

# Business-to-Business E-Negotiations and Influence Tactics

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## Abstract

E-negotiations, or sales negotiations over email, are increasingly common in business-to-business (B2B) sales, but little is known about selling effectiveness in this medium. This research investigates salespeople's use of influence tactics as textual cues to manage buyers' attention during B2B e-negotiations to win sales contract award. Drawing on studies of attention as a selection heuristic, the authors advance the literature on mechanisms of sales influence by theorizing buyer attention as a key mediating variable between the use of influence tactics and contract award. They use a unique, longitudinal panel spanning more than two years of email communications between buyers and salespeople during B2B sales negotiations to develop a validated corpus of textual cues that are diagnostic of salespeople's influence tactics in e-negotiations. These e-communications data are augmented by salesperson in-depth interviews and survey, archival performance data, and a controlled experimental study with professional salespeople. The obtained results indicate that the concurrent use of compliance or internalization-based tactics as textual cues bolsters buyers' attention and is associated with greater likelihood of contract award. In contrast, concurrent use of compliance and internalization-based tactics is prone to degrade buyer attention and likely to put the salesperson at a disadvantage in closing the contract award.

## Keywords

business to business, buyer attention, e-communication, linguistic, machine learning, negotiation, selling, text analysis

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Advances in digital technologies motivate firms to adopt technology-mediated channels for business interactions. In particular, business e-communications account for more than 125 billion daily messages, or 86 million messages per second (Radicati Group 2015). According to industry reports, 77% of customers prefer e-communications over other formats, and data indicate robust returns of \$40.56 for every dollar companies invest in e-communications (Miller and Waldow 2013). For business-to-business (B2B) selling (Russo 2015), these trends also are manifest in a 75% increase in e-negotiations (Bülow 2011) and, by one estimate, 80% of U.S. sales negotiations are conducted online (Pearl 2014).

Research into the effectiveness of B2B e-negotiations is limited. Compared with face-to-face (F2F) communications, e-communications are leaner, with fewer contextual cues and less interactivity and flexibility (Dennis, Fuller, and Valacich 2008), but they also offer some benefits, including (1) *accessibility*, such that emails are always available and offer the possibility of almost immediate feedback; (2) *transparency*, such that emails are verifiable (stored digitally for review) and visible (others in the organization can access them);

(3) *diversity*, such that emails can contain diverse materials, including hypertext, links to external text or video, and various content attachments; and (4) *flatness*, indicated by professional norms that favor short, to-the-point messages without undue emotion (Byron 2008).

For researchers, e-negotiations pose challenges of analyzing unstructured data. However, they also provide a unique, relatively unobtrusive, unfettered, and automatic access to the selling process by creating a permanent record of the selling process as it unfolds, without requiring an intervention (e.g., surveys and video/audio recordings can suffer from a reporting and obtrusive bias). Emergent academic research that utilizes process data from digital technologies show promise of new

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insights. For instance, researchers analyzed more than 1 million email exchanges among members of a professional services organization over a six-month period to show that response times are highly predictive of social and professional ties (Wuchty and Uzzi 2011). Evidence from other studies of buyer–seller interactions shows that the process underlying influence mechanisms is more complex and nuanced than is revealed by self-reports or static studies (Mantrala and Albers 2012; Plouffe, Bolander, and Cote 2014). Thus, we aim to examine the effectiveness of salespeople’s dynamic influence tactics (as textual cues) for winning sales contracts during the e-negotiation phase of the B2B selling process when email is the dominant mode of communication.

Specifically, using actual emails exchanged between buyers and salespeople, we (1) extract, categorize, and code unique textual cues associated with a salesperson’s influence tactics; (2) conceptualize and operationalize the buyer’s attention, as indicated by e-communications (i.e., text data); and (3) assess the impact of influence tactics and buyer attention on the probability of closing the contract successfully. We employ a unique data set of longitudinal email communications, sourced from a B2B heavy equipment manufacturing firm (Study 1). The communications involve a lead seller and the principal buyer, and our unfettered access to these naturalistic data, untainted by the seller’s perceptions, provides real-life accounts of buyer–seller negotiations (Clopton 1984). To rule out alternative explanations, we supplement the email data with in-depth interviews, survey data (e.g., demographics, attitudes) and a sales manager survey that provides performance and profitability data. Finally, we conduct an experimental study (Study 2) to examine the mediation effect of buyer attention in a controlled setting and test the influence of the concurrent use of internalization (recommendation) and compliance (promise) tactics on the sales contract award.

Overall, we offer three main contributions. First, we identify sales influence tactics from textual cues in salesperson’s e-communications and establish their validity. In so doing, we develop a five-step roadmap for developing and validating theoretical constructs from textual cues for broader use in future research. The five-step design uses grounded analysis to develop word dictionaries and contextualizes them to provide authentic representations of the target constructs. In turn, these bottom-up word dictionaries serve to “seed” a machine-learning (ML) algorithm that broadens their scope and expands their content to a reasonably large corpus of textual cues to ensure generalizability. Empirically, we show how “seed” dictionaries that are based on grounded work can offer a prediction accuracy of 63% that rises to 85% when they are combined with patterns recognized by ML procedures.

Second, we identify a key mediator of salesperson influence effects—buyer attention, defined as the degree to which a buyer displays behavioral responses to a salesperson’s e-communications (Frazier and Summers 1984; McFarland, Challagalla, and Shervani 2006; Ocasio 2011; Ocasio, Laamenen, and Vaara 2018; Plouffe et al. 2014). We find that buyer attention is a leading indicator (Frost 2019) of sales activity that predicts sales outcomes. In particular, our results show that a

one-standard-deviation increase in buyer attention increases the likelihood of contract award seven-fold, resulting in an additional \$37 million in revenue. Thus, while previous research has shown that sales influence tactics are effective in increasing performance, our theory of buyer attention explains both *why* salesperson influence tactics work to yield sales outcomes and when they do not, thereby advancing research into the mechanisms of the sales negotiation process.

Third, we show that no individual influence tactic is sufficient to hold buyers’ attention or win the contract award. Effective use of influence tactics requires the concurrent use of complementary tactics that prompt either internalization (internal analyzing) or compliance (risk shifting), but not both. Our results show that the concurrent use of assertiveness and promise tactics to evoke compliance lifts buyer attention by 14%, whereas concurrent use of information sharing and recommendation tactics to evoke internalization yields a 15% increase in buyer attention. In contrast, concurrent use of internalization and compliance tactics—referred to as competitive tactics—diminishes buyer attention by as much as 30%. This asymmetry in the concurrent use of sales influence tactics, such that gains from complementary tactics are only half as much as the losses from competitive tactics, is indicative of prospect theory assertions. Thus, our study advances the sales negotiations literature by uncovering the asymmetric effect of sales influence tactics and providing practical guidelines for sales managers and salespeople about what sales tactics to deploy in combination and which combinations to avoid for sales effectiveness. Next, we discuss pertinent literature and motivate our key hypothesis.

## Theory and Hypotheses

Figures 1 and 2 display the research context and the proposed conceptual model of e-communications, which includes (1) textual cues in e-communications that salespeople use to exert influence during the B2B sales negotiations; (2) buyer attention, displayed in textual cues of the buyer’s e-communications in B2B sales negotiations; and (3) sales contract award (yes/no) as an outcome. Table 1 outlines four fundamental attributes of e-communications with their implications for senders and receivers. We draw from these attributes to develop a theory of influence tactics in B2B sales e-negotiations, beginning with mediating role of buyer attention.

### Buyer Attention and B2B Sales Contract Award

We propose that e-communications that garner greater buyer attention are more likely to result in a successful contract award. According to the attention-based view of the firm, attention facilitates both coping with and adapting to contextual stimuli (Ocasio 2011). An entity with limited information-processing capacity copes with overwhelming stimuli by prioritizing and focusing on selective stimuli (Styles 2006). An entity also might adapt to incoming stimuli by directing attention to stimuli that are more likely to facilitate goal achievement while dismissing stimuli with less goal instrumentality

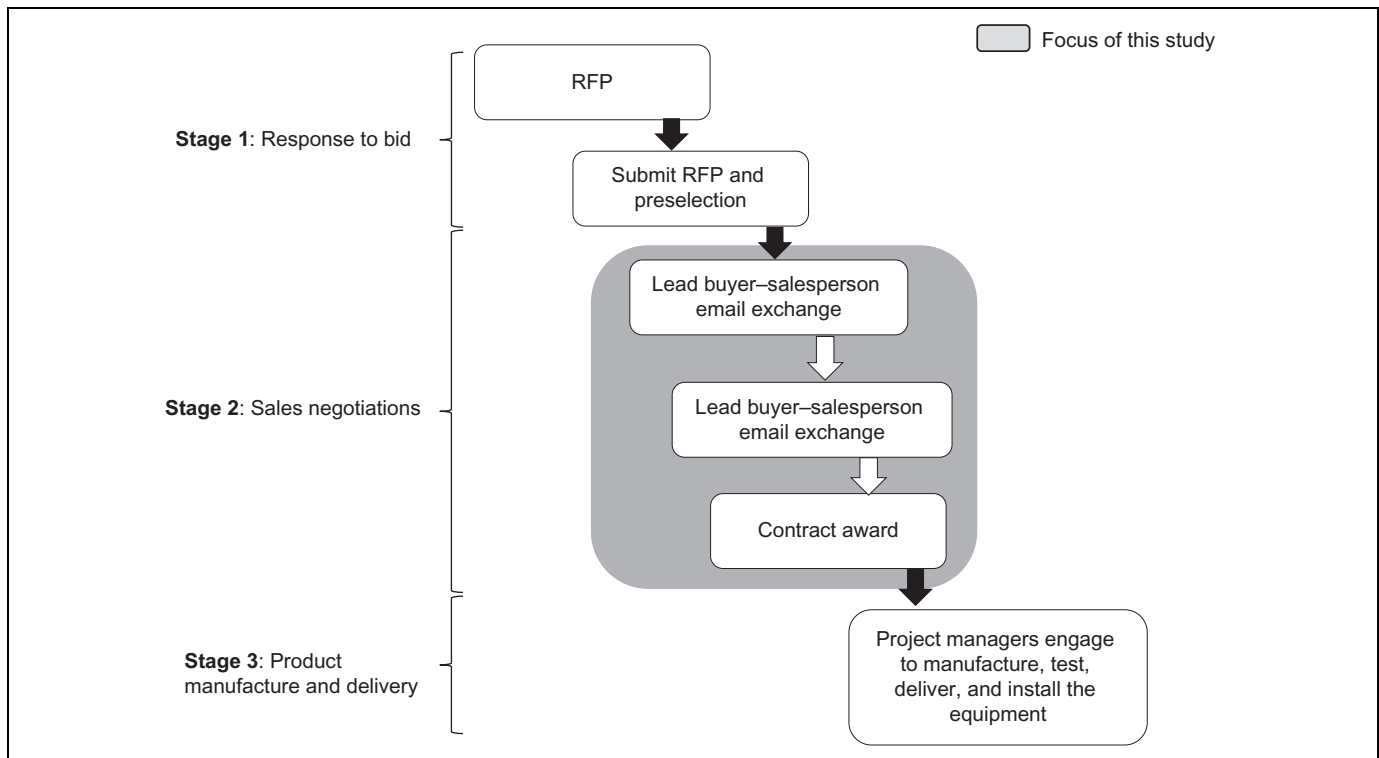


Figure 1. B2B sales process.

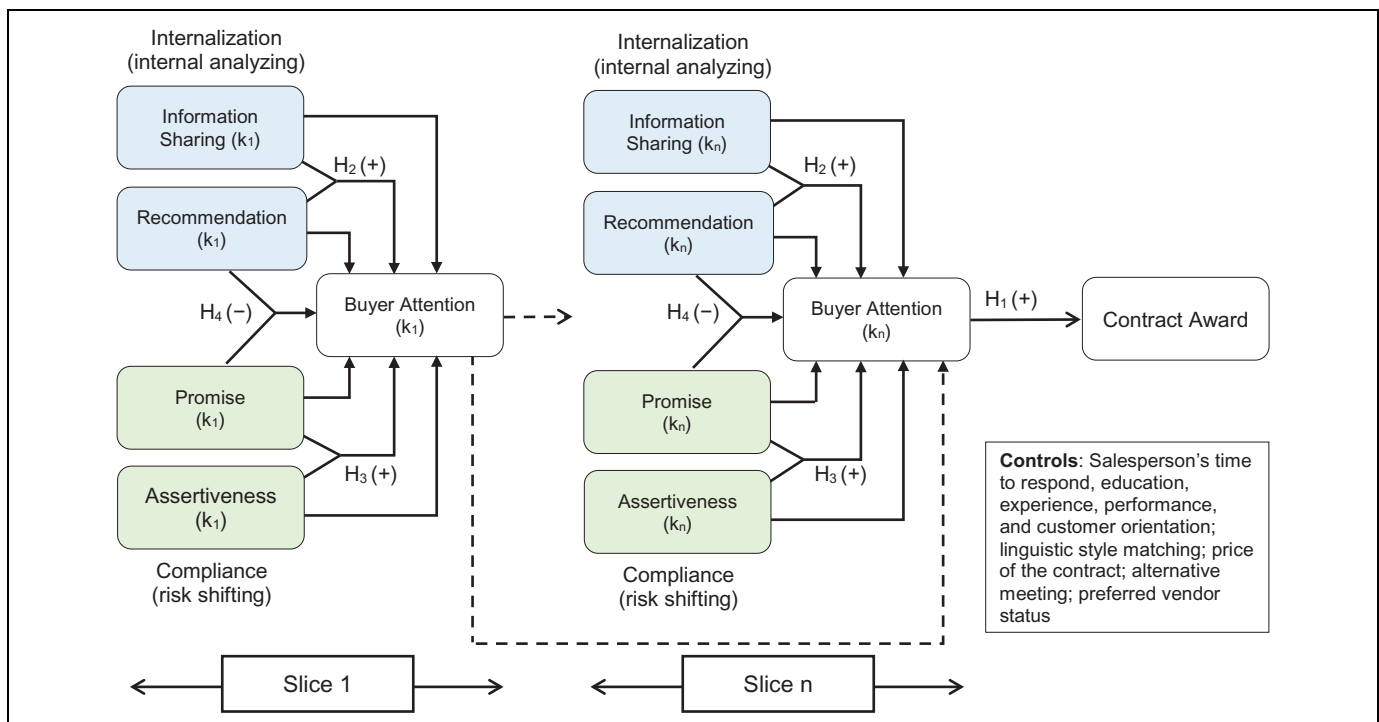


Figure 2. Conceptual model: B2B E-Negotiations and influence tactics.

Notes: Slice = A continuous tract of time (e.g., ten days) that clusters e-communications. For more details, see the section "Influence Tactics as Textual Cues and Buyer Attention in B2B Sales E-Negotiations."

(Ocasio 2011). If stimuli garner an entity's attention, this indicates their relative importance and relevance (Ocasio et al. 2018). Thus, we conceptualize that the intensity of attention

given to a specific stimulus is indicative of (1) its relative importance and relevance to the individual's needs and goals (MacKenzie 1986) and (2) its motivational potential to evoke

**Table 1.** E-Communication Affordances.

Attribute	Definition	Implications for the Sender	Implications for the Receiver
Accessibility	Emails are accessible (24/7) to receivers, with the possibility of almost immediate feedback.	<b>Pros:</b> Flexibility to compose messages any time. <b>Cons:</b> Probability of receiving replies varies from minutes to days.	<b>Pros:</b> Respond to incoming messages at will. <b>Cons:</b> Quantity and distribution of messages increase over time.
Transparency	Emails are verifiable and stored digitally for review, as well as visible, which provides others in the firm access to them.	<b>Pros:</b> Promotes messages that are open, direct, and without puffery. <b>Cons:</b> Lack of context can lead to misinterpretation by others in the organization.	<b>Pros:</b> Permits a check on the veracity of a claim made by the sender. <b>Cons:</b> Requires critical analysis and cross-checking of the content.
Diversity	Emails allow attachments that can embed documents, links, embellishments, and so on, which then can substantiate or augment a message.	<b>Pros:</b> Allows documents to be easily attached. <b>Cons:</b> Requires collection of varied documents that support an argument.	<b>Pros:</b> Arguments are substantiated. <b>Cons:</b> Require triangulation of diverse materials.
Flatness	Emails are constrained in length and in the use of emotional cues.	<b>Pros:</b> Only requires use of textual cues to compose the message. <b>Cons:</b> Limits the use of emotion.	<b>Pros:</b> Keeps message length short <b>Cons:</b> Encourages cognitive processing of messages.

behavioral response (Janiszewski, Kuo, and Tavassoli 2013). As Coleman and Williams (2015) suggest, attention functions like a gatekeeper for sorting, managing, and evaluating stimuli according to their fit with self-meaning. Tennessen and Cimprich (1995) show that deliberately directed attention provides a means to triage incoming stimuli that distract from purposeful activity. In a B2B context, Bonner and Calantone (2005, p. 55) conceptualize buyer “attentiveness” as a diagnostic construct that indicates the buyer’s “cognitive disposition . . . towards a product manufacturer and away from its competitors.” Graham (2019) concurs that buyer attention is critical because if the customer is not paying attention to what the seller is focused on, all efforts are wasted.

Regarding its motivational potential, Janiszewski, Kuo, and Tavassoli (2013) show that attention can be a source of “preference formation,” such that after directing their attention, people exhibit a preference for the focus of that attention, which they call the “mere attention effect.” Such selective attention entails an encoding process that stores the selected stimuli according to preferred network connections, relative to stimuli that are triaged. This encoding motivates preferences in subsequent action. In other words, “highly attentive buyers . . . purchase more products, more often, [and] for longer period of time” (Bonner and Calantone 2005, p. 56).

The role of buyer attention is salient in e-communications. Relative to F2F communication, e-communications permit greater accessibility, such that a salesperson can compose messages with the desired level of richness at any time and reach out to a buyer with follow-up targeted communications (cf. Table 1). In turn, this medium’s accessibility promotes message crowding wherein salespeople try to grab buyers’ attention quickly, engage them in compelling dialogue, and challenge their assumptions about needs and solutions (D’Andrea 2018). However, such continuous e-communications increase the burden on the buyer’s

cognitive capacity. Furthermore, although the transparency feature of e-communications is attractive, it also adds to the cognitive burden because it prompts analyses of message content and comparisons with previous messages or other sources. When buyers experience greater cognitive load, buyer attention should offer a particularly reliable and sensitive indicator of message priority during B2B negotiations.

The textual cues of e-communications reveal the degree of buyer attention. Positively valenced words indicate heightened interest (Hsu, Yu, and Chang 2017). Use of more active than passive text also indicates the activation of behavioral attention (Singh et al. 2018). Likewise, textual cues of time urgency reveal increased buyer attention, such as when a buyer asks the salesperson to respond “ASAP” (Chen and Lurie 2013). Bosschem (2017) state that buyer attention is heightened for messages that focus on buyers’ priorities, propose solutions for saving resources (time and money), and are pertinent to the problem at hand. Such signals of increased buyer attention show that the salesperson’s messages have been granted relatively higher priority, and thus we expect them to be associated with increased probability of contract award. Thus,

**H<sub>1</sub>:** Buyer attention mediates the impact of the salesperson’s influence tactics on the probability of B2B sales contract award during e-negotiations.

### *Influence Tactics as Textual Cues and Buyer Attention in B2B Sales E-Negotiations*

Prior B2B sales literature has identified various influence tactics used in F2F communications, such as information sharing, recommendations, assertiveness, promises, inspirational appeals, and ingratiation (McFarland et al. 2006; Plouffe et al. 2014; see Table 2). In a buyer-dominated sales process, inspirational appeals as well as their opposites (e.g., threats) are less relevant (McFarland et al. 2006; Plouffe et al. 2014).

**Table 2.** Construct Definitions and Key Linguistic Markers.

Influence Tactic	Key Linguistic Markers	Conceptual Ground
<b>Information Sharing:</b> Asynchronous communicating and exchanging (giving and asking) of relevant information (e.g., details, knowledge, data) about solutions, services, and products without recommendations or promises, whether on request or voluntarily.	Definitive verbs (e.g., attach, forward, provide, enclosed) conjugated with informational nouns (e.g., product specs, quality certificates)	Internalization (internal analyzing of prioritized and expert knowledge)
<b>Recommendation:</b> Explicit suggestions to buyers in asynchronous interaction in favor of a particular product, service, or solution by emphasizing product benefits, uniqueness, or usability, whether solicited or not.	Action verbs (e.g., recommend, offer, advice, believe) conjugated with proposition quality (e.g., clearly, strongly, acceptable, highest)	Internalization (internal analyzing of counter arguments to highlight benefits)
<b>Promise:</b> Committing to a future course of action, activity, and/or benefit, typically to follow up on a buyer's current request or future action in asynchronous communication.	Action verbs (e.g., perform, review, send, respond) conjugated with modals (e.g., will, can, would)	Compliance (risk shifting by committing to an action)
<b>Assertiveness:</b> Initiating a call-to-action or attention to the buyer in asynchronous communication that ensures the continuity of the business exchange and/or relationship, implicit or explicit.	Pronouns (e.g., we, I, you) conjugated with action verbs (e.g., need, would, should)	Compliance (risk shifting by suggesting an action)
<b>Ingratiation:</b> Asynchronously building rapport, engaging in flattery, and gaining approval of the buyer.	Affective words (e.g., thank you, appreciate, help, welcome, sorry, enjoy) conjugated with personal pronouns (e.g., we, I, you)	Identification (prosocial)
<b>Buyer Attention:</b> Degree to which a buyer displays heightened interest and behavioral engagement in response to salesperson's email communications	Instrumental words (e.g., do, get, send), valence words (good, best, excellent, etc.), and time-related/temporal contiguity words (today, tomorrow, next week, asap)	Attention-based view

Inspirational appeals presume that emotions sway buyers' decisions, but for B2B sales negotiations, with open bid processes and managerial or regulatory oversight, emotional appeals are relatively rare. The uses of threats or legalistic pleas presume that a contract already exists. Ingratiation might build relational bonds in F2F communications, but its use in professional email exchanges is less common, because such explicit and transparent exchanges generally make ingratiation attempts inappropriate. Accordingly, we do not include ingratiation appeals in our hypotheses, but to reflect prior research, we include them in the empirical analysis as a statistical control (Alavi et al. 2018).

Our conceptual development of influence tactics for e-negotiations features several notable elements. First, we use a "slice"—a continuous tract of time (e.g., ten days) that clusters e-communications—as the unit of conceptual and empirical analysis. It offers an alternative to a single salesperson-buyer turn or an entire string of communications as the unit of analysis. The former tends to be overly sensitive and prone to noisy input due to truncated or out-of-turn communications (e.g., multiple salesperson emails with no buyer response; Bülow 2011), while the latter aggregates all turns and thus obscures influence dynamics.

Second, we hypothesize that textual cues that indicate salesperson influence tactics *change* the buyer's attention over the duration of the e-communications. Desired changes in the buyer's attention provide a key mechanism by which influence tactics effectively achieve outcomes. Third, we advance prior conceptualizations in marketing that have adapted and refined

the work of Kelman (1961), specifically the compliance and internalization constructs, which initially served as foundations to understand social influence in international relations. Among the first efforts, Venkatesh, Kohli, and Zaltman (1995, p. 76) drew on Kelman's work to categorize existing influence tactics developed by Frazier and Summers (1984) using "processes of social influence and attitude and behavior change." Venkatesh, Kohli, and Zaltman (1995, p. 76) conceptualized that internalization is evoked by task-oriented influence tactics, including information sharing and recommendation, because they "seek to persuade a target of the inherent merit of the proposed decision." Furthermore, they stated that compliance is prompted by non-task-oriented influence tactics, such as requests or promises, which "seek to obtain conformance without attempting to persuade the target of the appropriateness of the decision." Leveraging this linkage between Kelman's social influence theory and influence tactics in marketing, McFarland et al. (2006) examined the relevance of influence tactics for salespeople and predicted the correspondence between Kelman's social influence mechanisms and individual influence tactics. They similarly predict that information sharing and recommendation tactics evoke intrinsic processes, whereas promises and threats indicate an instrumental mechanism. Their empirical findings indicate that individual influence tactics affect the buyer's manifest influence consistent with this categorization, such that when an intrinsic process is activated, the effects are larger and significant. Hochstein et al. (2019), Plouffe et al. (2014), and McFarland

and Dixon (2019) adopt this categorical correspondence between Kelman's social influence mechanisms and influence tactics. We similarly draw on the conceptual categories of internalization and compliance but adapt their conceptualizations to e-communications.

*Information sharing and recommendation tactics.* Both information sharing, defined as communicating and exchanging knowledge about solutions/services/products, and recommendation, defined as the explicit suggestion in favor of a particular solution/service/product, are likely to evoke internalization (Boyle et al. 1992; Kelman 1961; McFarland et al. 2006). In e-communications, internalization implies internal analyzing, such that a buyer is motivated to assess the stimuli contained in the salesperson's message to evaluate the benefits and costs of an action, activity, or choice. Information sharing prompts the buyer to evaluate the substantive content of the message and analyze the potential to increase or decrease the likely benefits and costs of an offer. In the case of recommendation, provision of a suggested course of action with decisional responsibility on the buyer also prompts the buyer to evaluate the credibility of the message and its implications in the context of the buyer's use situation.

Information sharing and recommendation tactics trigger an internal-analyzing process in complementary ways. Unlike F2F exchanges, e-communications enable the salesperson to craft messages carefully and thereby include attachments such as drawings, industry reports, or white papers that offer novel information about unique product or service specifications that can overcome objections and meet buyers' needs (Parlami and Geiger 2015). The richness of novel information, combined with buyer vigilance to assess its relevance for goal pursuit, prompts analysis by the buyer. When the incoming information is evaluated to be favorable in advancing buyers' goals, it is likely to be internalized and prompt more positive dispositions toward the object of the information (Boyle et al. 1992). McFarland et al. (2006) show that, relative to sales situations characterized by the buyer's self-orientation or interaction orientation (i.e., social welfare), those that feature task orientations (such that they are goal oriented) enable more significant, positive effects of the salesperson's information sharing on the buyer's manifest (perceived) influence.

In F2F exchanges, salespeople also issue recommendations that leverage social bonds or interpersonal trust with the buyer. However, the flatness and transparency of e-communications may hinder a salesperson's attempts to engage in explicit social bonding or trust building (Byron 2008). Buyers also might be more vigilant, to protect against self-serving claims by salespeople. These features activate the buyer's careful analysis of recommendation claims; if the analysis suggests positive implications for achieving the buyer's goal, the recommendations shift the buyer's attention toward their object. Prior research has shown that salespeople's recommendation tactic is effective when it is successful in reframing status quo solutions as suboptimal or problematic, which can be improved by the

salesperson's recommended course of action (Boyle et al. 1992; Hohenschwert and Geiger 2015).

We also posit that the concurrent use of information sharing and recommendations will interact to positively affect buyer attention, due to the reinforcing effects of these compatible processing motivations, especially when the buyer's cognitive resources are stretched. Both information sharing and recommendation evoke an internalization mechanism that favors internal analyses of input stimuli, in complementary ways. With their concurrent use, they should enhance attention effects, because the message content is reinforced by consistency and coherence (Pieters and Wedel 2004). Similarly, the concurrent use of search and display advertising online yields better results, because search advertising evokes a deliberate process to reveal consumer preferences, and display advertising acts like a recommendation agent that directs customers to a preferred site. We posit that textual cues of information sharing and recommendation promote cognitive consistency and coherence, because the former enables the buyer to process new knowledge and realize the disadvantages of current solutions, whereas the latter provides suggestions for resolving the problem (Hohenschwert and Geiger 2015). Thus,

**H<sub>2</sub>:** Salespeople's concurrently used information sharing and recommendation tactics, as textual cues, interact to positively affect buyer attention during B2B sales e-negotiations.

*Promise and assertiveness tactics.* Promise, the act of a salesperson committing to a future course of action, activity, and/or benefit, and assertiveness, a call to action for the buyer that ensures continuity of the business exchange and/or relationship, are both conceptualized to evoke risk shifting in accord with a compliance mechanism (Kelman 1961; McFarland et al. 2006). In B2B e-communications, risk shifting is evoked by salesperson messages that provide affordances for buyers to mitigate decision risk, simplify information processing, and/or reduce uncertainty (Newell and Simon 1972). Salesperson messages that effectively mitigate buyers' decision risk and cognitive burden are likely to garner increased attention due to their relevance in situations in which time is at a premium, informational uncertainty is high, and cognitive resources are stretched. Such risk shifting is not necessarily suboptimal; it reflects a reasoned choice. For example, the buyer's risk can be shifted and informational uncertainty reduced if the buyer complies with a course of action suggested by the textual cues in the salesperson's messages.

Promises and assertiveness both evoke risk shifting, but in complementary ways. When a salesperson makes a promise, it mitigates buyer risk and uncertainty by guaranteeing some specific outcome, benefit, or payoff. In e-communications, salespeople issue promises that increase clarity and help buyers visualize the expected payoffs. In this sense, an explicit promise of a desired outcome, conditional on a favorable decision, should strongly reduce the cognitive burden by enabling the buyer to forgo a systematic risk analysis (benefits/costs) in

favor of a promised outcome for which the seller bears the risk. Likewise, when a salesperson uses an assertiveness tactic to demonstrate superior knowledge and expertise in offering certain solutions, services, and products, this also mitigates buyer risk (Belonax, Newell, and Plank 2007). E-communications enable salespeople to assert expertise and superior knowledge by sharing scientific evidence and cases tailored to attractive solution options. Because the explicit and permanent nature of e-communications permits independent verification and validation of a salesperson's knowledge claims by multiple members of the buyer organization, knowledge claims that are credible affirm the salesperson's assertiveness of expertise. Grant (2013) shows that the use of assertiveness during sales processes improves outcomes, and Payan and McFarland (2005) demonstrate that a directed request tactic enhances the salesperson's manifest influence.

Here again, we predict a positive, interactive effect of salespeople's concurrent use of promise and assertiveness in e-communications on buyer attention, beyond the distinct effect of each tactic. Both shift decision risk and reduce information uncertainty; this complementary impact should reinforce the consistency and coherence of salesperson messaging without creating the downside of repetitive or belabored messages associated with a singular influence tactic. That is, by making promises, the salesperson indicates a willingness to take on the risk on behalf of the buyer, and assertiveness mitigates the buyer's informational uncertainty by redirecting attention to tailored solutions designed according to the salesperson's expert knowledge. Research offers similar evidence that a salesperson, acting as an expert consultant, can reduce risk perceptions with a consultative selling approach (Liu and Leach 2001; Rackham 1988). Thus,

**H<sub>3</sub>:** Salespeople's concurrently used promise and assertiveness tactics as textual cues interact to positively affect buyer attention during B2B sales e-negotiations.

## Study I: B2B Sales E-Negotiations in a Field Setting

### Research Setting

We collaborated with a global B2B industrial manufacturing firm that is one of the top competitors in the custom manufacturing of specialized equipment for heavy industrial plants with \$1.6 billion market and growing at a compound annual growth rate of ~5%. The firm had started conducting sales negotiations over email due to market changes; a vice president of sales noted that industrial buyers were actively avoiding F2F or phone meetings and requiring sales contract negotiations to be conducted by email. We collected multisource data: (1) longitudinal captures of buyer and salespeople emails exchanged during B2B sales negotiations for a two-year period, focusing on the sales negotiation phase (see Figure 2); (2) postnegotiation outcomes, namely, a successfully closed sales contract or not; (3) survey-obtained information about

salespeople's demographic profile, perceptions of email use, and description of their firm's vendor status; (4) archival data capturing salespeople's past performance, and (5) in-depth knowledge about the sales process and setting, gained from field interviews with salespeople and sales managers.

*Interviews with salespeople and sales managers.* Individual interviews with eight salespeople and two sales managers helped us understand the sales negotiation process, ascertain the frequency of buyer–salesperson interactions, and define the duration of e-negotiations. These interviews enabled us to develop an appropriate research design, identify data sources for the study variables, and derive an empirical approach for the sampling.

*Sampling.* The sampling procedure involved several steps. First, each salesperson provided lists of all sales e-negotiations assigned to him or her in the previous two years, including key identifiers, such as the buyer's name, purchase order number, project number, start month, and end month. The lists were verified for completeness and accuracy by the sales managers to ensure that the sampling frame included all sales e-negotiations or bids, whether successful or not. Second, guided by these lists of sales e-negotiations and identifiers, an information technology manager extracted the emails from the firm's servers. Third, we checked the extracted emails for completeness with regard to identifiers such as date and time stamps, receiver's/sender's name, and email subject. We also determined the incidence of email exchanges between the lead salesperson and lead buyer (>90%) versus other buying team members (e.g., project manager, legal). We retained only those sales e-negotiations that entailed at least 20 emails and thus excluded six sales e-negotiations. Further analysis revealed that these six sales e-negotiations were unusual, lower-valued negotiations that resulted from F2F interactions. Finally, we recorded information specific to the sales e-negotiations, such as the price and negotiation outcome. In total, we sampled communications for 47 distinct sales e-negotiations.

*Unit of analysis.* The unit of analysis is a slice, defined as a specific continuous tract of time that clusters e-communications, guided by conceptual and empirical considerations. As noted previously, using a single turn as a unit of analysis is overly sensitive and prone to noisy input. E-negotiations often contain truncated or out-of-turn patterns of communications that occur for several reasons, including buyers and sellers working in different time zones, having different schedules, returning to a previous message to clarify comments, or due to power asymmetry in favor of the buyer. Using the entire string of communications as a single chunk is similarly problematic because it collapses time and obscures influence dynamics, especially for contract negotiations that can run into months of back-and-forth communications. The use of "slice of time," involving grouping of communications over a narrow band of time provides an intermediate but effective approach to examine influence dynamics. Twitchell et al.

(2013) used a similar approach in which they grouped 100 consecutive sentences as an analysis unit while studying high-stakes negotiations. For our analysis, we considered three alternative slices—7 days, 10 days, and 14 days—in which we grouped emails based on their similarity of subject line text using cosine distance, a commonly used similarity measure in text analysis. To construct the slices, (1) we assessed the change in the email subject over the slice length, and (2) if a change exists, we constructed the slice for the similar email subject; otherwise, the next slice begins on the 7th, 10th, or 14th day, respectively. The 7-day slice resulted in missing data (email responses from either the buyer or seller were lacking). The 10-day and 14-day slices had no missing observations. Thus, we used the 10-day slice to test our hypothesis and the 14-day slice as a robustness check.

**Salesperson survey.** We surveyed all salespeople ( $n = 9$ ; 100% response rate) to collect perceptual (e.g., email use, customer orientation, adaptive selling behavior), demographic (e.g., age, gender, education, experience), and archival (e.g., vendor status, relationship length) data.

**Archival data.** Sales managers provided archival data about salespeople's performance on indicators that the company routinely collects for evaluation purposes such as sales, profitability, responsiveness to buyers' requests, and completeness of information provided.

### Measure Development: Influence Tactics and Buyer Attention as Textual Cues

As Table 3 shows, we used a five-step process to develop and validate measures of the salesperson's influence tactics and buyer attention. We briefly discuss each step next.

**Operational definitions.** To gather purposive data, we asked four salespeople who work in the focal industry to write sample emails that contain one and only one specific influence tactic to purposefully convey a specific (target) influence tactic (Shaltoni and West 2010). This process yielded 113 sentences, each containing a target influence tactic. We merged a subsample of the naturalistic data obtained from the firm (four sales e-negotiations or  $\sim 10\%$  of the data) with these purposive data to create a training sample of 473 sentences. Sales managers and academics reviewed the influence tactics in the training sample to fine-tune the operational definitions (Table 2) of each influence tactic using a top-down approach. For the construct of buyer attention, we aimed to identify indications of heightened interest and behavioral engagement in a buyer's response to a salesperson's email message. This resulted in instrumental (action-oriented) words and phrases that signal action, temporal contiguity words to convey time-related urgency, and positive or negative valence words that indicate activation. We asked expert academics to evaluate sentences extracted from the buyers' email data ( $n = 150$ ) for the presence or absence of each dimension (interrater reliability  $> 95\%$ ).

**Measure generation.** Using operational definitions, two sales managers, an executive from the focal firm, and two academics (1) classified each sentence in the training sample as indicative of one of five influence tactics and (2) identified the words and phrases that denoted a particular tactic, which were subsequently used as the seeds for an influence tactic-specific dictionary. Iterative recoding and discussions resulted in interrater reliability greater than 93%. For buyer attention, two research assistants identified unique words and phrases corresponding to each dimension: instrumental (33), temporal contiguity (22), and valence (24). This list was supplemented with words from extant dictionaries such as the Linguistic Inquiry and Word Count (Pennebaker et al. 2015; 198 words from the time dimension) and Harvard Enquirer (249 words for positive/negative valence, 623 words for instrumental/action). Overall, we generated 1,149 words/phrases for buyer attention.

**Measure augmentation.** The top-down approach to developing construct dictionaries was augmented by a bottom-up approach to enhance validity. Using the training sample, the data were preprocessed to remove uninformative words/characters (stop words [e.g., "the," "and," "on"], HTML tags, and extraneous cues). We inserted white spaces following punctuation to separate content and stemmed the words to their roots to allow for variations (e.g., "seem" for "seeming" and "seemingly"). For feature (construct-specific linguistic markers) identification, we assigned the email sentences to vectors using term frequency-inverse document frequency and co-occurrence matrices. Feature identification is followed by feature selection, with the objective of choosing the relevant cues that can lower the error rate for the holdout sample. To select relevant cues, we fit five logistic regressions (one per influence tactic) as follows:

$$P(L = 1|w) = \frac{1}{1 + \exp(w_0 + \sum_{i=1}^n w_i x_i)} \quad (1)$$

$$P(L = 0|w) = \frac{\exp(w_0 + \sum_{i=1}^n w_i x_i)}{1 + \exp(w_0 + \sum_{i=1}^n w_i x_i)} \quad (2)$$

where  $L = 1$  for a specific influence tactic and 0 otherwise,  $x_i$  is the textual cue, and  $w_i$  is the weight. Using the weight, we selected the most relevant cues for the classification step after testing iteratively 25–100 cues for each influence tactic; we ultimately retained the top 35 cues, based on achieved accuracy in the holdout sample. The selected cues and seeding dictionaries of linguistic markers were used to classify the training sample with a supervised vector machine (SVM), which performs well in high-dimensional spaces (Ordenes et al. 2018; Vapnik 1998). To assess classification accuracy, we used stratified five-fold cross-validation. The "training sample" is divided randomly into five parts, and training is performed on the first four samples with the prediction performed on the fifth (holdout) sample (repeated five times); manual coding of influence tactic labels is compared with the SVM classification to determine the error rate (Witten et al. 2016). We achieved



**Table 3.** Measure Development from Email Data.

Objective	Technique	Activities	Outcome
1. Establish operational definitions	Structured interviews; combine purposive and naturalistic data	<ol style="list-style-type: none"> <li>1. Purposive data are assembled by asking four salespeople who work in the same industry to write sample emails that contain one specific influence tactic. With purposive sampling, we collect information-rich cases that use emails deliberately to convey influence tactics.</li> <li>2. Naturalistic data are compiled by randomly selecting four sales e-negotiations (~ 10%) from the complete data set (43 sales e-negotiations ~ 90% of the data set is used for hypothesis testing). Naturalistic data enhance external validity.</li> <li>3. Sales managers and academics examine the use of influence tactics in the combined purposeful and naturalistic data set to revisit and contextualize the definition of influence tactics. Sales managers offer guidance from practice to adapt the influence tactic definitions to the email context.</li> </ol>	<ol style="list-style-type: none"> <li>1. A sample of 20 emails (113 sentences), each with a specific influence tactic, is assembled.</li> <li>2. Four sales e-negotiations containing 360 sentences are merged with 113 sentences from the purposive data collection. The sample of 473 sentences is used to generate and augment measurement items, referred to as the “training sample” hereinafter.</li> <li>3. The contextualized definitions of influence tactics are agreed on by sales managers and academics, ensuring relevance for both practice and research.</li> </ol>
2. Generate measurement items	Grounded analysis	<ol style="list-style-type: none"> <li>1. From the influence tactics definitions, sales managers and academics code each sentence in the training sample according to the (1) presence of each influence tactic and (2) specific textual cues (words/phrases) indicative of that influence tactic. Manual coding by experts ensures accurate identification of influence tactic cues.</li> <li>2. Interrater reliability for textual coding by sales managers and academics is computed to assess the consistency of textual representations or cues of specific influence tactics.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training sample sentences are coded for the presence or absence of the five influence tactics.</li> <li>2. A corpus of textual cues, organized as linguistic markers in a dictionary, is obtained for each influence tactic. Interrater reliability indicates high agreement (&gt;93%) regarding the identified influence tactics.</li> </ol>
3. Augment measurement items	Machine learning	<ol style="list-style-type: none"> <li>1. ML tools, such as TF-IDF and the co-occurrence matrix, are used to identify relevant linguistic markers.</li> <li>2. Identified linguistic markers are combined with the corpus of textual cues for each influence tactic from the “Generate measurement items” stage. Integrating human and ML identified cues ensures a comprehensible dictionary.</li> <li>3. Logistic regression selects textual cues as linguistic markers that can accurately predict the presence or absence of influence tactic in each sentence. The predictive ability of linguistic markers is then tested with an SVM algorithm. Classification algorithms can test if the selected textual cues can predict out-of-sample data accurately</li> </ol>	<ol style="list-style-type: none"> <li>1. All relevant linguistic markers in the training sample are identified.</li> <li>2. An augmented corpus of textual cues (identified by humans and ML tools) is formed.</li> <li>3. The SVM classification algorithm offers the highest prediction accuracy (~ 85%).</li> </ol>
4. Deploy measurement items	Machine learning	<ol style="list-style-type: none"> <li>1. An SVM, trained on the training sample, codes the hypothesis testing data set (4094 email sentences in 43 sales e-negotiations) for the presence or absence of specific influence tactics.</li> <li>2. Two research assistants independently code 100 randomly selected email sentences from the test data.</li> <li>3. Coding of the 100 email sentences provided by the research assistants is compared with that provided by the SVM.</li> </ol>	<ol style="list-style-type: none"> <li>1. Hypothesis testing data are coded by SVM.</li> <li>2. An agreement of 91% is achieved between the two research assistants.</li> <li>3. Human and SVM classification matches 86% of the time.</li> </ol>

(continued)

Table 3. (continued)

Objective	Technique	Activities	Outcome
5. Assess validity and reliability	Confirmatory factor analysis	<p>1. Internal validity of the labeled test data is assessed by convergent and discriminant validity (Check for high skewness and kurtosis and use robust procedures).</p> <p>2. External validity is assessed using measures to predict key outcomes (e.g., sales). We test the robustness of the findings to a 14-day slice.</p>	<p>1. A CFA model indicates acceptable model fit and support for both convergent (AVE &gt; .50) and discriminant (AVE &gt; MSV) validity. Reliabilities of all constructs are greater than .67 (Table 4, Panel A).</p> <p>2. Influence tactic constructs based on text-based measures behave as hypothesized (Table 7, Panels A and B).</p>

satisfactory accuracy of 85.1% for influence tactics and 86.2% for buyer attention.

**Deployment of measures.** We use linguistic markers in the SVM algorithm to code the email data (4,094 sentences from 43 e-negotiations) for the presence or absence of specific influence tactic (see Table 2). To validate out-of-sample coding, two research assistants independently coded 100 randomly selected sentences from the 43 e-negotiations into one of the five influence tactics using operational definitions (interrater reliability = 91%). We obtained a classification consistency of 86% with the sentences coded by SVM. Similarly, for buyer attention, two research assistants independently read 75 sentences randomly sampled from the 43 e-negotiations and classified them into the three buyer attention dimensions (interrater reliability = 92%). The classification consistency was 90.7% relative to sentences coded by SVM.

**Measure validity.** Each influence tactic was operationalized as the number of identified sentences corresponding to the tactic divided by the total number of sentences in the slice. Similarly, buyer attention was operationalized as the total number of instrumental, valence, and temporal contiguity sentences that occur in a slice, divided by the total number of sentences in that slice. To examine measure validity, a confirmatory factor analysis (CFA) was conducted with two measures for each influence tactic (linguistic cues for each influence tactic were randomly divided into two groups) and three dimensions of buyer attention. Textual cues extracted by the ML methods suffer from lack of multivariate normality conditions. We checked for distributional properties of extracted measures and noted that an extraction method robust to high kurtosis is needed. Thus, we used robust CFA analysis methods such as maximum likelihood robust and maximum likelihood parameter estimates with Satorra–Bentler correction (Maydeau-Olivares 2017). Using these robust procedures, we found an acceptable Satorra–Bentler chi-square statistic for the hypothesized measurement model (34.08, d.f. = 37,  $p > .1$ ). Furthermore, fit indices confirmed the goodness-of-fit of the measurement model (normed fit index = .92, root mean square error of approximation = .001). Each influence tactic measure and buyer attention construct evidenced significant factor loadings, convergent validity (average variance extracted [AVE] > .50), and discriminant validity (AVE > maximum shared

variance [MSV]) (Table 4, Panel A). We established predictive validity by providing recall, precision, and F1-scores for influence tactics and buyer attention (Table 4, Panel B).

### Empirical Analysis

We have panel data with time-sequenced e-communications ( $k$  = slice; TS = time-ordering, first occurrence coded as 0) nested within salesperson–customer dyads ( $sj$  = the salesperson–buyer dyad). To test the impact of salesperson influence tactics (INSH = information sharing, RECO = recommendation, PROM = promise, ASRT = assertiveness, and INGR = ingratiation) on buyer attention (BATTN) during the e-negotiations, we account for both time-variant (e.g., linguistic style matching, alternate channels of meeting, time to respond) and time-invariant (salesperson and buyer specific) variables. Thus, we use a random parameters specification that models the heterogeneity between dyads with a random intercept that is a function of all time-invariant variables and random parameters for all influence tactics variables, thereby capturing heterogeneity within dyads and across time-sequenced emails. We estimate the following equations (Greene 2018):

$$\begin{aligned}
 \text{BATTN}_{sjk} = & \beta_{0sj} + \beta_{1sj} \text{BATTN}_{sj(k-1)} + \beta_{2sj} \text{INSH}_{sjk} \\
 & + \beta_{3sj} \text{RECO}_{sjk} + \beta_{4sj} \text{PROM}_{sjk} + \beta_{5sj} \text{ASRT}_{sjk} \\
 & + \beta_{6sj} \text{INGR}_{sjk} + \beta_{7sj} \text{INSH}_{sjk} \times \text{RECO}_{sjk} \\
 & + \beta_{8sj} \text{PROM}_{sjk} \times \text{ASRT}_{sjk} + \beta_{9sj} \text{INSH}_{sjk} \\
 & \times \text{PROM}_{sjk} + \beta_{10sj} \text{INSH}_{sjk} \times \text{ASRT}_{sjk} \\
 & + \beta_{11sj} \text{RECO}_{sjk} \times \text{PROM}_{sjk} + \beta_{12sj} \text{RECO}_{sjk} \\
 & \times \text{ASRT}_{sjk} + \beta_{13sj} \text{ACALL}_{sjk} + \beta_{14sj} \text{LSM}_{sjk} \\
 & + \beta_{15sj} \text{STTR}_{sjk} + \beta_{16sj} \text{TS}_{sjk} \\
 & + \epsilon_{sjk}, \text{ where } \epsilon_{sjk} \sim N(0, \sigma^2).
 \end{aligned} \tag{3}$$

$$\begin{aligned}
 \beta_{0sj} = & \alpha_0 + \alpha_1 \text{EDU}_{sj} + \alpha_2 \text{SALPERF}_{sj} + \alpha_3 \text{CORIENT}_{sj} \\
 & + \alpha_4 \text{SPEX}_{sj} + \alpha_5 \text{LPRICE}_{sj} + \alpha_6 \text{PVENDOR}_{sj} \\
 & + \zeta_{sj}, \text{ where } \zeta_{sj} \sim N(0, \sigma^2).
 \end{aligned} \tag{4}$$

$$\beta_{msj} = \gamma_0 + \delta_{sj}, \text{ where } \delta_{sj} \sim (0, \sigma^2). \text{ where } m = 2 \text{ to } 15. \tag{5}$$

Table 4. Study I Results.

	Loading <sup>a</sup>	t-Value	Reliability <sup>b</sup>	AVE <sup>c</sup>	MSV <sup>d</sup>
<b>A: First- and Second-Order CFA of Influence Tactics and Buyer Attention</b>					
<b>First-Order Factor Structure</b>					
Information Sharing			.67	.51	.49
Item 1	.69	11.98			
Item 2	.88	15.97			
Recommendation			.78	.65	.49
Item 3	.88	17.16			
Item 4	.91	17.71			
Promise			.86	.75	.42
Item 5	.96	20.82			
Item 6	.94	20.02			
Assertiveness			.78	.65	.42
Item 7	.93	17.81			
Item 8	.86	16.09			
Buyer Attention			.82	.61	.06
Instrumental	.70	12.94			
Valence	.95	20.07			
Temporal Contiguity	.91	18.52			
<b>Second-Order Factor Structure</b>					
Internalization			.81	.68	.34
Information Sharing	.99	8.91			
Recommendation	.71	10.09			
Compliance			.70	.55	.34
Promise	.89	12.43			
Assertiveness	.73	9.58			
<b>B: SVM Classification Results</b>					
	Recall		Precision		F1 Score
<b>Influence Tactics</b>					
Information Sharing	.91		.79		.85
Recommendation	.82		.75		.79
Promise	.84		.88		.86
Assertiveness	.77		.91		.83
Ingratiation	.88		.96		.92
<b>Buyer Attention</b>					
Temporal	.87		.82		.85
Instrumental	.85		.91		.88
Valence	.86		.82		.84

<sup>a</sup>The estimates are standardized coefficients with corresponding t-values in the adjacent column.

<sup>b</sup>Estimated composite reliability, per Fornell and Larcker (1981).

<sup>c</sup>Estimated average variance extracted by the corresponding latent construct from its hypothesized indicators, per Fornell and Larcker (1981).

<sup>d</sup>Maximum shared variance between any two latent constructs.

To assess the impact of buyer attention and influence tactics on the sales contract award, we specify a probit model that accounts for the heterogeneity in the impact of buyer attention as a function of salesperson and contract-specific time invariant variables. The estimated model includes unidirectional causal effects because buyer attention precedes the sales contract award. We expect the disturbance terms across equations to be uncorrelated; we tested this by estimating the equations simultaneously allowing for correlated errors, but we failed to find significance ( $\chi^2_{1df} = 1.93; p > .1$ ). Thus, we estimate the following probit model, where probability of contract award =  $\kappa_{sj}$ :

$$\begin{aligned} \kappa_{sj} = & 1, \\ \text{if } \kappa_{sj} = & \iota_{0sj} + \iota_{1sj} \text{BATTN}_{sjk} + \iota_{2sj} \text{INSH}_{sjk} + \iota_{3sj} \text{RECO}_{sjk} \\ & + \iota_{4sj} \text{PROM}_{sjk} + \iota_{5sj} \text{ASRT}_{sjk} + \iota_{6sj} \text{INGR}_{sjk} \\ & + \iota_{7sj} \text{INSH}_{sjk} \times \text{RECO}_{sjk} + \iota_{8sj} \text{ASRT}_{sjk} \\ & \times \text{PROM}_{sjk} + \iota_{9sj} \text{INSH}_{sjk} \times \text{PROM}_{sjk} \\ & + \iota_{10sj} \text{INSH}_{sjk} \times \text{ASRT}_{sjk} + \iota_{11sj} \text{RECO}_{sjk} \\ & \times \text{PROM}_{sjk} + \iota_{12sj} \text{RECO}_{sjk} \times \text{ASRT}_{sjk} \\ & + \iota_{13sj} \text{ACALL}_{sjk} + \iota_{14sj} \text{LSM}_{sjk} + \iota_{15sj} \text{STTR}_{sjk} \\ & + o_{sjk} > 0. \end{aligned} \quad (6)$$

Otherwise  $\kappa_{sj} = 0$ , where  $\kappa_{sjk} \sim N(0, \sigma^2)$ .

$$\begin{aligned} 1_{1sj} = & \pi_0 + \pi_1 \text{EDU}_{sj} + \pi_2 \text{SALPERF}_{sj} + \pi_3 \text{CORIENT}_{sj} \\ & + \pi_4 \text{SPEX}_{sj} + \pi_5 \text{LPRICE}_{sj} + \pi_6 \text{PVENDOR}_{sj} \\ & + \Omega_{sj}, \text{ where } \Omega_{sj} \sim \text{iid}(0, \sigma^2). \end{aligned} \quad (7)$$

These equations include several control variables (Table 5, Panel A): salesperson alternative mode of communication (ACALL) (= 1 if emails contain words specific to meeting outside the email context such as “hotel” or “golf,” 0 otherwise), linguistic style matching (LSM;  $M = .64$ ,  $SD = .32$ ), the salesperson’s average response time to buyer emails (STTR;  $M = 2.27$  days,  $SD = 12$  days), salesperson education (EDU; 1 = undergraduate, 2 = master’s degree, 3 = doctoral degree) salesperson performance indicators such as sales, profitability, responsiveness, and completeness (SALPERF; 1 = poor performer, 5 = best performer), customer orientation (CORIENT; 1 = low, and 5 = high), salesperson tenure (SPEX;  $M = 6.87$  years,  $SD = 5.76$  years), contract price (LPRICE;  $M = \$2.1$  million,  $SD = \$3.6$  million), and vendor status (PVENDOR; 1 = preferred vendor, 0 otherwise). All variance inflation factors were less than 6.

**Endogeneity.** The salesperson–buyer negotiations yield contemporaneous measures. Specifically, a salesperson’s use of an influence tactic is temporally ordered and contemporaneous if (1) it co-occurs with other influence tactics used by the salesperson in a given slice and (2) it is reciprocally related to buyer attention, which serves as the dependent variable. As Rutz and Watson (2019) explain, when one or more explanatory variables are caused simultaneously and reciprocally with the specified dependent variable, the resultant endogeneity occurs due to simultaneity. To address this endogeneity due to simultaneity, we follow Rutz and Watson’s review of appropriate approaches and guidelines for an instrumental variable approach. Alternative approaches, such as latent instrument variables and Gaussian copula, do not fit our empirical setting. To produce valid and strong instruments, we use predicted scores from regressions of the current value of a contemporaneous variable on its past values, lagged one period, as well as the dependent variable, lagged one period (Rutz and Watson 2019). These instruments satisfy the exclusion criteria; they correlate with the current values of the predictor variables that they precede and are not influenced by contemporaneous unobservable variables. To establish validity of the instruments, we conduct the Sargan test for overidentifying restrictions where the instruments are uncorrelated with the residuals and yield a nonsignificant statistic ( $.28 \chi^2_{4df} = 7.78, p < .1$ ), indicating the validity of the instruments (Germann, Ebbes, and Grewal 2015). To establish strength of the instruments, we regress the endogenous variable on all exogenous variables and then add instruments in the second step to perform an incremental F-test; a value higher than 10 indicates strong instruments. The obtained F-statistics demonstrate that the instruments are strong, with incremental F-statistics of 64.85 (information

sharing), 76.91 (recommendation), 60.75 (promise), 60.83 (assertiveness), and 67.14 (ingratiation) (all  $p < .001$ ; d.f. = 16, 18). Since we have multiple endogenous regressors, we also conducted the Sanderson–Windmeijer weak instrument F-test for assessing the strength of the instruments. The first-stage F-statistics are also highly significant and exceed the threshold of 10 (Stock, Wright, and Yogo 2002), supporting the strength of the instruments.

### Impact of Influence Tactics and Buyer Attention on Sales Contracts

**Model fit.** We compared the hypothesized model with a model with only control variables. According to the likelihood ratio test, the hypothesized model offers a superior fit for both buyer attention ( $\chi^2(23) = 254.78, p < .001$ ) and sales contract award ( $\chi^2(13) = 39.64, p < .001$ ) (Table 6). The Akaike information criterion (AIC) values for the hypothesized and control only model are 728.7 versus 520.3 (for buyer attention) and 289.2 versus 277.5 (for contract award), respectively.

**Hypothesis testing.** To test  $H_1$ , we conducted a test of moderated mediation and examined the conditional indirect effects of the hypothesized influence tactics on sales contract award (Pieters 2017). First, in terms of internalization tactics, the conditional direct effects of information sharing ( $.04, p > .1$ , 95% confidence interval [CI] =  $[-.46, .58]$ ) and recommendation ( $.21, p > .1$ , 95% CI =  $[-.14, .56]$ ) on the sales contract award are insignificant, as expected. However, the conditional indirect effect of information sharing on the contract award is significant and negative when recommendation increases from  $-2$  SD ( $-4.44, p < .001$ , 95% CI =  $[-5.80, -3.07]$ ) to  $-1$  SD ( $-.79, p < .001$ , 95% CI =  $[-1.02, -.56]$ ). Then, as recommendation rises from  $.4$  SD to  $+2$  SD, the conditional indirect effect of information sharing reverses sign and positively increases from  $.26$  ( $p < .001$ , 95% CI =  $[.18, .34]$ ) to  $6.26$  ( $p < .001$ , 95% CI =  $[4.24, 8.29]$ ). Second, in regard to the compliance tactics, the conditional direct effects of promises ( $.30, p > .1$ , 95% CI =  $[-.21, .81]$ ) and assertiveness ( $.31, p > .1$ , 95% CI =  $[-.25, .87]$ ) on the sales contract award also are insignificant. In contrast, the conditional indirect effect of promises on the contract award is negative and significant when assertiveness increases from  $-2$  SD ( $-3.08, p < .001$ , 95% CI =  $[-4.81, -1.36]$ ) to  $-1$  SD ( $-.14, p < .001$ , 95% CI =  $[-.20, -.07]$ ). As assertiveness increases above its mean value, the conditional indirect effect of promises becomes positive and significant, from  $.4$  SD ( $.32, p < .001$ , 95% CI =  $[.16, .47]$ ) to  $+2$  SD ( $4.99, p < .001$ , 95% CI =  $[1.79, 8.19]$ ). This pattern of results is in accord with  $H_1$ .

In support of  $H_2$ , we find a significant positive interaction of information sharing and recommendation ( $.15, p < .05$ ) on buyer attention (Table 6). Following Spiller et al. (2013), we assess the impact of information sharing on buyer attention when recommendation ranges from  $-2$  SD to  $+2$  SD. When recommendation is low ( $-2$  SD), the impact of information sharing on buyer attention is negative and significant ( $-.31$ ,

**Table 5. Descriptive Statistics.**

<b>A: Study 1</b>																
Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Sales contract award	1															
2. Buyer attention	.12**	1														
3. Assertiveness	.12**	-.02	1													
4. Ingratiation	.15**	.25***	.25***	1												
5. Information sharing	.06	.20***	.39***	.32***	1											
6. Promise	.17**	-.07	.24***	.25***	.44***	1										
7. Recommendation	.05	.07	.11*	.02	.26**	.21**	1									
8. Customer orientation	.59***	.03	.04	.07	-.02	.08	.06	1								
9. Salesperson experience	.26***	.07	.06	.19***	.07	-.02	-.18**	.25*	1							
10. Salesperson education	-.11*	-.02	-.11*	-.24**	-.01	.001	-.09	-.26*	-.03	1						
11. Alternative meeting	.09	-.15**	.14**	.13**	.16**	.29***	.01	.08	.14**	-.03	1					
12. Linguistic style matching	-.09	.18**	-.21**	-.12**	-.16**	-.18**	-.13**	.01	.00	.07	-.03	1				
13. Preferred vendor	.02	-.01	-.08	.06	.01	.00	.09	.02	.10*	.12**	.08	.08	1			
14. Price	-.27**	.05	-.01	.04	.21**	-.10*	-.06	-.33*	.17**	.42**	.07	.10	-.02	1		
15. Salesperson time to respond	.03	-.02	-.08	-.08	-.07	-.10*	-.05	.04	.11*	-.08	.09	-.06	.00	.00	1	
16. Salesperson perf.	.44**	.12*	-.01	.02	.04	-.03	.08	.53*	.02	.00	-.05	.02	.02	-.10*	.00	1
Mean	.52	0	.45	.62	1.49	.45	.21	4.61	6.87	1.97	.33	.65	.45	2.16 <sup>+</sup>	2.27	3.65
SD	.50	1	.61	.76	1.62	.62	.37	.38	5.76	1.4	.47	.32	.50	3.62	12.01	.44
<b>B: Study 2</b>																
Variables	1	2	3	4	5	6	7	8								
1. Sales contract award	1															
2. Buyer attention	.83***	1														
3. Recommendation	.13	.23**	1													
4. Promise	.22**	.30***	.02	1												
5. Customer satisfaction	.38***	.53***	.54***	.44**	1											
6. Age	-.18*	-.26***	-.13	-.18	-.17	1										
7. Education	.14	.06	.07	-.18	.07	-.15	1									
8. Gender	-.23	-.20**	-.05	.07	.05	.33***	-.22***	1								
9. Mean	4.63	5.01	4.86	4.83	4.85	36.88	.31	.58								
10. SD	1.16	.84	1.14	1.08	1.03	11.69	.46	.49								

\*p < .1.  
 \*\*p < .05.  
 \*\*\*p < .001.  
 Notes: Two-tailed tests of significance.

**Table 6.** Study I Results: Impact of Influence Tactics as Textual Cues on Buyer Attention and Sales Contract Award.

Variables	Buyer Attention: Control Only	Buyer Attention: Hypothesized Model	Sales Contract Award: Controls Only	Sales Contract Award: Hypothesized Model
Intercept	-1.26 (1.07)	-.54 (.81)	-8.80 (1.35)***	.70 (.31)**
Buyer attention (H <sub>1</sub> )				16.32 (7.37)**
Information sharing		-.10 (.07)		.04 (.24)
Recommendation		-.14 (.04)***		.21 (.17)
Promise		-.01 (.06)		.30 (.25)
Assertiveness		-.03 (.07)		.31 (.28)
Information sharing × Recommendation (H <sub>2</sub> )		.15 (.05)***		.20 (.22)
Promises × Assertiveness (H <sub>3</sub> )		.14 (.06)**		.11 (.15)
Promises × Information sharing		.06 (.04)		-.01 (.30)
Promises × Recommendation		-.10 (.04)**		.15 (.25)
Assertiveness × Information sharing		-.01 (.05)		.06 (.34)
Assertiveness × Recommendation		-.30 (.05)***		.29 (.21)
Ingratiation		-.06 (.05)		-.05 (.40)
Buyer attention lagged		.12 (.12)		.20 (.22)
Slice	-.03 (.02)	.01 (.01)		
Salesperson customer orientation	.22 (.18)	.05 (.14)	3.01 (.60)***	
Salesperson customer orientation × Buyer attention				-4.15 (1.34)***
Salesperson education	-.02 (.04)	-.05 (.03)	.17 (.17)	
Salesperson education × Buyer attention				.01 (.26)
Salesperson tenure with the firm	.02 (.01)**	-.01 (.01)	.10 (.03)***	
Salesperson tenure with the firm × Buyer attention				-.18 (.06)***
Salesperson performance	.01 (.06)	.07 (.05)	.43 (.18)**	
Salesperson performance × Buyer attention				-.43 (.34)
Response time	.01 (.01)	-.01 (.01)	.01 (.01)	.01 (.01)
Linguistic style matching	1.03 (.07)***	.54 (.11)***	-.84 (.52)	-.47 (.47)
Alternative mode of communication	.02 (.10)	-.16 (.08)*	.41 (.35)	.18 (.32)
Log of contract price	-.01 (.08)	.02 (.06)	-.96 (.29)***	
Log of contract price × Buyer attention				1.05 (.55)*
Preferred vendor status	-.09 (.11)	-.06 (.08)	-.04 (.35)	
Preferred vendor status × Buyer attention				-.26 (.74)
Log-likelihood (d.f.)	-348.35 (16)	-221.16 (39)	-135.58 (10)	-115.76 (23)
AIC	728.7	520.3	289.2	277.5

\* $p < .1$ .\*\* $p < .05$ .\*\*\* $p < .001$ .

Notes: Two-tailed tests of significance.

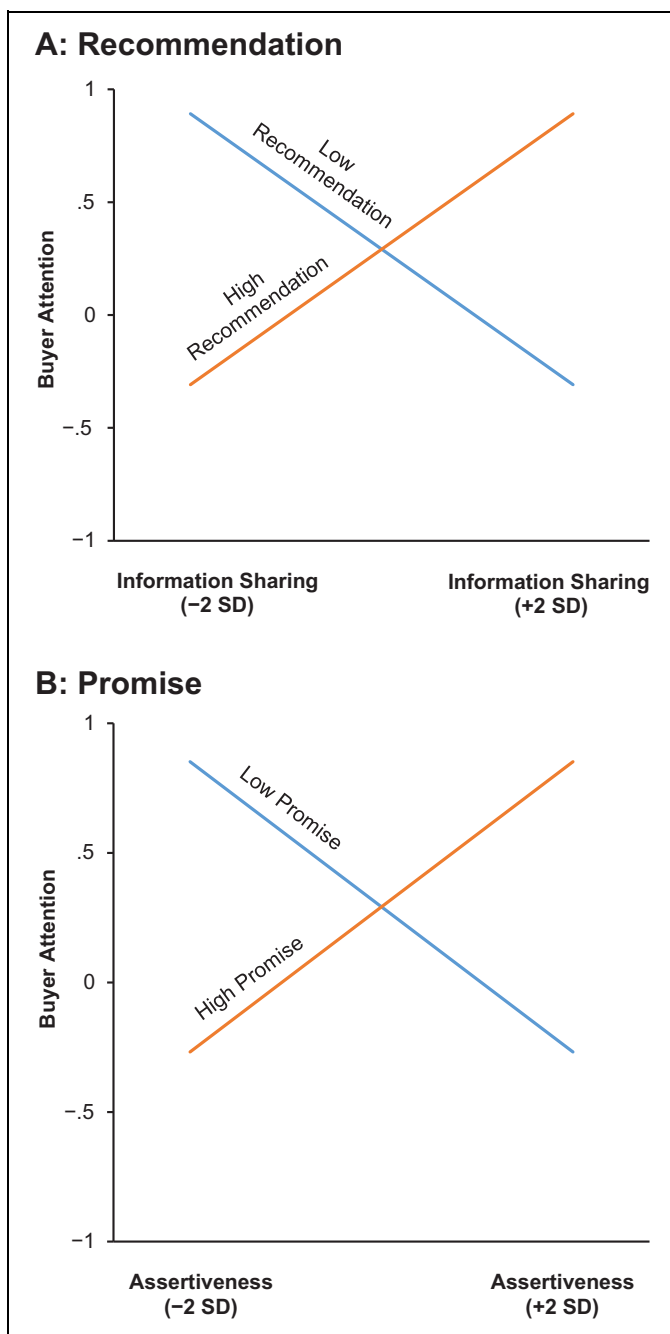
$p < .002$ ) (Figure 3). As recommendation increases to .1 SD, the effect of information becomes positive and significant (.02,  $p < .002$ ) and grows to .31 ( $p < .002$ ) at +2 SD. Conversely, the marginal effect of recommendation on buyer attention at low levels (-2 SD) is -.42 ( $p < .005$ ) but increases to .13 ( $p > .1$ ) at high levels (+2 SD) of information sharing.

Consistent with H<sub>3</sub>, we find a significant, positive interaction of promises and assertiveness (.14,  $p < .05$ ) on buyer attention. When assertiveness is low (-2 SD), the impact of promises on buyer attention is negative and significant (-.28,  $p < .04$ ) (Figure 3). As assertiveness increases to .1 SD, the effect of promises becomes positive and significant (.01,  $p < .04$ ) and grows (.28,  $p < .04$ ) at +2 SD. Conversely, the marginal effect of assertiveness on buyer attention is -.28 ( $p < .04$ ) at low levels (-2 SD) and .28 ( $p < .04$ ) at high levels (+2 SD) of promise.

Our study also provides evidence for negative interaction effects when salespeople concurrently use promise and recommendation tactics; the marginal effect of promises on buyer

attention decreases from .21 ( $p < .05$ ) at low levels (-2 SD) to -.21 ( $p < .05$ ) at high levels (+2 SD) of recommendations. Similarly, the concurrent use of assertiveness with recommendation tactics decreases the marginal effect of assertiveness on buyer attention, from .59 ( $p < .001$ ) to -.59 ( $p < .001$ ) at low versus high levels of recommendation. The concurrent uses of promise and information sharing, as well as assertiveness and information sharing, fail to achieve significance.

**Robustness checks.** We conduct a battery of robustness checks, as detailed in Table 7, Panels A and B, including subsample analyses in which we randomly drop 5% of the data, drop long sales e-negotiations with more than 10 slices, or use slice as 14 days. We also examine changes in buyer attention as the interaction unfolds by regressing buyer attention on time-sequenced slices and extracting the slope for all 43 sales e-negotiations to capture the rate of change in buyer attention. The contract-specific slopes provide an independent variable in



**Figure 3.** Study 1: Effect of concurrent use of complementary influence tactics on buyer attention (Predicted Scores).

the sales contract model. The change in buyer attention exerts a positive impact (2.41,  $p < .06$ ) on successfully closed contracts. Together, these results confirm the robustness of our key findings.

## Study 2: B2B Sales E-Negotiations in a Controlled Setting

This experimental study goes beyond Study 1's focus on concurrent use of complementary influence tactics that constitute

either internalization (e.g., information sharing, recommendation) or compliance (e.g., promise, assertiveness) tactics to examine the concurrent use of competitive influence tactics that diminish buyer attention. Specifically, we aim to test the interactive effect of concurrent use of recommendation (internal analyzing) and promise (risk shifting) tactics on the likelihood of sales contract award. We define these inconsistent influence tactics as a “competitive” combination of tactics from theoretically incompatible categories and hypothesize that this combination diminishes buyer attention and lowers purchase likelihood.

Support for this finding is forthcoming from the generalizable findings of cognitive inconsistencies research (mixed signals). In particular, promises and recommendations present disparate cues for buyers. Promises nudge buyers to shift decision risk with an instrumental cognition focused on expected payoffs from the promised outcome that the seller guarantees. By contrast, textual cues signaling recommendations prompt systematic analyses, intrinsically focused on expected benefits and costs of alternative options, such that the buyer bears the decisional risk. When used concurrently, promise and recommendation cues send mixed signals. Drover, Wood, and Corbett (2018, pp. 221–22) report that mixed signals tend to heighten ambiguity and abandonment of effortful analyses. Similarly, Mignonac et al. (2018) find that divergent signals result in ambivalence. Consistent with these studies, we anticipate that a competitive use of influence tactics dilutes their effect on buyer attention and, in turn, lowers purchase likelihood. The experimental study is designed to provide explanatory insights, not definitive evidence of causal mechanisms. It is prudent to examine the boundary condition uncovered in Study 1 for its explanatory power in a controlled setting before delving into its causal mechanisms. Thus,

**H<sub>4</sub>:** Salespeople's concurrently used recommendation and promise tactics (a) interact to diminish the likelihood of a successfully closed sales contract, and (b) this negative effect is mediated by buyer attention.

## Method

One hundred and one U.S.-based B2B professionals with at least two years' experience in purchasing ( $M_{\text{age}} = 36.88$  years,  $SD = 11.69$ ; 56.8% men) were recruited from an online panel and randomly assigned to one of the four conditions (Web Appendix A) in a 2 (recommendation: high vs. low)  $\times$  2 (promise: high vs. low) between-subjects experiment. To construct the scenarios and manipulate salespeople's use of recommendation and promise tactics, we utilized the validated textual cues from Study 1. We ensured that the treatment conditions were equivalent in terms of the (1) number of sales interaction turns, (2) content and number of words used by the buyer, (3) number of words (but not content) used by the salesperson, and (4) purchase situation. Furthermore, we use the context of an office supplies contract negotiation, which is a common B2B procurement activity. The scenarios were pretested with 32 respondents. Each participant was asked to imagine that

Table 7. Study I Robustness Checks.

<b>A: Impact of Influence Tactics as Textual Cues on Buyer Attention</b>			
<b>Variables</b>	<b>Buyer Attention: 5% Drop</b>	<b>Buyer Attention: Drop &gt; 10 Slices</b>	<b>Buyer Attention: 14-Day Slice</b>
Intercept	-.85 (.98)	-.64 (.95)	-.16 (.97)
Information sharing	-.09 (.08)	-.10 (.07)	-.02 (.08)
Recommendation	-.15 (.07)**	-.19 (.06)***	.01 (.06)
Promise	-.01 (.07)	-.03 (.07)	-.11 (.07)
Assertiveness	-.02 (.08)	-.12 (.07)	-.07 (.06)
Information Sharing × Recommendation (H <sub>2</sub> )	.07 (.04)*	.07 (.05)	.10 (.05)**
Promises × Assertiveness (H <sub>3</sub> )	.15 (.07)**	.29 (.08)***	.16 (.09)*
Promises × Information sharing	.06 (.05)	.08 (.05)	.08 (.05)
Promises × Recommendation	-.09 (.04)**	-.17 (.05)***	-.13 (.05)***
Assertiveness × Information sharing	-.06 (.06)	-.05 (.08)	-.05 (.06)
Assertiveness × Recommendation	-.19 (.06)***	-.49 (.08)***	-.13 (.07)*
<b>Controls</b>			
Ingratiation	-.06 (.06)	-.02 (.09)	-.06 (.06)
Buyer attention lagged	.17 (.12)	.13 (.10)	.18 (.11)
Slice	-.03 (.02)	-.01 (.02)	.01 (.03)
Salesperson customer orientation	.14 (.14)	.14 (.16)	.06 (.16)
Salesperson education	.01 (.04)	.01 (.04)	.08 (.04)**
Salesperson tenure with the firm	.01 (.06)	.01 (.05)	.01 (.05)
Salesperson performance	.03 (.06)	-.03 (.05)	.09 (.05)
Response time	-.01 (.01)	-.01 (.01)	-.01 (.05)
Linguistic style matching	.44 (.14)***	.44 (.13)***	.46 (.12)***
Alternative mode of communication	-.19 (.10)*	-.19 (.09)*	-.16 (.10)
Log of contract price	-.02 (.07)	-.04 (.07)	-.08 (.07)
Preferred vendor status	.02 (.10)	.07 (.10)	.22 (.10)**
Log-likelihood (d.f.)	-209.59 (39)	-203.58 (39)	-194.33 (39)
AIC	497.2	485.2	466.7
<b>B: Impact of Influence Tactics as Textual Cues on the Sales Contract Award</b>			
<b>Variables</b>	<b>Sales Contract Award: 5% Drop</b>	<b>Sales Contract Award: Drop &gt; 10 Slices</b>	<b>Sales Contract Award: 14-Day Slice</b>
Intercept	.64 (.35)**	.67 (.34)**	.96 (.42)**
Buyer attention (H <sub>1</sub> )	18.25 (8.33)***	20.57 (7.98)**	25.07 (9.82)**
Information sharing	.04 (.25)	.07 (.25)	.35 (.46)
Recommendation	.21 (.17)	.19 (.18)	.14 (.19)
Promise	.35 (.27)	.34 (.27)	.48 (.37)
Assertiveness	.26 (.31)	.23 (.28)	.37 (.41)
Information sharing × Recommendation	.13 (.15)	.12 (.16)	.14 (.19)
Promises × Assertiveness	-.05 (.34)	-.14 (.37)	-.10 (.44)
Promises × Information sharing	.13 (.24)	.08 (.22)	.11 (.23)
Promises × Recommendation	.04 (.36)	.10 (.29)	.07 (.31)
Assertiveness × Information sharing	.39 (.23)*	.41 (.24)*	.58 (.31)*
Assertiveness × Recommendation	-.04 (.44)	-.01 (.42)	.03 (.44)
<b>Controls</b>			
Ingratiation	.15 (.23)	.13 (.23)	.12 (.24)
Salesperson customer orientation × Buyer attention	-4.72 (1.60)***	-4.98 (1.58)***	-6.32 (2.08)***
Salesperson education × Buyer attention	.16 (.32)	.14 (.31)	.25 (.35)
Salesperson tenure with the firm × Buyer attention	-.21 (.07)***	-.13 (.07)*	-.16 (.08)**
Salesperson performance × Buyer attention	-.48 (.37)	.01 (.35)	.01 (.40)
Log of contract price × Buyer attention	1.13 (.59)*	.89 (.59)	1.26 (.68)*
Preferred vendor status × Buyer attention	.18 (.82)	-.46 (.82)	-.41 (.90)
Response time	.01 (.02)	.01 (.02)	.01 (.01)
Linguistic style matching	-.18 (.56)	-.22 (.56)	-.22 (.57)
Alternative mode of communication	.16 (.32)	.15 (.33)	.17 (.35)
Log-likelihood (d.f.)	-109.55 (23)	-107.37 (23)	-95.76 (23)
AIC	265.1	260.7	237.5

\* $p < .1$ .\*\* $p < .05$ .\*\*\* $p < .001$ .

Notes: Two-tailed tests of significance. 5% drop = randomly drop 5% of data; drop &gt; 10 slice = drop sales e-negotiations that have greater than 10 slices; 14-day slice = use 14 days to create slices.



(s)he was the buyer in the scenario and to respond to several measures (see Web Appendix B). The participants evaluated the scenarios as realistic on 1–10 scale ( $M = 7.27$ ,  $SD = 1.54$ ; 1 = “unrealistic,” and 10 = “realistic”). Raw means and descriptive statistics for all constructs are in Web Appendix C and Table 5, Panel B.

## Results

**Manipulation checks.** Using measured constructs, we tested the manipulations included in the experimental treatments (scenarios). Comparing the high- and low-recommendation treatments with an analysis of variance revealed that participants in the high-recommendation condition ( $M = 5.57$ ,  $SD = .88$ ) indicated a higher level of recommendation than did those in the low condition ( $M = 4.16$ ,  $SD = .93$ ), with a significant difference ( $M_{diff} = 1.41$ ,  $p < .001$ ). Likewise, participants in the high-promise condition ( $M = 5.51$ ,  $SD = .90$ ) indicated a higher level of promise than those in the low condition ( $M = 4.16$ ,  $SD = .81$ ), with a significant difference ( $M_{diff} = 1.35$ ,  $p < .001$ ). Thus, the treatment scenarios successfully manipulated the target conditions (Web Appendix D).

**Hypothesis for recommendation and promise tactics.** To test  $H_{4a}$ , we conducted a full factorial analysis of covariance with promise and recommendation treatments (dummy coded) predicting contract purchase likelihood while statistically controlling for customer satisfaction ( $F(1, 93) = 5.13$ ,  $p > .05$ ), gender ( $F(1, 93) = 9.14$ ,  $p > .05$ ), age ( $F(1, 93) = 1.04$ ,  $p < .1$ ), and education ( $F(1, 93) = .12$ ,  $p < .1$ ). As hypothesized, the interaction of promise and recommendation was significant ( $F(1, 3) = 17.26$ ,  $p > .001$ ,  $\eta_p^2 = .16$ ). Follow-up analyses revealed that the estimated marginal means for high recommendation condition were lower for those in the high-promise condition ( $M = 4.50$ ,  $SD = .20$ ) relative to those in the low-promise condition ( $M = 4.92$ ,  $SD = .21$ ). Furthermore, the estimated marginal means for the low-recommendation condition were higher for those in the high-promise condition ( $M = 5.24$ ,  $SD = .19$ ) relative to those in the low-promise condition ( $M = 3.89$ ,  $SD = .22$ ). Together, these findings support  $H_{4a}$ .

**Hypothesis for moderated-mediation analysis.** Testing  $H_{4b}$  requires a moderated-mediation analysis to demonstrate that (1) buyer attention fully mediates the effect of promise and recommendation treatments, and (2) conditional indirect effect of the promise and recommendation treatments on the likelihood of sales contract award is significant. To mitigate measurement error bias, testing  $H_{4b}$  requires that measured variables of the buyer attention construct be used in hypothesis testing as latent, not observed, variables. Accounting for measurement error is also necessary to obtain unbiased estimates for the indirect effect (Peters 2017). A simultaneous equations model with latent variables and robust estimation to account for nonnormal distribution of dependent variables provides a methodological approach that meets the preceding requirements.

We implement the aforementioned approach by using maximum likelihood robust estimator in Mplus with 10,000 bootstrap iterations to estimate the asymmetric CIs of the conditional indirect effect and test its statistical significance. We also included satisfaction as a control variable along with other potential confounders (e.g., age, education, gender). Overall, our hypothesized model for full mediation by buyer attention fits the experimental data reasonably well ( $\chi^2 = 71.55$ ,  $d.f. = 40$ ,  $p < .001$ , comparative fit index/Tucker–Lewis index =  $.95/.94$ , root mean square error of approximation =  $.088$ , P-close =  $[.05, .12]$ , and standardized root mean square residual =  $.04$ ). The good fit of the fully mediated model to the experimental data confirms our hypothesis that buyer attention plays a central role in carrying the influence of salesperson’s influence tactics. Moreover, the pattern of estimated conditional indirect effect of recommendation and promise tactics on buyer attention is also consistent with  $H_{4b}$ . The impact of recommendation tactic is significant and positive at  $-1$  SD of promise tactic ( $2.63$ ,  $p < .001$ , 95% CI =  $[1.73, 3.53]$ ), but this conditional indirect effect becomes negative when the use of promise tactic is at  $+1$  SD ( $-.46$ ,  $p < .01$ , 95% CI =  $[-.79, -.12]$ ). The corresponding indirect effect of recommendation with bias-corrected bootstrap 95% CIs are  $2.74$   $[1.78, 3.72]$ ,  $p < .01$  at  $-1$  SD of promise, and  $-.47$   $[-.87, -.11]$ ,  $p < .05$  at  $+1$  SD of promise. The robust and significant indirect effect of influence tactics on contract award likelihood is an indication of the strength and significance of the mediation effect of buyer attention. We also used the PROCESS macro (Hayes 2017) for testing  $H_{4b}$  and found similar results.

Study 2’s results demonstrate that the salesperson’s concurrent use of competitive tactics during sales e-negotiations interact to negatively affect sales outcomes. This advances Study 1, which examined the positive effects of complementary influence tactics on sales outcomes. Furthermore, by using validated textual cues from Study 1 to manipulate salespeople’s use of influence tactics, Study 2 provides a direct test of the influence tactics library developed in Study 1. Finally, the evidence of causal inference is encouraging, as Study 2 affirms that the process by which concurrent use of influence tactics shapes contract success includes buyer attention as a key mediator.

## Discussion

This research advances our understanding of selling effectiveness in B2B e-negotiations, a medium that is increasingly favored by buyers because of its accessibility, transparency, diversity, and flatness. Advances in this area have been hampered by the demands of conducting research on influence tactics deployed as e-communications. Among them are unfettered access to the entirety of e-communications between salespeople and buyers, measuring and modeling sales influence tactics by using unstructured text data, and theorizing an influence process that provides the mediating mechanism linking the salesperson’s influence tactics and the buyer’s contract award decision. To navigate these challenges, and advance insights into the effectiveness of sales influence tactics in

B2B e-communications, we conduct two studies and establish four main contributions.

First, we provide a roadmap for sales research that uses unstructured data obtained from salesperson–buyer interactions to test theoretical models of sales mechanisms. Study 1 shows how buyer and seller emails may be used as data to capture influence tactics and their effects. Second, we establish the theoretical and managerial significance of buyer attention as a key mediator in the relationship between salesperson’s use of influence tactics and the sales contract award. Previous studies in marketing have studied direct effects of influence tactics on sales outcomes but rarely examined the mechanism that underlies these effects. Third, we advance a theory of influence tactics in B2B e-negotiations by conceptualizing and demonstrating that influence tactics, as textual cues, are invariably more effective in winning contracts when they are used in specific combination than when they are used individually. Prior research has overlooked the gains from concurrent use of different influence tactics in B2B negotiations. Fourth, we demonstrate that the concurrent use of influence tactics is effective in securing contract awards *only* when the tactics are complementary in prompting internalization (internal analyzing) *or* compliance (risk shifting). Specifically, we show that the concurrent use of competitive influence tactics degrades buyer attention and diminishes the likelihood of contract award. Previous research has missed that salespeople’s use of some influence tactics has the counterintuitive effect of escalating loss probability of the contract award. We discuss these contributions next, followed by implications for managers and future research.

### *Influence Tactics as Textual Cues in Sales E-Negotiations*

Constructs are the building blocks that bridge our theories of a phenomenon with empirical analysis of its manifestation. Getting the study constructs “right” so they are rich in theoretical content and valid in empirical representation is a challenge with unstructured data. Much has been discussed about the bottom-up and top-down approaches for extracting meaningful constructs from unstructured data to permit their use in building empirical models and in analytics engines that yield insights. We contribute to the literature on best practices for analysis of unstructured data (Balducci and Marinova 2018; Berger et al. 2020; Chapman 2020) by offering a five-step roadmap for developing and validating theoretical constructs from textual cues. Our roadmap combines top-down and bottom-up approaches by outlining objectives, techniques, activities, and outcomes for each step and showing empirical evidence of their validity.

### *Buyer Attention as a Key Mediator in E-Negotiating Contract Awards*

We advance the literature by (1) conceptualizing buyer attention in the context of B2B e-negotiations, (2) capturing variations in buyer attention from textual cues during the sales

negotiation process, and (3) theorizing and empirically examining the role of buyer attention as a key mediator in two separate study contexts. Conceptually, we show that, while previous research has explained what influence tactics are effective in different sales contexts, our study explains *how* influence tactics work. We draw from the attention-based view framework to posit that buyer attention explains how buyers notice, process, and respond to salesperson stimuli (influence tactic) in accord with attention’s role in a selection, resource-allocation, and action-motivation mechanism, respectively (Bonner and Calantone 2005; Coleman and Williams 2015; MacKenzie 1986).

Operationally, accessing the variations in the attentional mindset of buyers while they are in the midst of the sales negotiation process is challenging. As a first step, this research relied on the linguistic content of buyers’ emails to extract their attentional mindset. While composed emails are likely to be incomplete and constrained representation of buyer attention, they have the advantage of being accurate (e.g., the buyer’s own words) and time sensitive (e.g., stamped by time of sending the email). The results from Studies 1 and 2 consistently show that buyer attention fully mediates the effect of salespeople’s use of influence tactics on the likelihood of sales contract award. Our insight is that the waxing and waning of buyer attention in B2B sales negotiation, visible in the signals of buyers’ message content and urgency, among others, provide an early indication of sales effectiveness that is relatively robust and remarkably diagnostic of the likelihood of sales contract award. The confirming evidence of buyer attention’s mediating role in the experimental study, in which alternative explanations are more tightly controlled, lends credence to our conceptual contribution that buyer attention offers a mechanism for understanding *how* influence tactics work. Extant work that examines buyer attention in related research domains aligns with our studies. For instance, in a study of B2B purchasing managers, Bonner and Calantone (2005) found that buyer attention fully mediates the effect of sellers’ relationalism on buyer purchase behaviors, with strong empirical support for the mediated effects. They also found that the effect of seller reputation on buyer’s purchase behavior was fully mediated by buyer attention.

### *The Advantage of Concurrent Use of Complementary Influence Tactics as Textual Cues*

This study contextualizes the conceptualization of Kelman’s (1961) original social influence mechanisms for sales e-negotiations by building on and extending the literature on influence tactics in sales management. Internationalization involves internal analyzing, which primes the buyer to bear the risk of evaluating the benefits and costs of alternative options and is stimulated by use of textual cues that involve information sharing and making recommendations. Compliance involves risk shifting, which nudges the buyer to shift decisional risk to the seller by leaning toward the guaranteed outcome, is stimulated the use of textual cues that involve being assertive

and making promises. Study 1's results provide compelling support for our conceptual contribution. The influence tactics constructs extracted from textual cues in salespeople's e-communications using the proposed roadmap show (1) evidence of convergent and discriminant validity, (2) a consistent factor pattern at the second-order level that confirms the presence of two (and no more than two) underlying second-order "factors" to indicate mechanisms (internalization and compliance), and (3) support for the four (and no more than four) hypothesized first-order "factors" to indicate influence tactics. Moreover, in accord with the posited hypotheses and as evidence of nomological validity, the results from the study 1 confirm that concurrent use of complementary influence tactics indicated by a positive interaction effect heightens buyer attention.

Previous studies have shown that each influence tactic, when used individually, can be effective at times, but most have not theorized or tested the concurrent use of multiple influence tactics. This is surprising because, in practice, salespeople flexibly use multiple influence tactics by instinct. Our study fills this void and advances the field by demonstrating that gaining B2B buyer attention is more effective when different (rather than same) influence tactics are used concurrently as long as the influence tactics are complementary in prompting either internalization or risk shifting.

### *The Disadvantage of Concurrent Use of Competing Influence Tactics as Textual Cues*

Study 2 confirms the theoretical expectation that when salespeople concurrently use competing influence tactics, this results in diminished buyer attention and lower contract closing success. Few, if any, studies have examined such competing combinations. For instance, parallel work in product management has examined the effect of salespeople's efforts to combine compliance-generating (e.g., "rationality") and compliance-impeding ("assertiveness") tactics on product manager compliance (Joshi 2010). This study advances Joshi's intuition about the disadvantage of stimulating inconsistent cognitions by explicitly testing the effect of using recommendation and promise tactics concurrently within a controlled experimental study. The results reveal that the disadvantage of competing influence tactics is substantial. Specifically, Study 1 data show that concurrent use of the promise tactic with low levels of recommendation is equivalent to a 92% probability of contract award; however, this probability reduces to less than 50% when the salesperson uses both promise and recommendation, all else being equal. Such concurrent use of competing influence tactics can make the difference between winning or losing contracts.

### *Future Research Directions*

Several study limitations provide avenues for future research. First, we investigate negotiations that feature only a single seller over a two-year time period. Future research could add

to this body of work on influence tactics by testing their effect across different stages (e.g., early, late) of the negotiation, advancing theory for competitive effects of influence tactics, and expanding the scope of the studied B2B e-negotiations in other industry contexts. Second, we develop a typology of different affordances that are unique to e-communications and draw on these attributes to develop a theory of influence tactics in B2B e-negotiations. Researchers may use the proposed typology to ground future studies of e-communications and enrich its features. Third, we propose a five-step roadmap for developing and validating theoretical constructs from textual cues; tools for analyzing unstructured text data continue to improve, promising the ability to account for paratextual cues such as amplifiers (e.g., different colored text) or accentuators (e.g., exclamation marks). We invite future contributions that enhance and enrich this roadmap to bolster the field's building blocks for theory development. Fourth, we theorize and obtain empirical support for buyer attention as a mediating mechanism in B2B e-negotiations using naturalistic data to extract theoretical constructs for testing hypotheses and an experimental design to study underlying mechanism. Finally, with growing usage of mobile as a way to communicate, future research should consider the effect of device type on sales e-negotiations (Melumad, Inman, and Pham 2019).

### *Implications for Salespeople and Sales Managers*

Our results hold several important implications for salespeople and those who manage them. First, our study offers a recommendation for the sales process training. A worldwide survey of 513 firms (CSO Insights 2019) indicates that sales training focused on the sales process is crucial for salespeople in enhancing win rates. Our study recommends that sales organizations incorporate into their training programs guidelines for building buyer attention during sales e-negotiations. During our salesperson interviews, we learned that seasoned salespeople with proven sales performance in traditional interfaces (e.g. F2F, phone) often struggle to assess the buyer's mindset in e-communications. Our findings show that this training gap is important to fill because salespeople who are successful in increasing buyers' attention by a factor of 1 SD increase the likelihood of contract award seven-fold to yield an additional \$37 million in revenue. In motivating salespeople, we recommend that sales managers specify buyer attention as a key process metric. By measuring buyer attention for each e-negotiation on an ongoing basis, the manager can establish a new performance indicator and identify skill gaps that require more directed coaching.

Second, salespeople need to gain a nuanced understanding of how to leverage influence tactics during e-negotiations. Our study suggests that existing "best practices" in sales influence tactics are unhelpful when they attempt to simplify the sales influence process by focusing on direct effects of individual tactics such as "tactic X will produce result Y" or "tactic X is better than Z to produce result Y." The salespeople we interviewed attested to the ineffectiveness of sales influence

practices in e-negotiations that work in F2F interactions. By isolating the benefits of the concurrent use of complementary influence tactics, we suggest a different path to winning contracts: sales managers should coach salespeople to deploy different combinations of complementary sales tactics and avoid any combination of competitive sales tactics. We demonstrate that concurrent deployment of complementary sales tactics within each e-negotiation slice yields significant gains in buyer attention and a reliable pathway to the contract award. For instance, the concurrent use of assertiveness and promise tactics to evoke compliance during e-negotiations boosts buyer attention by 14% on average. Likewise, the concurrent use of information sharing and recommendation tactics to evoke internalization during e-negotiations tactics results in 15% increase in buyer attention. In contrast, competitive combinations that are concurrently deployed invite losses in buyer attention (30% on average) and significantly diminish the likelihood of contract award.

Finally, the validated textual cue dictionaries from this study can help design training and assessment methods to enhance selling effectiveness. Firms may have access to much larger data sets than the one used for this research. The proposed measurement approach, which incorporates ML algorithms, is developed with this industry trend in mind and is well-suited for big data. Managers can adopt our approach and library of validated words and phrases according to their own sales context. This aligns with recent trends in the sales field, in which ML is increasingly used for predictive content recommendation (e.g., what a salesperson should say in the email) as well as script optimization (e.g., how to say it) (Baumgartner, Hatami, and Valdivieso 2016; Zagorin 2019). We also show that “seed” dictionaries that are based on grounded work can offer a prediction accuracy of 63%. Furthermore, the prediction accuracy improves substantially to 85% when “seed” dictionaries are combined with patterns recognized by ML. According to Zagorin (2019), firms most poised to benefit from ML in sales are those that have (1) relatively high transaction volumes, (2) large sales forces, and (3) the majority of their marketing and sales activity tracked digitally. Managers in such firms can readily adopt our approach and conduct context-specific refinements to enhance sales effectiveness. Participation of professional sales staff in this process can also aid in promoting ownership and building commitment. Looking ahead, sophisticated and contextualized dictionaries of textual cues for successful e-selling can be used as tools for building and sustaining the competitive advantage of the sales organization.

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