on intuition to synthesize overwhelming amounts of complex data to make quick, company-changing decisions (Khatri and Ng 2000; Sadler-Smith and Shefy 2004).

In Essay 1, we provided the first insight on another domain-specific intuition, salesperson intuition. Consistent with social intuition research (Ambady 2010), we found that salespeople could decode a customer's nonverbal behavior in order to accurately predict that customer's shopping intentions. Also, when retail salespeople rely on these intuitions, they are able to sell more effectively and efficiently. More importantly, our findings suggest that even if these salespeople accurately assess a customer's needs following verbal interactions, inaccurate salesperson intuitions lead to worse salesperson-customer outcomes. The accuracy of a salesperson's intuition is powerful in determining the success or failure of salesperson-customer interactions.

Despite the overwhelming promise and power of intuitive judgments, research on expert intuition suggests that a necessary condition to develop accurate, expert intuition is extensive experience within a particular domain (Dane and Pratt 2009; Dane and Pratt

2007; Dane, Rockmann, and Pratt 2012; Salas, Rosen, and DiazGranados 2010). That is, "the key to using intuition effectively is experience" (Klein 2003, pg. 36). This paints a bleak picture for those individuals who lack the necessary domain experience to make accurate intuitive judgments. For instance, in 2012, the largest 500 companies employed over 23 million salespeople and would seek to recruit an additional 500,000 college graduates in the following year to join their sales forces (Selling Power 2012). Based on the tenets of expert intuition, these college graduates, along with many of the other new hires would lack the on-the-job experience required to effectively make accurate intuition judgments. Since intuition is automatic and involuntary (Evans 2008; Sadler-Smith and Shefy 2004), these inexperienced salespeople would be unable to escape the consequences of applying their poorly developed intuitions. As we found in Essay 1, retail salespeople cannot recover from inaccurate first impressions. This inability to make intuitive judgments could contribute to the cause for four out of every ten rookie salespeople leave their jobs within the first year (Hrehocik 2007).

In this paper, we examine whether or not motivation and ability can enhance the intuitive accuracy of rookie salespeople and whether or not experience is indeed necessary. We also examine how this motivation and ability affects experienced salespeople. Specifically, our two research objectives focus around how the effects of antecedents of intuition accuracy vary as salespeople obtain on-the-job experience. First, we investigate how the difficulty of the task, in terms of the length of exposure to the target, interacts with experience in determining intuition accuracy. Can rookie salespeople make accurate snap judgments based on very thin slices (i.e., brief exposures) of customers' behavior? Second, we examine the role of ability (to read nonverbal cues

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and to empathize) as well as motivation (a learning goal orientation) in enabling accuracy with both experienced and inexperienced salespeople.

To investigate mechanisms that can improve intuition accuracy for inexperienced and experienced salespeople, we draw on research from social intuition, expert intuition, and goal orientations. Social intuition involves processing information about an individual in order to predict that individual's inner state or future behavior (Gore and Sadler-Smith 2011; Myers 2002). The ability to decode nonverbal behavior (Rosenthal et al. 1979; Weisbuch and Ambady 2010) as well as to empathize with the target (Losoya and Eisenberg 2001) have been shown to improve the accuracy of these intuitive predictions. However, research on expert intuition argues that in order to develop and utilize a domain-specific intuition, such as salesperson intuition, individuals must develop complex domain-relevant schemas (CDRS), which are only attainable through experience (Chase and Simon 1973; Gore and Sadler-Smith 2011; Salas, Rosen, and DiazGranados 2010). These research streams suggest that extensive domain experience is a necessary condition for salespeople to be able to transfer their social intuition skills to the sales domain. Without experience it would be hard for salespeople to make accurate intuitive judgments. Research on learning goals has shown that in difficult and important situations, individuals with learning goals have deeper levels of processing of information, higher performance, and higher levels of intrinsic motivation (Grant and Dweck 2003). We propose that motivated learning enables salespeople to process customers' behavioral cues more effectively; thus improving intuition accuracy for both rookie and experienced salespeople. Also, motivated learning should help rookie

salespeople develop CDRS more quickly, which will also improve their intuition accuracy.

With a complex data set involving dyadic data from 2,860 salesperson-customers dyads, we investigate how the impact of two social intuition abilities on intuition accuracy change with domain-specific experience, and how motivated learning through learning goal orientations affects intuition accuracy. The findings make three important contributions to the sales and marketing literature. First, rookie salespeople's intuition accuracy increases when the difficulty of judgment is easier; that is, intuition accuracy is higher when they are presented with thick slices of a customer's nonverbal behavior. However, as salespeople gain more experience, salespeople's intuition accuracy is higher when presented with thinner slices of a customer's nonverbal behavior. Second, and contrary to our hypotheses, the benefits of strong social intuition skills of decoding nonverbal cues and empathy decreases as salespeople obtain more experience. Specifically, inexperienced salespeople with higher levels of these abilities are able to make more accurate intuitive judgments than inexperienced salespeople with lower levels of these abilities. However, the benefits of these abilities become less important as salespeople become more experienced. This suggests that social intuition abilities are important for intuition accuracy early in a retail salesperson's career at the company; however, later in their career, these skills are less important. Third, motivated learning through a learning goal orientation benefits both the inexperienced and the experienced! Learning goals magnify the effects of the ability to decode nonverbal behavior into more accurate intuitive judgments. It is noteworthy, only salespeople who lack a learning

orientation encounter the diminishing effect of their social intuition skills on intuition accuracy as they gain on-the-job experience.

We organize this paper as follows: We first provide a summary of how salesperson intuition, a domain-specific social intuition, develops. Here, we explain previous research on expert intuition, spelling out a widely voiced perspective that, domain-novices have poor intuition. Next, we propose that learning goals are a mechanism to improve intuition accuracy for both experienced and inexperienced salespeople. Then, we describe our methodology and report our empirical results. We conclude with a general discussion of our findings, suggestions for improving intuition accuracy, and directions for future research.

SALESPERSON INTUITION: A DOMAIN-SPECIFIC SOCIAL INTUITION

The power of domain-specific intuitions is demonstrated in a number of domains, from the firefighter who can sense that the floor is about to collapse (Gladwell 2005) to the CEO whose gut feeling about developing a new car turns a company around (Hayashi 2001). In situations such as these, individuals' on-the-job experience enables them to make quick, accurate decisions effortlessly and with seemingly little information. This need for experience distinguishes intuition from instinct, which is generally defined as hardwired or automatic biological response to a stimuli (Hogarth 2001). Domain-specific intuitions, termed secondary intuitions, arise from the synthesis of domain-general intuitions (e.g., primary intuitions) manifested in a specific domain (Gore and Sadler-Smith 2011). Domain-general intuitive processes include the use of heuristics (if-then decision rules) under conditions of uncertainty and the development of complex domain relevant schemas, or CDRS for short. However, the implementation (i.e., accuracy) of

these processes within a particular domain involves pattern recognition through repeated practice (Gore and Sadler-Smith 2011; Kahneman and Klein 2009). In summary novices should lack the ability to make quick, accurate judgments within a particular domain.

In this paper, we concentrate on a domain-specific intuition, salesperson intuition. We define *salesperson intuition* as the salesperson's prediction of a customer's shopping intentions prior to verbally interacting with them. This intuition is similar to a nurse's or mother's intuition in that it involves the both social and problem-solving intuition.

Simply, salesperson intuition initially involves two steps. First, salespeople draw on the mechanisms underlying social intuition in order to process information about the customer that might be diagnostic to the customer's shopping intentions. Thin slices of behavior research, a field of social psychology, suggest that individuals can make accurate social judgments based on their ability to process scant, naturalist, nonverbal behavior (Ambady and Rosenthal 1992). Thin slice refers to very brief exposures to the target individual's expressive behavior and typically range from a photo still to one minute in length. Thin slices research has demonstrated that individuals can make accurate judgments on a number of dimensions important to salespeople including predicting affective states (Carney, Colvin, and Hall 2007), personality characteristics (Ambady and Rosenthal 1993; Borkenau et al. 2004), deception (Albrechtsen, Meissner, and Susa 2009), and intelligence (Borkenau et al. 2004; Carney, Colvin, and Hall 2007), to name a few.

Next, once salespeople have processed this nonverbal information, correctly or not, they draw upon their schemas in order to categorize (e.g., pattern match) and characterize their customers. As individuals gain more experience and become domain

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experts, they are able to develop and utilize their complex domain-relevant categories for effective pattern matching, which is the foundation of expert intuition (Dane and Pratt 2009; Gore and Sadler-Smith 2011). These "domain experts are well equipped to capitalize on the potential benefits of intuition because they possess rich bodies of domain knowledge that foster the rapid and sophisticated associated processes that produce accurate intuition (Dane, Rockmann, and Pratt 2012, pg 188)." Alternatively, domain-novices lack the domain-experience to develop CDRS. Rather, novices base their intuitive judgments on simple heuristics and stereotypes, which result in less accurate judgments than experts (Baylor 2001; Dane and Pratt 2007; Kahneman and Klein 2009).

In a similar vein, this process where salespeople process behavioral cues, match those cues to previous patterns, and make a judgment is parallel to the work on implementation intentions where individuals develop if-then rules to solve problems (Gollwitzer 1999; Gollwitzer and Sheeran 2006). As individuals encounter similar situations over time, they develop a set of situational rules guiding their action and, in our case, judgment. These "if-then" implementation intentions require very little deliberation once a specific situation is encountered (Brandstatter, Lengfelder, and Gollwitzer 2001). However, proper implementation requires both recognition of the situation (social intuition) and well-developed schemas (expert intuition) to determine the appropriate actions.

The proper utilization of salesperson intuition requires the ability process a customer's nonverbal behaviors as well as developing complex domain-relevant schemas through experience. This begs the questions, should inexperienced salespeople avoid acting on their intuitive judgments since they lack domain-specific experience, or are

there mechanisms that can help novice salespeople make accurate intuitive judgments despite the lack of experience? The following section presents research that suggests that inexperienced salespeople should refrain from acting upon their intuitions. We plan to demonstrate that, in general, inexperienced salespeople's intuitions are worse than more experienced salespeople and, at times, are no better than random chance. However, we conclude the section by proposing that motivated learning provides a necessary mechanism that can improve salesperson's intuitive judgments even for those salespeople who lack extensive domain-specific experience.

Slice Thickness and Intuition Accuracy

Funder (1995) and Kenny (1994) suggested that more information about a target should improve person perceptional accuracy. However, empirical research on the relationship between amount of information and perceptual accuracy has been less clear. Ambady and Rosenthal (1992) demonstrated in their meta-analysis on thin slices of behavior that the amount of information, which was conceptualized as exposure to the target, has no effect on perceptual accuracy. Specifically, the individual's assessments of a target's personality traits were equally as accurate with less than half a minute exposure as with 5-minute exposures. Conversely, Carney, Colvin, and Hall (2007) found that exposure length increased an individual's ability to predict positive affect, agreeableness, and extraversion. However, there was no relationship between exposure length and negative affect, openness, and intelligence. The authors suggested that perceivers are driven to quickly recognize, "these behavioral categories may be both life-saving and life promoting (pg. 1058)" to the perceiver. When the judgment of a characteristic is

important to an individual's goals, the individual processes information quickly and is still able to make accurate judgments.

In personal selling, salespeople are motivated to recognize customers needs (Sujan, Weitz, and Kumar 1994; Weitz, Sujan, and Sujan 1986) since satisfying customers needs leads to superior performance (Franke and Park 2006). Thus, through experience, salespeople acquire knowledge about important customer needs and the information cues that are diagnostic to those needs; these are "life saving" and "life promoting" for salespeople. However, salespeople understand customer needs and the diagnosticity of various behavioral cues as they obtain on-the-job experience. Once they have developed their CDRSs, salespeople should be able to quickly identify diagnostic cues as well as retrieve information from their CDRSs in order to make accurate intuitive judgments. Thus, following Carney, Colvin, and Hall's (2007) argument, as salespeople gain domain-specific experience on the job, the amount of exposure will not affect intuition accuracy regarding a customer's needs. Additional exposure time will not provide additional benefit to domain-experts.

Alternatively, novices should not be able to make accurate judgments when provided shorter exposures of their target; novices should benefit from additional exposure. As inexperienced salespeople have simpler, less-developed schemas to draw from than experienced salespeople, they will utilize heuristics or prevalent stereotypes for their intuitive judgments (Dane and Pratt 2007). These heuristics tend to give rise to more slower judgments than expert judgments (Gobet and Lane 2005). In addition to slower judgments, novices are unable to recognize patterns quickly and therefore process information about the target more slowly (Ericsson and Lehmann 1996). Anderson

(1982) describes this situation as a trial and error process for novices where, over time,

individuals will be able to connect the linkages more quickly. While novices' judgments,

in general, should be less accurate than domain-experts, novices' intuition accuracy

should improve with extended exposure to customers' expressive behavior since they

would possess more time to properly draw on their less-developed schemas. Bringing this

whole argument together, we hypothesize:

> H_1: The impact of exposure length on intuition accuracy diminishes as domain-specific experience increases. Exposure length has no effect for experienced salespeople; however, shorter exposure length will reduce intuition accuracy for inexperienced salespeople.

Interactive Influence of Social Intuition Skills and Domain-Specific Experience

Interpersonal sensitivity involves understanding the thoughts, feelings, and

intentions of others while predicting the future states of behaviors that will result

(Bernieri 2001). Social intuition, a form of interpersonal sensitivity, involves rapid and

automatic evaluations of these inner states (Gore and Sadler-Smith 2011). In sales,

particularly retail sales, a salesperson must quickly understand a customer's affect,

personality traits, and communication style as these assessments influence how the

salesperson should approach the customer and how the customer will react. Accurate

categorization and adaptation to these characteristics leads to effective relationship

building and, thus, salesperson effectiveness (Manning, Reece, and Ahearne 2011),

whereas inaccurate categorizations can be disastrous. Recent work by Homburg,

Wieseke, and Bornemann (2009) demonstrated that a salesperson's accurate assessment

of the hierarchy of customer needs increases the customer's willingness to pay and

satisfaction. However, we revealed in Essay 1 that salespeople cannot recover from inaccurate first impressions of a customer's shopping-related needs.

In this research, we focus on two abilities from social intuition research linked to the perceiver's skill to forecast another individual's inner state. The first, the ability detect behavioral cues, involves a perceiver's skill to detect subtle surface-level cues from a target individual (Ambady, LaPlante, and Johnson 2001; Bernieri 2001). These cues can be facial expressions, body language, clothing, jewelry, etc. Standardized tests, such as the Profile of Nonverbal Sensitivity (Rosenthal et al. 1979), PONS for short, have been developed to measure individuals' ability to accurately predict an individual's personality or inner states based on various body, facial, and other non-verbal behavioral cues. While a general ability to decode these non-verbal behavioral cues is essential to social situations, Klein (2003) suggested that properly transferring this ability to a specific context requires domain relevant experience. Thus, novices, in general, should have lower intuition accuracy as they lack the domain relevant experience to draw from. When novices possess a weak ability to decode nonverbal behavior, the accuracy of their intuitive judgments should be no better than a guess as they lack both the ability to decode nonverbal behavior and the less complex schemas to draw from. Novices with a strong ability to decode nonverbal behavior should still encounter some of the difficulty making accurate intuitive judgments; however, their intuition accuracy should improve since they can effectively match customers to the appropriate, albeit less-developed, schema. Alternatively, domain experts with a strong ability to decode nonverbal behavior should be able to quickly match customers to the appropriate CDRS. However, domain experts with a weak ability to decode nonverbal behavior will have difficulty making

accurate intuitive judgments as they lack the ability to match customers to the proper CDRS.

The second social intuition ability, empathy, is an individual's ability to identify or relate with other individual's inner state (Eisenberg and Strayer 1990; Losoya and Eisenberg 2001; McCullough, Worthington, and Rachal 1997). Empathy is generally treated as an enduring trait (Bagozzi and Moore 1994; McBane 1995); however, research suggests that empathy develops as individuals gain experience within social situations (McCullough, Worthington, and Rachal 1997). Similarly, recent research in both sales (Homburg, Wieseke, and Bornemann 2009; Peterson and Limbu 2009) and nursing (Brunero, Lamont, and Coates 2010; Taylor et al. 2009) suggest that empathy is a trainable skill. While training empathy could be worthwhile, Pedersen (2010) and Batson et al. (1996) argue that successful development of empathy in a particular domain requires domain-specific, situational experience. Similar to the rationale for decoding nonverbal behavior, we suggest that intuition accuracy should be maximized when salespeople are more empathetic and possess domain-specific experience. Alternatively, novice salespeople who are more empathetic should still have some difficulty identifying with customers as they possess less domain-specific experience and less complex schemas to draw upon. Novices that are less empathetic should have the worst intuition accuracy as they lack the ability to identify with the customer and possess less complex schemas to use for their intuitive judgments.

In summary, two perceiver characteristics, decoding nonverbal behavior and empathy, which have been identified as antecedents of accurate person perception judgments, should have incremental benefit to novice salespeople as they have less

domain-specific experience to fully utilize these abilities. On the other hand, experienced

salespeople should be able to leverage these abilities through their CDRS. Thus, decoding

nonverbal behavior and empathy should increase the effect that experience has on

intuition accuracy. Thus, we hypothesize:

H_2:   The impact of the ability to decode nonverbal behavior on intuition
accuracy increases as domain-specific experience increases. A
salesperson's ability to decode nonverbal behavior will have a smaller
impact on inexperienced salespeople's intuition accuracy and a greater
impact on experienced salespeople's intuition accuracy.

H_3:   The impact of empathy on intuition accuracy increases as domain-specific
experience increases. A salesperson's empathy will have a smaller impact
on an inexperienced salesperson's intuition accuracy and a greater impact
on an experienced salesperson's intuition accuracy.

Motivation to Learn: Improving Social Intuition Accuracy

Expert intuition, such as salesperson intuition, requires an environment that

provides valid cues for diagnosing future success and the opportunity to learn these cues

(Kahneman and Klein 2009). This environment must involve repeated judgments and

provide valid feedback of those judgments (Klein 2003). Selling provides an ideal,

natural environment to develop expert intuitions. In retail sales, salespeople have discrete,

one-off encounters with a variety of customers on a daily basis. Through each interaction,

salespeople obtain feedback regarding their intuitive judgments during the interaction,

and each sales interaction provides feedback in the form of measurable, objective

outcomes (e.g., sale or not, amount purchased, customer satisfaction).

Goals motivate what salespeople choose to focus their efforts on (Salas, Rosen,

and DiazGranados 2010) and how they process feedback (Grant and Dweck 2003). Grant

and Dweck (2003) found that when faced with challenging situations, such as a

salesperson trying to identify customers' needs to make a sale, individuals with a learning

goal orientation are persistent, not troubled with making mistakes, and process

information more deeply. Thin slices research suggests that accurate social judgments

requires deep processing of both a target's nonverbal behavior and current situation. That

is, judgment accuracy increases as individuals are able to uncover deeper meanings of the

target's surface-level information. Thus, intuition accuracy should increase as individuals

are able to process this information more deeply. Since salespeople with a learning goal

orientation should process customers' behavioral cues more deeply than those lacking a

learning goal orientation, the effect of salespeople's ability to decode nonverbal behavior

and empathize should be enhanced for salespeople who possess a learning goal

orientation.

Thus, we hypothesize:

H_4: The impact of the ability to decode nonverbal behavior on intuition accuracy increases as learning orientation increases.

H_5: The impact of empathy on intuition accuracy increases as learning orientation increases.

Research on adaptive selling suggests that a learning goal orientation should

improve the development of salesperson's knowledge of customer categories, or CDRSs

(Sujan, Weitz, and Sujan 1988; Weitz, Sujan, and Sujan 1986). A learning goal

orientation should not only enhance the utilization of social intuition abilities, but it

should allow salespeople to develop CDRS more quickly. Building on previous

arguments, we suggest a three-way interaction of social intuition abilities, learning goal

orientation, and domain-specific experience where higher (lower) levels of social

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intuition ability, learning orientation, domain-specific experience should result in the best

(worst) intuition accuracy of all the combinations.

Thus, we hypothesize:

H_6:   The impact of the ability to decode nonverbal behavior on intuition
        accuracy increases (decreases) as both learning orientation and domain-
        specific experience increases (decreases).

H_7:   The impact of empathy on intuition accuracy increases (decreases) as both
        learning orientation and domain-specific experience increases (decreases).

METHODOLOGY

Setting

To investigate how the impact of antecedents associated with accurate intuitive

judgments changes as salespeople obtain on-the-job experience, we conducted an

extensive online experiment with a midsize U.S.-based specialty retailer that operates

over 1,000 stores nationwide and over 100 stores in our research area. This retailer was

ideal for this study for three reasons. First, this retailer primarily sells one product line,

mattresses, which consist of 6–10 brands ranging in price from $199 to $4,349. The

retailer's product selection has enough variance in assortment, brand, price, and product

characteristics to assess intuition accuracy. Second, sales associates at this firm are

primarily incentivized through commission. Approximately, 75% of their take-home pay

comes from commission-based incentives. Thus, salespeople are motivated to identify a

customer's needs since the salesperson's pay is closely tied to their sales performance.

Third, each store location has a glass window exterior out of which the salesperson can

easily see customers as they drive up to the store, park, and enter the store. As such,

salespeople have the opportunity in their natural environment to make quick, intuitive judgments about their customers.

Data Collection

Data was collected in two distinct stages: (1) customer videos and surveys, followed by (2) salesperson assessments. Customer data was collected through intercepting customers as they entered one of this specialty retailer's stores. To reduce potential biases and selection issues, 4 of the local 100 store locations were chosen at random. Twenty customers agreed to participate in the study and also consented to being videotaped as they entered the store. Four customer videos were discarded because of video quality issues leaving 16 videos for use with this study (eight women and eight men customers). The average age of the customers was 38.1 years.

For the salesperson assessments, salespeople were asked to complete two surveys, *Intuition Assessment* and *Nonverbal Assessment*, as part of a company initiative. For their participation, salespeople who completed both surveys were entered in a drawing where one in ten salespeople would receive a $25 gift card. All 2,407 sales associates from this firm were contacted for this study and 715 associates completed both assessments, representing a completion rate of 28.5%. To check for non-response bias, we analyzed the sales performance for the past year of responders and non-responders and found no difference in the two groups. The sample was 73% male with an average age of 37.95 years and an average 3.61 years of sales experience at the firm. 74.8% reported their ethnicity as White.

Customer Videos and Surveys. The purpose of videotaping customers was to capture visual information similar to that seen by a salesperson in the field. Trained

research assistants intercepted customers prior to entering the store. Research assistants obtained permission from each customer to participate in the study, which included being videotaped and completing a brief survey. The content of these videos included the customer exiting their car, walking to the store, and briefly talking with the research assistant. Note, following thin slices of behavior methodology, audio was stripped from the videos so that participants would only be exposed to each customer's nonverbal behaviors. The videos were all at least one minute in duration. After being videotaped, customers filled out a survey where they would rank the importance of six shopping needs and demographic information about themselves. A list of the shopping needs can be found in Appendix 2.1.

Intuition Assessment. The goal of this assessment was to evaluate the accuracy of salespeople's intuitive judgments regarding the shopping needs of a series of customers. At the beginning of the assessment, salespeople were asked to view a customer that was previously intercepted by our research assistants. Then, based on viewing the customer, salespeople were asked to rank their perception of the importance of the six shopping needs that the customer was previously asked. Salespeople would make these judgments for a total of four randomly selected customers, two male and two female.

We manipulated the length of the video clip that salespeople viewed for a between-subjects design. Specifically, salespeople were randomly assigned to one of three viewing conditions: (a) picture, (b) 10-second clip, and (c) full length video. Pictures and video clips all came from the same, full-length video clip. Consistent with Ambady and Rosenthal (1993), photo stills and 10-second clips were randomly selected from the original video clips. Once the salespeople completed their judgments for each of

the four customers, they were asked to provide self-assessments of their empathy, learning orientation, domain-specific experience, industry experience, age, gender, and ethnicity. On average, the Intuition Assessment took approximately fifteen minutes to complete.

Nonverbal Assessment. All participants who completed the Intuition Assessment received a thank you email and an invitation to complete the Nonverbal Assessment. The Nonverbal Assessment consisted of two assessments of an individual's ability to decode nonverbal cues: the Reading of the Mind in the Eyes revised test (Baron‑Cohen et al. 2001) and the Face and Body MiniPONS (Bänziger et al. 2011). For each assessment, salespeople encountered a photograph or brief video clip of an individual. After viewing the photograph or video clip, salespeople were asked to make a prediction about what the individual was feeling, thinking or doing. To make their prediction, salespeople were given two to four to choose from. In order to make sure that participants understood the assessment, each assessment started with two practice questions. After completing the practice questions, participants were shown the correct answers and confirmed that they understood how to take the assessments. On average, the Nonverbal Assessment took approximately twenty minutes to complete. Responses from each salesperson for the Intuition and Nonverbal Assessments were matched with the appropriate customer responses.

Measures

Dyadic measures for intuition accuracy, age discrepancy, gender discrepancy, and ethnicity discrepancy were asked to both customers and salespeople. Measures regarding domain-specific experience, learning orientation, ability to decode nonverbal behavior,

and empathy were all administered directly to sales representatives. The amount of information was manipulated in the Intuition Assessment through the length of clip: a photo still, a 10-second clip, or a full-length clip. A summary of the descriptive statistics and correlations for our measures can be found in Appendix 2.2.

Intuition Accuracy. Our dependent measure is the accuracy of the salesperson's intuitive judgments of a customer's hierarchy of shopping related needs. We termed this as *intuition accuracy*. As in Essay 1 for Customer Need Intuition (CNI), we computed intuition accuracy as a discrepancy index between the customer's self-ranked hierarchy of shopping needs from the customer survey and the salesperson's judgment of those needs from the salesperson Intuition Assessment. Specifically, we calculated intuition accuracy by summing the absolute value of the difference between the customer's rank for need i and the salesperson's rank for need i. With six needs, perfect accuracy would equal 0 and perfect inaccuracy would equal 18. As such, we performed a transformation of intuition accuracy by taking 18 less than the absolute differences in rank so that higher intuition accuracy scores represented higher accuracy. This method measures a salesperson's ability to accurately determine the magnitude or importance of a need over a set of needs (Tiggle et al. 1982).

$$\text{Intuition Accuracy} = 18 - \sum_{i}^{6} |(\text{CustRank}_i - \text{EmpRank}_i)|.$$

Ability to Decode Nonverbal Behavior. We measured the ability to decode nonverbal behavior with two separate assessments of nonverbal reading ability administered in the salesperson's Nonverbal Assessment. First, salespeople completed the 36 item, Mind in the Eyes test, MET for short (Baron‑Cohen et al. 2001). This assessment focuses on reading facial expressions focused centered around the eyes for

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both men and women. Then, salespeople were asked to complete the Face and Body

MiniPONS test, MiniPONS for short (Bänziger et al. 2011), a shortened version of

Profile of Nonverbal Sensitivity (Rosenthal et al. 1979). The shortened version consists

of 40 items. The MiniPONS assessment focuses on reading both general facial and body

expressions. We combined the two assessments to create a general assessment of a

salesperson's ability to read nonverbal behavior. The composite reliability of this

combined construct of the two MET measures (male and female) and MiniPONS (face

and body) was .80, which suggests that combining the two assessments into one higher

order factor is justified (Bagozzi 1980).

Domain-specific Experience. Domain-specific experience was operationalized as

the amount of time in years that the salesperson has worked at the retail firm. The

average years of experience was 3.61 with a standard deviation of 3.60.

Learning orientation. Learning orientation was measured using 4 items developed

and validated by Sujan, Weitz, Kumar (1994) based on the original scale developed by

Ames and Archer (1988). Items focused on the extent that salespeople were motivated to

learn from their sales experiences. Items were adapted to match the research context. (α =

.85; example item: "Making some mistakes, I feel, when selling is a necessary part of the

learning process.")

Empathy. Empathy was measured using a 3-item scale adapted from Barrett-

Lennard (1981). Items focused on the extent that salespeople are able to take the

customer's perspective. (α = .79; example item: "It is easy for me to take the customer's

perspective.")

Covariates. We controlled for three characteristics of the target that have been shown to be related to accurate intuitive judgments. Since we found in Essay 1 that salesperson-customer demographics affect intuition accuracy, we controlled for differences in the salesperson's age, gender, and ethnicity. *Age discrepancy* was calculated as the absolute difference in the salesperson's and customer's ages. *Gender discrepancy* and *ethnicity discrepancy* were coded as a 1 for mismatch and 0 otherwise.

We also controlled for three characteristics of the perceiver that have been shown to be related to accurate intuitive judgments. First, we controlled for the salesperson *gender* since research has consistently demonstrated that intuitive judgments tend to be more accurate for females than males (Carney, Colvin, and Hall 2007; Hall 1978; Hall, Murphy, and Mast 2006). For *gender*, we coded females as 1 and males as 0. Second, we controlled for the salesperson's *age,* since the ability to read nonverbal tends to decline with age (Charles and Campos 2011; Mill et al. 2009). Third, we controlled for number of years of *industry experience* to control for influences of domain relevant experience.

Exposure Length. We manipulated the amount of nonverbal behavioral information that salespeople received for each target. Salespeople were randomly assigned to one of the three exposure length conditions: photo still, 10-second clip, or full-length clip. Table 2.1 presents the results of the manipulation on intuition accuracy. Overall, longer exposures were associated with higher intuition accuracy than the photo still (Mean Difference .600, p<.01) and 10 sec video clip (Mean Difference .387, p<.05).

- - - - Insert Table 2.1 about here - - - -

Analytical Procedure

For our data analysis approach, it is important to consider the two-level structure

of our data. In this structure, customers (i.e., Level 1) are nested within salespeople (i.e., Level 2). Our dependent variable, intuition accuracy, is located at the lower level, as it is associated with a specific customer. As our hypotheses deal with the influence of a higher-level variable on a lower-level variable, a multilevel analytical approach enables us to examine how much variance of intuition accuracy was explained by characteristics of salespeople and how much resides uniquely with customer characteristics. As such, we test our hypotheses by estimating a multilevel model using SAS PROC MIXED (Hox 1995; Singer 1998). We centered all predictor variables by their grand mean.

In our analyses, we applied a stepwise approach (see Table 2.2). For Model 1, we entered dummy variables for the exposure manipulation along with customer and salesperson control variables. Then, for Model 2, we entered the main effects of ability to decode nonverbal behavior, empathy, and domain-specific experience. Next, for Model 3, we entered domain-specific experience as a moderator. Then, for Model 4, we added learning orientation as an additional moderator. In the final model, Model 5, we included three-way interactions with domain-specific experience and learning experience with our two focal skills, the ability to decode nonverbal behavior and empathy.

- - - - Insert Table 2.2 about here - - - -

Results

Table 2.2 presents the results of our multilevel analysis. Consistent with prior work on the target's characteristics that affect intuition accuracy, salesperson-customer ethnicity discrepancy (Model 1, $\beta=-.419$, $p <.01$) reduced salesperson's intuition accuracy. However, age discrepancy (Model 1, $\beta=-.006$, *ns*) and gender discrepancy (Model 1, $\beta=.050$, *ns*) was not related to intuition accuracy. Consistent with prior work

on the perceiver's characteristics that affect intuition accuracy, females (Model 1, β=.323, p <.05) and industry experience (Model 1, β=.186, p <.01) were positively related to intuition accuracy. Also, salesperson age (Model 1, β=-.011, p <.05), when controlling for experience, was negatively related to intuition accuracy.

Exposure Length. We provide the shape and form of the interaction of exposure length and domain-specific experience in Figure 2.1A. The interaction plots indicate that the effect of longer exposure via the 10-second clip on intuition accuracy did not diminished as salespeople gained domain-specific experience (Model 3, β=-.013, *ns*), failing to support H$_1$. However, the effect of longer exposure via the full-length clip on intuition accuracy diminished as salespeople gained domain-specific experience (Model 3, β=-.287, p <.01), supporting H$_1$.

Further analysis suggests that there is no difference in the effect of the two thinnest conditions, photo and 10-second video clip, on intuition accuracy. Specifically, from Table 2.1, there is no difference in the average intuition accuracy for the photo versus the 10-second video conditions (mean difference = -.243, ns). Also, from the interaction plot in Figure 1A, there is no difference in the slope of the photo and 10-second video conditions as salespeople gain more domain-specific experience (Difference in slope = .091, ns). This suggests that the photo and 10-second video conditions represent thin slices of behavior whereas the full-length video represents thicker slices of behavior. As our subsequent hypotheses deal with making intuitive judgments from thin slices, our interaction plots for the remainder of the paper will focus on the thinner slice conditions; however, Table 2.2 reports the complete findings for all conditions with dummy variables for each condition.

Interactive influence of domain-specific experience. In our results, ability to decode nonverbal behavior and empathy did interact with domain-specific experience; however, the direction of the interaction was surprisingly opposite to our hypotheses. Specifically, as salespeople obtained more domain-specific experience, the effects of decoding nonverbal behavior (Model 3, β=-.274, p <.05) and empathy (Model 3, β=-.045, p <.01) on intuition accuracy decreased, which contradicts H_2 and H_3 respectively. Investigating the shape and form of these interactions in Figures 2.1B and 2.1C indicate that decoding nonverbal behavior and empathy does improve intuition accuracy for inexperienced salespeople, consistent with H_2 and H_3. However, contrary to hypotheses, these effects on intuition diminish in importance as salespeople obtain more domain-specific experience.

- - - - Insert Figure 2.1 about here - - - -

Interactive influence of learning orientation. Consistent with H_3, learning orientation did interact with ability to decode nonverbal behavior (Model 4, β=.602, p <.05). Figure 2.2A shows the shape and form of the interaction of learning orientation and ability to decode nonverbal behavioral cues. As seen in this figure, when ability to decode nonverbal behavior is low, learning orientation's interactive effect is weak and nonsignificant. However, when ability to decode nonverbal behavior is high, learning orientation's interactive effect is stronger and significant. Learning orientation did not interact with empathy (Model 4, β=.022, *ns*), failing to support H_4. As seen in Figure 2.2B, learning orientation provides an additive effect with empathy rather than a multiplicative effect.

Interactive influence of learning orientation and domain-specific experience.

Although in the hypothesized direction, the three-way interaction of domain-specific experience, learning orientation and ability to decode nonverbal was not significant (Model 5, β=.069, *ns*), failing to support H_5. Despite the nonsignificant interaction, Figure 2.3A shows that early in the salesperson's career, lower levels of the ability to decode nonverbal behavior has a strong negative effect on intuition accuracy, irrespective of learning orientation. With low levels of domain-specific experience and lower levels of ability to decode nonverbal cues, salespeople's intuitive judgments of product-related needs are no better than random chance (random chance = intuition accuracy of 6.33). Also at this early stage of a salesperson's career, learning orientation has a weak, positive effect on those individuals with a high ability to decode nonverbal behavior. However, as salespeople obtain more domain-specific experience, high levels of learning orientation coupled with high ability to decode nonverbal behavior is superior to the other combinations.

The three-way interaction of domain-specific experience, learning orientation, and empathy (Model 5, β=.028, p<.05) was related to intuition accuracy, supporting H_6. As seen in Figure 2.3B, low domain-specific experience, learning orientation, and empathy result in intuitive judgments significantly worse than all other combinations. Also, empathy improved intuition accuracy for rookie salespeople; however, as salespeople gain more domain-specific experience, empathy coupled with high learning orientation provides higher levels of intuition accuracy than with low learning orientation.

- - - - Insert Figure 2.2 & 2.3 about here - - - -

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DISCUSSION

Summary of Findings

Research on expert intuition suggests that the successful implementation of intuition within a particular domain requires significant domain-specific experience. However, the activation of intuition, regardless of experience, is automatic. In support of prior research on expert intuition, we found that, in general, less experienced retail salespeople did in fact make less accurate intuitive judgments than more experienced salespeople. Rookie salespeople's intuitive judgments were less accurate when given very thin slices of the customer's expressive behavior. However, their intuition accuracy improved as they were provided thicker slices. Nevertheless, in retail sales, inexperienced salespeople from time to time may not have the privilege of long exposures of the customer's expressive behavior prior to verbally engaging the customer.

Further, we proposed that on-the-job experience was required for salespeople to transfer their social intuition abilities (e.g., decoding nonverbal behavioral cues and empathy) to the retail sales domain. Again, this would provide a dim outlook on newly hired salespeople. However, contrary to our hypotheses and the tenets of expert intuition, our findings suggest that rookie salespeople are able to leverage their social intuition capabilities into more accurate intuitive judgments. For inexperienced salespeople, the social intuition abilities of decoding nonverbal behavioral cues and empathy can substitute for lack of experience. This supports research from thin slices of behavior that inexperienced individuals can make accurate intuitive judgments based on their ability to process facial expressions, gestures, and tone of voice (Ambady 2010; Ambady, Bernieri, and Richeson 2000). Interestingly and again, contrary to our hypotheses, the importance of these social intuition abilities diminished as salespeople obtained more experience. As

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retail salespeople obtain more and more experience, the ability to decode nonverbal behavioral cues and empathize with customers does not improve intuition accuracy. Rather, experience, which is necessary to develop CDRS, improves intuition accuracy. However, through further investigation, we found the decline in the importance of social intuition skills only occurred with individuals that were not learning oriented.

In this research we suggested that salespeople who lack the adequate on-the-job experience can properly implement their intuition. Specifically, we proposed that individuals who were motivated to learn would have higher intuition accuracy. Drawing from research on learning orientation, we argue that individuals with a learning orientation would process customer behavioral cues more deeply, draw deeper meaning from the customer's situation, and also develop CDRS faster, all of which will improve salesperson intuition accuracy. Overall, a salesperson's learning orientation improves intuition accuracy for experienced as well as less-experienced salespeople!

Despite the relationship between empathy and the ability to decode nonverbal behavior ($\rho = .250$, p<.01), the interactive effects of these social intuition abilities with learning orientation and domain-specific experience differed. For the ability to decode nonverbal behavior, a learning orientation magnified the positive effects of this ability. This suggests that motivated learning enables salespeople, experienced or not, to process the information provided by customer behavioral cues more deeply, resulting in higher intuition accuracy. Learning orientation played an interactive role with experience by influencing the effect of salesperson's social intuition skills on intuition accuracy. Inexperienced salespeople with a low ability to decode nonverbal behavioral cues, irrespective of learning orientation, make intuitive judgments no better than chance.

However, a high level of experience, learning orientation, and ability to decode nonverbal behavioral cues resulted in the best intuition accuracy of all the combinations.

Contrary to our hypotheses, empathy did not significantly interact with learning orientation. However, we did find support for a three-way interaction with learning orientation and experience. We found that the intuition accuracy for rookie salespeople with low learning orientation and low empathy is significantly worse than all other combinations. Also, while empathy was important for experienced salespeople, learning orientation is necessary to improve intuition accuracy. While the interactive effects of the social intuition skills, learning orientation, and experience differ, our results consistently indicated that learning orientation plays an important role in transferring theses abilities into accurate intuitive judgments.

Improving Intuition Accuracy

Our findings suggest that mechanisms exist that can improve the intuition accuracy of their retail sales force, particularly in the areas of hiring, training, and emphasizing social intuition abilities. For hiring, social intuition abilities and learning orientation are critical for accurate salesperson intuition. Beyond the scales to measure an individual's empathy and learning orientation, we have provided two assessments, MiniPONS and Mind in Eyes, which can be used as screening tools to identify an individual's ability to decode nonverbal behavioral cues. Similarly, firms can screen potential candidates based on antecedents to these abilities and motivation. For example, valuing welfare (Batson et al. 2007), which is similar to customer orientation, target-perceiver similarity (Grover and Brockner 1989), and perspective-taking (Davis 1994) have been found to be antecedents of empathy. Similarly, salesperson affect (Ambady

and Gray 2002; Forgas 2011) and gender (Zuckerman et al. 1976) have been linked to the ability to decode nonverbal behavioral cues. Lastly, Payne, Youngcourt, and Beaubien (2007) identified a number of factors associated with a learning goal orientation, including need for achievement, conscientiousness, emotional stability, extraversion, openness to experience, self-esteem, and self efficacy.

Our findings suggest that training social intuition abilities is most beneficial early in a salesperson's career. Homburg, Wieseke, and Bornemann (2009) found that empathy can be improved through training in perspective-taking. That is, training salespeople to visualize the customer's perspective enhances salespeople's empathy ability. Similarly, Peterson and Limbu's (2009) research suggests that training individuals to take a customer's perspective, think more deeply about an customer, and understand the components of empathy improve salespeople's empathy. However, training empathy and other social skills in the classroom may have limited success as it lacks a critical participant, the customer. Pedersen (2010) argues that the training of empathy should closely involve both the perceiver and target. Thus, empathy training programs could combine these suggestions and be implemented in the field rather than the classroom. For example, inexperienced salespeople could be instructed to make a conscious effort to understand each customer's perspective and discuss their perceptions with more experienced salespeople or managers. This would improve both salespersons' empathy ability as well as develop their CDRS.

Retail firms (Boyle 2006) and experienced salespeople (Martin 2006) have already begun to identify behavioral cues that are diagnostic of future customer behavior and training salespeople to identify these cues. However, research on training

individuals' ability to decode nonverbal behavior is less available. One interesting avenue to draw from is research on deception detection training. Deception detection research has found that change in voice pitch, voice patterns, use of hand gestures, and other behavioral cues were more indicative of liars, and individuals can be trained to detect these cues (DeTurck and Miller 1985; Vrij 1994). If this is the case, then managers first must identify the behavioral cues that associated with various customer behaviors. However, subsequent research on deception detection found that training the ability to detect cues provides no improvement to the ability to detect cues; rather, training individuals to be thoughtful of the importance of diagnosing cues can improve their ability to detect nonverbal behavior (Levine et al. 2005). In this case and similar to the training of empathy, firms can improve their inexperienced salespeople's ability to detect diagnostic nonverbal cues by emphasizing the importance of detecting these cues.

Although learning orientation is an enduring trait, the previous discussion on training empathy and ability to decode nonverbal behavioral cues lends itself to motivated learning. That is, motivating salespeople by emphasizing the importance of learning how to empathize and detect nonverbal behavioral cues should improve the effects of these social intuition abilities for both inexperienced and experienced salespeople. In a similar vein, Kohli, Shervani, and Challagalla (1998) find that sales managers can also directly influence the level of learning orientation of their salespeople. The authors found that salespeople's learning orientation is enhanced when managers possess an activity and capability orientation. Activity orientation focuses on providing feedback on sales activity performance where as capability orientation deals with emphasizing the development of sales skills and abilities. As salesperson intuition

requires feedback as well as the sales skills of social intuition, managers can directly influence the learning orientation and intuition accuracy of their salespeople by providing appropriate feedback of social intuition skills and emphasizing the importance of social intuition capabilities.

Avenues for Future Research

Our research is one of the first to explore how to improve the accuracy of a secondary intuition. We draw on the mechanisms of both social and expert intuition to support our hypotheses. While we suggested the interactive influence of social intuition abilities (decoding nonverbal behavior and empathy), domain-specific experience, and learning orientation on intuition accuracy, many questions remain about the underlying psychological processes of these three influences. For example, we find that higher levels of social intuition skills allow for higher intuition accuracy for novice salespeople. It would be noteworthy to investigate if these skills act as a springboard for faster learning of CDRS or as a substitute for experience. Similarly, we find that learning goals matter significantly in making accurate intuitive judgments. The question is, why is this the case? Our suggestion is that learning goals allow for deeper processing of both the customer's behavioral cues and current situation, but alternative explanations should be explored.

Our findings suggest that the ability to detect customer's behavioral cues is important for salesperson intuition raises the need to identify a set of specific nonverbal behaviors that are diagnostic of customer's intentions. Thin slices of behavior research has repeatedly shown that individuals can accurately identify various personality traits of a stranger based on the stranger's nonverbal behavior; however, little guidance is

provided on which nonverbal behaviors or traits salespeople should focus on when making their predictions. This research may show that some customer behaviors and intentions are associated with a universal set of behavior cues.

An important finding is that the thickness of the slice of behavioral information affects intuition accuracy contingent on the domain-specific experience of the salesperson. Not surprising, inexperienced salespeople benefit from thicker slices. Interestingly, our results suggest that very experienced salespeople make more accurate judgments with less rather than more information. This raises two interesting questions. First, does this phenomenon occur across other domains such as nursing or manager decision making? Second, what are the causes of this decreased accuracy? These are important questions as the conventional wisdom suggests that more information is better and recent research has indicated that, in some cases, more information has no effect on judgment accuracy. However, are there cases, such as in retail sales, where individuals must make rapid accurate decisions where more information could actually decrease intuition accuracy? Does more information in these cases create a conflict with individual's intuitive and deliberative thinking? Can more information in these time sensitive situations force individuals to question their intuitions?

The effect of thickness of slice of behavioral information on intuition accuracy also suggests how retailers should design their store and how they should develop customer approach strategies. That is, retailers with relatively inexperienced salespeople should design store layouts that enable salespeople the opportunity for longer exposures of the customer prior to verbal interaction. Also, these stores should instruct rookie

salespeople, who might be more eager to approach a customer, to take additional time to size up the customer prior to approaching him or her.

One aspect our research doesn't address is that individuals do possess a general temperament or preference to utilize a more analytical or intuitive thinking process (Sadler-Smith 2010; Scott and Bruce 1995; Sinclair, Ashkanasy, and Chattopadhyay 2010). Sadler-Smith (2010) proposes that each profession requires a different balance of analytical and intuitive minds. An interesting avenue for research would be to identify an optimal balance of these two mindsets for retail salespeople, inside salespeople, outside salespeople, and even sales managers. If different profiles exist, then these findings would shed light on why some salespeople are more or less successful in various sales positions. Also, this would provide guidance for hiring salespeople and identifying salespeople as good candidates for management positions.

Our research focuses on factors that affect retail salespeople's intuitive assessment of customer needs. As Weitz (1978) points out in his ISTEA model, the first impression of a customer is only the first step of the sales process. An interesting research topic would be to explore how salespeople's first impression of a customer, accurate or not, affects the selection and deployment of their selling strategy as well as customer outcomes. Also, what affects a salesperson's decision to utilize one selling strategy over another? Again, experience is likely to play an important role; thus, managers should be interested in finding mechanisms that improve the utilization of appropriate selling strategies by inexperienced salespeople.

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Table 2.1

EXPOSURE MANIPULATION – PLANNED COMPARISON

					Intuition Accuracy	
Baseline	Salespeople	Dyads	Mean	Comparison	Mean Difference	SE
Photo	240	960	7.86	10 sec video clip	-.213	.150
				Full video clip	-.600**	.151
10 sec video clip	242	968	8.08	Photo	.213	.150
				Full video clip	-.487*	.151
Full video clip	233	932	8.46	Photo	.600**	.151
				10 sec video clip	.487*	.151
Summary	715	2860	8.13			

Table 2.2
MODEL RESULTS

	DV = Intuition Accuracy Unstandardized Coefficients (Standard Error)				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Intercept	8.512 (0.270)**	8.283 (0.240)**	8.322 (0.231)**	8.227 (0.225)**	8.243 (0.224)**
Exposure Manipulation					
S	0.191 (0.174)	0.195 (0.151)	0.182 (0.145)	0.156 (0.140)	0.159 (0.139)
L	0.762 (0.175)**	0.597 (0.153)**	0.528 (0.147)**	0.538 (0.141)**	0.495 (0.142)**
Controls – Customer Level					
AD	-0.006 (0.005)	-0.005 (0.005)	-0.005 (0.005)	-0.005 (0.005)	-0.004 (0.005)
GD	0.050 (0.113)	0.041 (0.112)	0.039 (0.112)	0.037 (0.112)	0.038 (0.112)
ED	-0.419 (0.126)**	-0.274 (0.121)*	-0.254 (0.119)*	-0.220 (0.117)#	-0.221 (0.117)#
Controls – Employee Level					
Age	-0.011 (0.005)*	-0.005 (0.004)	-0.005 (0.004)	-0.003 (0.004)	-0.004 (0.004)
Gender	0.323 (0.163)*	0.156 (0.142)	0.104 (0.137)	0.206 (0.133)	0.184 (0.133)
IE	0.186 (0.017)**	0.005 (0.023)	-0.000 (0.022)	-0.003 (0.021)	0.002 (0.021)
Main-Effects					
NVA		3.026 (0.349)**	2.694 (0.354)**	2.835 (0.344)**	2.943 (0.353)**
EMP		0.304 (0.058)**	0.300 (0.055)**	0.299 (0.054)**	0.312 (0.054)**
DSE		0.248 (0.027)**	0.350 (0.035)**	0.371 (0.034)**	0.365 (0.034)**
LO				0.350 (0.049)**	0.322 (0.051)**
Interaction Effects					
DSE x S			-0.013 (0.040)	-0.029 (0.038)	-0.035 (0.038)
DSE x L			-0.287 (0.043)**	-0.269 (0.042)**	-0.274 (0.042)**
DSE x NVA			-0.274 (0.112)*	-0.249 (0.109)*	-0.196 (0.119)
DSE x EMP			-0.045 (0.015)**	-0.036 (0.014)*	-0.042 (0.015)**
LO x DSE				0.025 (0.013)#	0.022 (0.014)
LO x NVA				0.602 (0.254)*	0.558 (0.266)*
LO x EMP				0.022 (0.042)	0.034 (0.042)
NVA x EMP					0.509 (0.288)#
3-way Interaction Effects					
DSE X LO X NVA					0.069 (0.078)
DSE X LO X EMP					0.028 (0.012)*
Increase in Model Fit	$\Delta\chi^2$ =131.14 (df=8)**	$\Delta\chi^2$ =192.83 (df=3)**	$\Delta\chi^2$ =53.07 (df=4)**	$\Delta\chi^2$ =47.31 (df=3)**	$\Delta\chi^2$ =6.09 (df=3)#
Psuedo R^2					
Kreft and Leeuw (1998)	0.074	0.152	0.174	0.201	0.203
Snijders and Bosker (2011)	0.223	0.247	0.253	0.261	0.262

#p < .10 (one-tailed).
*p < .05 (one-tailed).
**p < .01 (one-tailed).
Notes: S = Short video clip, L = Long video clip, AD = Age difference, GD = Gender difference, ED = Ethnicity difference IE = Industry experience, NVA = Nonverbal decoding ability, EMP = Empathy, DSE = Domain-specific experience, LO = Learning orientation.

Figure 2.1
INTERACTIVE INFLUENCE OF EXPERIENCE ON EXPOSURE LENGTH AND
SOCIAL INTUITION SKILLS ON INTUITION ACCURACY

Figure 2.1A: Interactive Influence of Exposure Length and Experience on Intuition Accuracy

Figure 2.1B: Interactive Influence of Ability to Decode Nonverbal Behavior and Experience on Intuition Accuracy

Figure 2.1C: Interactive Influence of Empathy and Experience on Intuition Accuracy
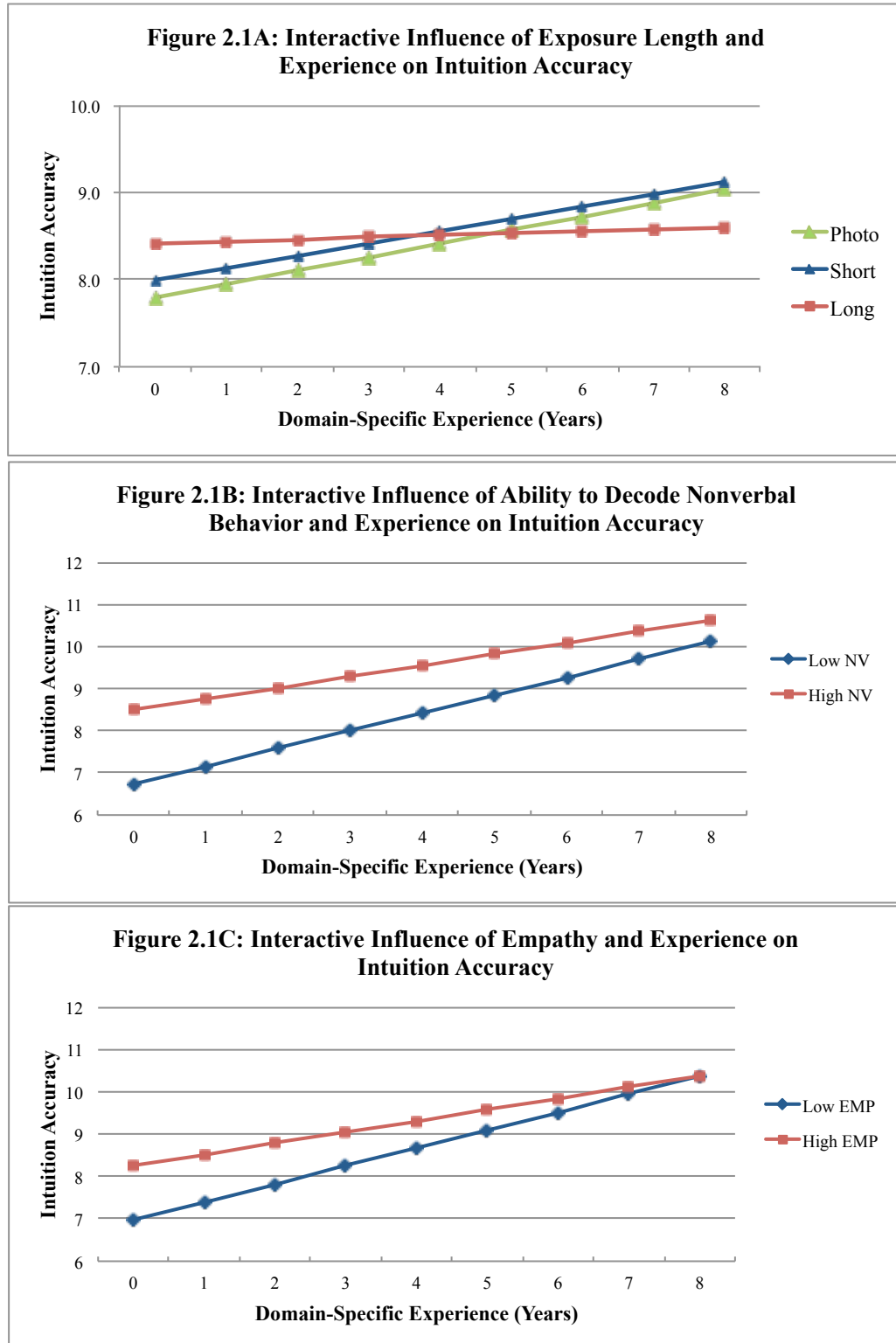
Figure 2.2
INTERACTIVE INFLUENCE OF LEARNING ORIENTATION AND SOCIAL
INTUITION SKILLS ON INTUITION ACCURACY

Figure 2.2A: Interactive Influence of Ability to Decode Nonverbal Behavior and Learning Orientation on Intuition Accuracy

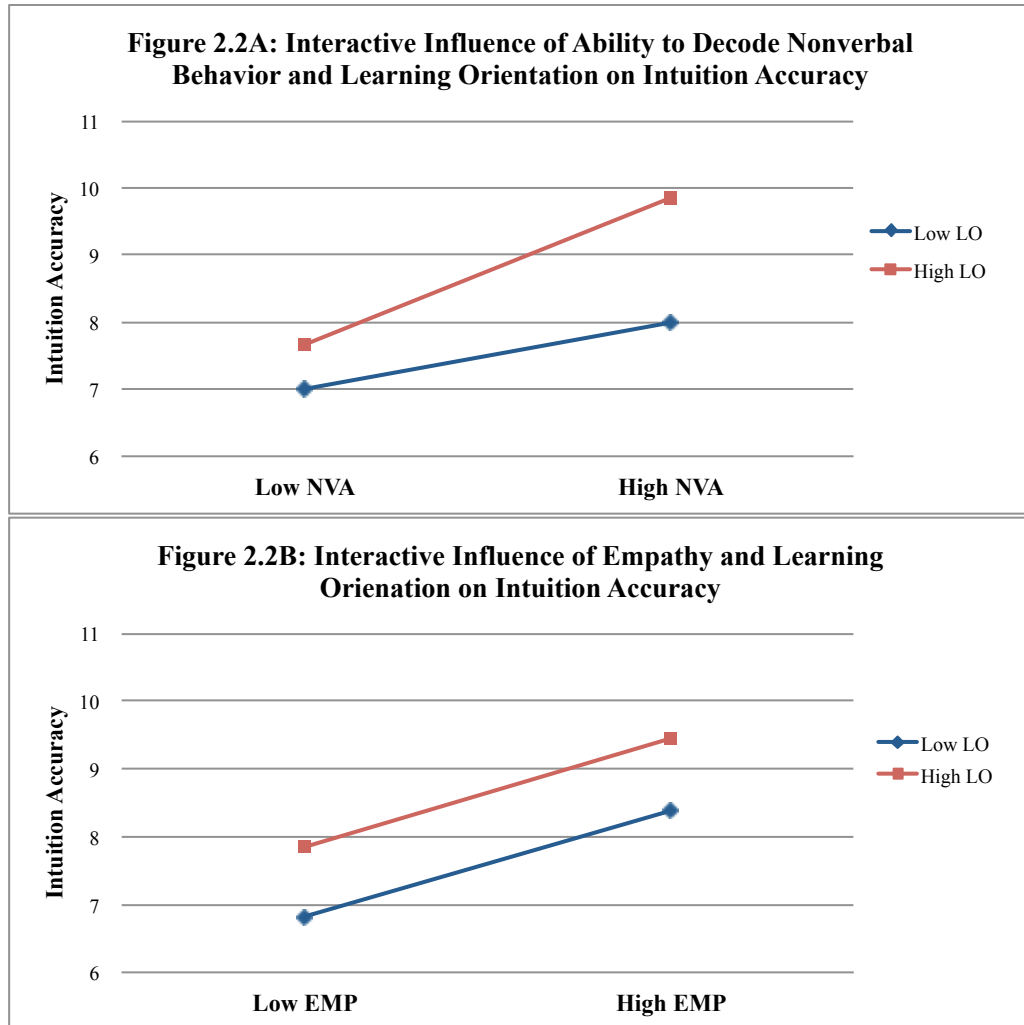**Figure 2.2B: Interactive Influence of Empathy and Learning Orienation on Intuition Accuracy**
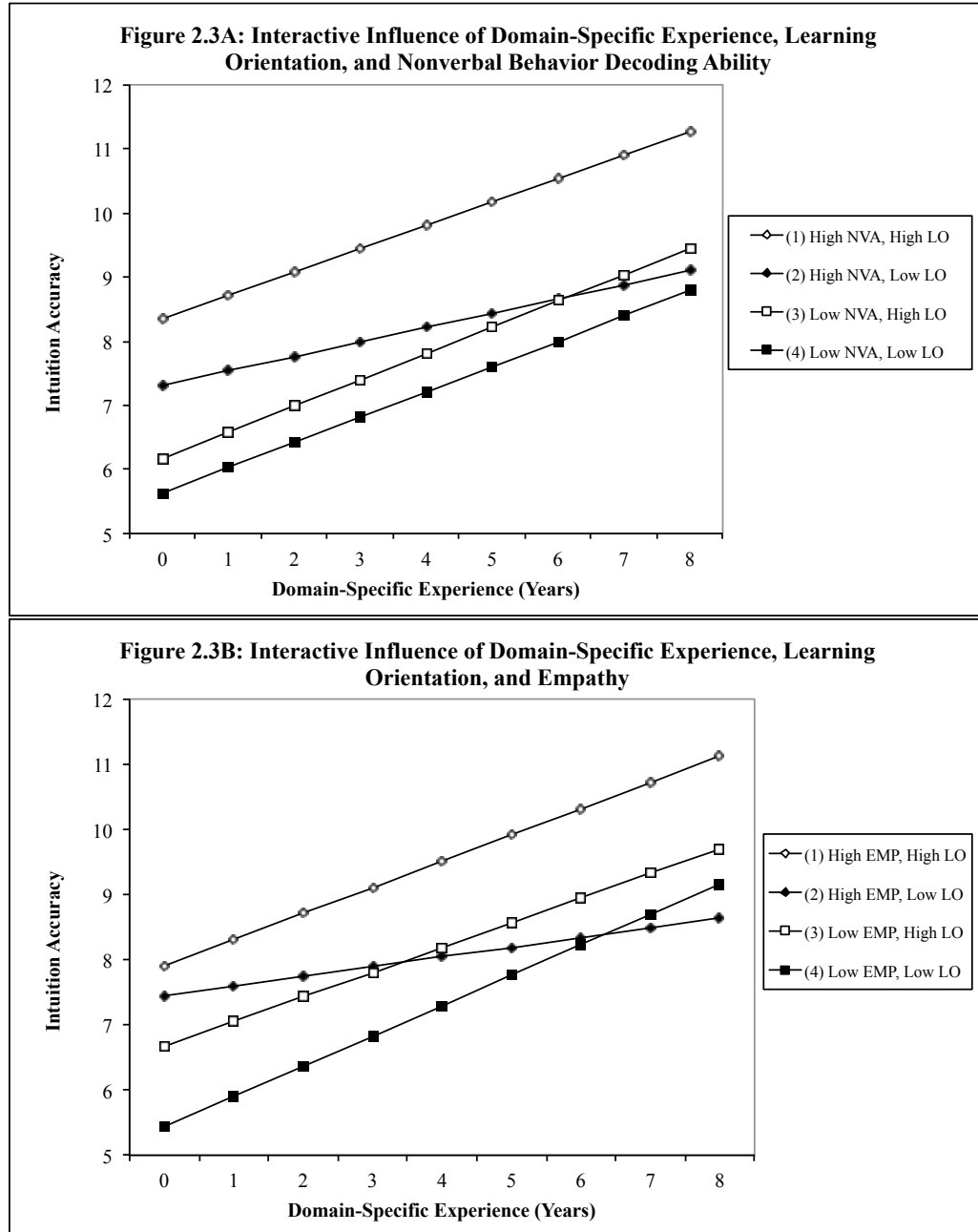
Figure 2.3
INTERACTIVE INFLUENCE OF DOMAIN-SPECIFIC EXPERIENCE, LEARNING
ORIENTATION, AND SOCIAL INTUITION ABILITIES ON INTUITION
ACCURACY

Figure 2.3A: Interactive Influence of Domain-Specific Experience, Learning Orientation, and Nonverbal Behavior Decoding Ability

Figure 2.3B: Interactive Influence of Domain-Specific Experience, Learning Orientation, and Empathy

APPENDIX 2.1: SCALES FOR CONSTRUCT MEASURES

Constructs	*Item Loadings*	α

Intuition Accuracy (Homburg, Wieseke, and Bornemann 2009; Tiggle et al. 1982) – Dyadic: Salesperson and Customers Reported

    Customers: Please rank how important the following factors are to you when shopping for this mattress with 1 being most important to 6 being least important.

    Salespeople: Please indicate how important *you believe* the following factors are to the customer's purchase of a mattress today.

- The brand of the mattress
- The overall feel (support, firmness, comfort) of the mattress
- The ability to easily obtain financing
- The overall price of the mattress
- The ability to easily return or exchange the mattress
- The quality of salesperson assistance

$$\text{Intuition Accuracy} = 18 - \sum_{i}^{6} |(\text{CustRank}_i - \text{EmpRank}_i)|$$

Customer Discrepancy – Dyadic: Salesperson and Customers Reported

    Gender Discrepancy - Coded as similar (1) if gender salesperson and customer gender mismatched, 0 otherwise.

    Ethnicity Discrepancy - Coded as similar (1) if gender salesperson and customer gender matched, 0 otherwise.

    Age Discrepancy – Calculated as the absolute difference in age between the salesperson and customer.

Domain-Specific Experience - Salesperson Reported

    How much experience do you have at this firm in a sales role?

Industry Experience - Salesperson Reported

    How much experience do you have in this industry in a sales role?

Empathy (Barrett-Lennard 1981)- Salesperson Reported		.79
I always sense exactly what customers want.	.71	
I realize what customers mean even when they have difficulty saying it.	.79	
It is easy for me to take the customer's perspective.	.73	

Learning Orientation (Sujan, Weitz, and Kumar 1994) - Salesperson Reported		.85
I feel an important part of being a good sales associate is continually improving your sales skills.	.81	
Making some mistakes, I feel, when selling is a necessary part of the learning process.	.71	
Ideally, I would like to learn something noteworthy from each selling experience I have.	.87	
Even if it slows me down, I would like to spend time learning new approaches for relating with customers.	.72	

APPENDIX 2.2: DESCRIPTIVE STATISTICS AND INTERCORRELATION MATRIX

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Intuition Accuracy											
2. Nonverbal Decoding Ability	0.253										
3. Empathy	0.204	0.259									
4. Learning Orientation	0.095	-0.058	0.036								
5. Gender	0.039	0.070	0.013	-0.058							
6. Age	-0.014	0.017	-0.037	0.016	-0.124						
7. Domain-specific Experience	0.325	0.199	0.012	-0.115	0.002	0.056					
8. Industry Experience	0.238	0.130	0.027	-0.058	-0.068	0.186	0.761				
9. Age Discrepancy	-0.038	0.000	-0.011	-0.017	-0.004	0.326	-0.033	0.057			
10. Gender Discrepancy	0.010	0.001	-0.002	0.002	0.000	0.001	0.000	0.000	-0.093		
11. Ethnicity Discrepancy	-0.109	-0.106	-0.048	-0.039	-0.033	-0.008	-0.141	-0.084	0.003	0.074	
Mean	8.13	1.49	5.18	5.71	0.27	39.73	3.63	4.42	15.49	0.50	0.59
St. Dev	3.30	0.19	1.16	1.19	0.44	13.78	3.61	4.56	11.80	0.50	0.49

Correlations greater than |.036| are significant with $p < .05$