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Prevention and promotion approaches to contracting: Implications for negotiator focus and contract frames on exchange performance and relationships in the digital age

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Abstract *Contracting can be approached in very different ways, depending on whether negotiators and the contracts themselves focus on preventing negative events or promoting positive outcomes. These two different approaches influence the exchange and exchange relationship in predictable ways. This chapter reviews prior work on how regulatory focus affects the traditional contracting process; that is, how individuals negotiate, draft, review, and then manage the contract, highlighting the need to expand the promotion role for contracts in practice. However, the advent of AI contracting tools and smart contracts is significantly changing this process. Thus, this chapter also provides an examination of these new digital contacting tools and how they further bias people and contracts toward prevention. Understanding these effects can allow managers to strategically use negotiator focus and contract frames to increase performance and enhance exchange relationships in the digital age, as use of AI tools and smart contracts becomes widespread.*

Keywords: Contracts, Contract frames, Regulatory focus, AI, Contract automation, Smart contracts.

1 Introduction

Contracts have long been studied from legal and economic perspectives. Because both literatures focus on mitigating risk and including appropriate safeguards, they implicitly characterize contracts as tools for preventing negative events or outcomes in transactions. In practice, this characterization led to a systematic bias of negotiator foci and contract frames towards preventing negative events. However, contracts play additional roles in the exchange, including shaping the partners' interpretations, their behavior, and their relationship. If these additional roles are not considered when designing the contract, exchange performance and the development of the on-going partner relationship may be hindered.

We draw on regulatory focus theory, a well-established social psychological perspective, that suggests individuals view the world in terms of either preventing negative outcomes (prevention) or promoting positive outcomes (promotion). These views of the world lead to very different emotional experiences, behaviors, attributions, and relationships, even when the goal itself is exactly the same. Importantly, while prevention or promotion focus is a general tendency that people tend to have across situations, it also can be strongly influenced by contextual cues.

Understanding when and how contextual cues shape regulatory focus allows people to better understand their own and others' behavior in exchange contexts and make strategic choices about how to leverage prevention and promotion language to optimize results. Negotiators, including lawyers and managers, should not only be aware of their own chronic regulatory focus, but potentially even adopt a different contextually-induced focus if it is more appropriate given the specific context of the exchange. Furthermore, they should intentionally use prevention and promotion contract frames to enhance the exchange and on-going partner relationships. Thus, a deep understanding of the psychological impact of prevention and promotion foci and frames allows people to deliberately shape the exchange context and partner relationship, rather than be forced to accept potential unintended consequences of the psychological influences from the default prevention role that most contracts play in practice.

Finally, while psychological research on negotiator regulatory focus and contract frames has been conducted using the traditional contracting paradigm of individuals negotiating, drafting, reviewing, and managing or enforcing contracts, the advent of AI tools and smart contracts (sometimes both are generally referred to as 'contract automation') has the potential to dramatically change the contracting process. Our analysis suggests that these technologies are likely to further bias negotiator focus and contract frames towards prevention. Therefore, while there have been dire predictions that these technologies will replace humans in the contracting process, our analysis suggests a need for experts who can augment the contracting process with a thoughtful consideration of negotiator foci and contract frames, and act as exchange and relationship managers, rather than simply as contract drafters and reviewers.

The sections that follow provide detailed accounts of the ideas we have introduced in Section 1.

Specifically, Section 2 introduces regulatory focus theory and its implications for using negotiator focus and contract frames to actively manage exchanges and relationships. Section 3 discusses how the introduction of AI contracting tools and smart contracts impacts contracting and is likely to increase an already systematic bias towards prevention contracts. Section 4 delves into practical implications of these technological advances and future opportunities for contracting managers and lawyers to strategically use contract frames to increase exchange performance and bolster partner relationships in the digital age. Finally, Section 5 concludes with a brief summary of the ideas presented in the chapter.

2 The impact of negotiator focus and contract frames on exchanges and relationships

Contracts obviously have economic and legal implications for exchanges because they specify the terms of the deal and outline the safeguards to enforce them. [1] Yet, contracting also has a psychological impact on the exchange and the on-going relationship with the parties.[2] That is, the negotiator focus (the way that the negotiator views the exchange) and the contract frame (the way that the contract is written) may shape the exchange in unexpected ways because they can influence the parties' emotions, behaviors, attributions, focus of attention, and relationship. As a result, it is important for the parties to understand and control the potential impact of negotiator focus and contract frames on both the exchange and the relationship, rather than just enduring the unintended consequences.

2.1 Regulatory focus theory

Psychological theory provides insight into how contracting can impact exchanges and relationships. Regulatory focus theory (RFT) suggests that people generally hold one of two different mindsets at any given point in time.[3] Under prevention focus, a goal is seen as minimal, or something that must be done. From this perspective, the focus is on avoiding negatives.[4] In contrast, under promotion focus, the *same goal* is viewed as maximal, or an ideal that one should strive to meet. From this perspective, the focus is on achieving positives. [5] In sum, prevention and promotion focus reflect different ways of directing attention and viewing goals, which in turn leads to different emotions and behaviors in the exchange.

When a goal is met under prevention focus, people experience quiescence-related emotions, such as calm or relaxation.[6] However, when the same goal is missed under prevention focus, people experience agitation-related emotions, such as tension or uneasiness. As a result, under prevention focus, the motivation to avoid agitation emotions is stronger than the motivation to experience quiescence emotions, which leads to vigilant behavior (e.g., carefully checking off a list of safeguards or monitoring a partner's behavior) as a means to avoid missing the goal.

In contrast, when the same goal is met under promotion focus, people experience cheerfulness-related emotions, such as happiness or satisfaction.[7] Yet, people experience dejection-related emotions, such as disappointment or discouragement, when the same goal is missed. In this case, the motivation to pursue cheerfulness emotions is stronger than that to avoid dejection, which leads to eager behavior (eg, cooperation to work together to meet the goal, flexibility to adapt to unexpected circumstances, or creativity to figure out a new approach) in an attempt to accomplish the ideal goal. Although people may have a chronic focus or baseline proclivity toward one focus or the other, whether people hold a prevention or promotion focus at any given moment often depends on cues in their environment.[8] Thus, dispositional RFT, as well as contextually-induced RFT, may have a significant impact on emotions, cognitions, and behaviors throughout the contracting process.

2.2 Stages in the contracting process

The contracting process generally consists of several stages: negotiations; design[9]; review; and performance

[1] Oliver E Williamson, *Economic Institutions of Capitalism* (NY Press 1985).
[2] Eg, Libby Weber L, Kyle J Mayer and Jeffrey Macher, 'An Analysis of Extendibility and Early Termination Provisions: The Importance of Framing Duration Safeguards' (2011) 54 Academy of Management Journal 182; Libby Weber and Christopher Bauman, 'The Cognitive and Behavioral Impact of Promotion and Prevention Contracts on Trust in Repeated Exchanges' (2019) 62 Academy of Management Journal 361.
[3] E Tory Higgins, 'Beyond Pleasure and Pain' (1997) 52 American Psychologist 1280;
E Tory Higgins 'Promotion and Prevention: Regulatory Focus as a Motivational Principle' (1998) 30 Advances in Experimental Social Psychology 1.
[4] C Miguel Brendl and E Tory Higgins, 'Principles of Judging Valence: What Makes Events Positive or Negative?' (1996) 28 Advances in Experimental Social Psychology 95.
[5] E Tory Higgins, 'Beyond Pleasure and Pain' (1997) 52 American Psychologist 1280;
E Tory Higgins 'Promotion and Prevention: Regulatory Focus as a Motivational Principle' (1998) 30 Advances in Experimental Social Psychology 1; C Miguel Brendl and E Tory Higgins, 'Principles of Judging Valence: What Makes Events Positive or Negative?' (1996) 28 Advances in Experimental Social Psychology 95.
[6] Christopher JR Roney, E Tory Higgins and James Shah, 'Goals and Framing: How Outcome Focus Influences Motivation and Emotion' (1995) 21 Personality and Social Psychology Bulletin 1151; E Tory Higgins, James Y Shah and Ronald S Friedman 'Emotional Responses to Goal Attainment: Strength of Regulatory Focus as Moderator' (1997) 72 Journal of Personality and Social Psychology 515.
[7] ibid.
[8] E Tory Higgins and others, 'Achievement Orientation from Subjective Histories of Success: Promotion Pride versus Prevention Pride' (2001) 31 European Journal of Social Psychology 3.
[9] Includes contract drafting. Please see Thomas D Barton and others, 'Reframing Contract Design: Integrating Business, Legal Design, and Technology Perspectives' in Marcelo Corrales, Helena Haapio and Mark Fenwick (eds), *Research Handbook on Contract Design* (Edward Elgar, forthcoming): "Stated differently, effective Contract Design is about business needs and user needs, and tackling both needs together. It begins by planning and structuring an exchange that is highly functional for its business purposes; then ensures that the people using that structure can readily understand and act upon the contents within that structure, building personal

and management. There is some variation in contracting processes between industries, but generally all stages are present in some form. First, in contract negotiation, the parties mutually determine the terms of the deal. This stage involves active discussion about contract terms between parties. Second, the parties must draft the contract, codifying the terms of the deal, as well as adding safeguards they have agreed upon. In this stage, one party typically writes the first draft of the contract based on the negotiations. Then, both parties participate in contract review, during which they continue to modify the document (proposing, and accepting or rejecting changes) until a final version is agreed upon. Finally, during the contract performance and management stage, the parties perform their contractual duties and actively extract value from contracts by monitoring the contracts that their company has with their partners. This step may also include enforcement or haggling between the partners when unexpected disturbances arise in the exchange. Prevention and promotion foci can potentially impact all of these stages of contracting.

2.3 Regulatory focus and negotiations

The first step in developing a contract is negotiating the terms of the exchange. Negotiations inherently involve a tension between the potential benefits people can achieve through cooperation and the potential risk of having one's counterpart take advantage of them.[10] Given that regulatory focus involves the extent to which someone tends to frame situations in terms of potential benefits or risks, it is not surprising that whether negotiators have a prevention or promotion focus influences both how people behave in negotiations and their ability to achieve the outcomes they desire.

In general, people with a promotion focus achieve better outcomes in negotiations than those with a prevention focus.[11] Negotiators with a promotion focus are more likely to initiate negotiations rather than accept a first offer from the other party.[12] Therefore, in a very basic sense, a promotion focus leads to better outcomes by simply prompting people to ask for a better deal. Moreover, during the negotiation process, individuals with a promotion focus tend to have an advantage over those with a prevention focus because they pay attention to their aspiration (i.e., an optimistic vision of what outcome they may be able to attain in the negotiation) and adjust their behavior during the negotiation process to achieve what appears to be the best attainable outcomes, regardless of their a priori goals.[13] In contrast, negotiators with a prevention focus pay more attention to their reservation point (i.e., the minimum they would be willing to accept in the negotiation) and are often quick to make concessions as soon as they achieve their a priori goals. In sum, regulatory focus influences people's motivation and attention during negotiation, which in turn affects the size of their offers, the size and rate of their concessions, and when they decide to end the negotiation and settle on a deal. These consequences of regulatory focus on negotiation behavior are especially influential in relatively simple negotiations, such as those that only include a single issue, like sales price.

Negotiators with a promotion focus also tend to outperform negotiators with a prevention focus in complex, multi-issue negotiations. In these situations, negotiators' outcomes depend not just on their ability to claim value, but also on their ability to create value. There are several ways to create value in negotiations, but one of the most common ways is to find tradeoffs among issues that are valued differently by the two parties.[14] Negotiators can maximize joint gains by crafting agreements in which each party makes large concessions on issues that are a lower priority for them in exchange for large gains on issues that are a higher priority for them. This way, both parties can "win" on what is most important to them, which yields the highest perceived value for both sides (i.e., the Pareto-efficient solution). Negotiators with a promotion focus have a higher tolerance for risk, exhibit more trust, and are more willing to share information, all of which help them realize tradeoffs and create value.[15]

In addition to these broad trends in how individuals' regulatory focus influences negotiation, there are many more nuanced effects as well. The effects of regulatory focus on negotiations are sometimes conditional upon other factors, including perceived competitiveness of the other party,[16]

relationships and trust along the way; and finally, inserts a variety of mechanisms for effective, flexible implementation of the contract terms."

[10] Eg, J Keith Murnighan and others, 'The Information Dilemma in Negotiations: Effects of Experience, Incentives, and Integrative Potential' (1999) 10 International Journal of Conflict Management 313.

[11] Eg, Adam Galinsky and others, 'Regulatory Focus at the Bargaining Table: Promoting Distributive and Integrative success' (2005) 31 Personality and Social Psychology Bulletin 1087; Shaul Shalvi and others, 'Pay to Walk Away: Prevention Buyers Prefer to Avoid Negotiation' (2013) 38 Journal of Economic Psychology.

[12] Shaul Shalvi and others, 'Pay to Walk Away: Prevention Buyers Prefer to Avoid Negotiation' (2013) 38 Journal of Economic Psychology 40.

[13] Adam Galinsky and others, 'Regulatory Focus at the Bargaining Table: Promoting Distributive and Integrative Success' (2005) 31 Personality and Social Psychology Bulletin 1087; Roman Trötschel and others, 'Promoting Prevention Success at the Bargaining Table: Regulatory Focus in Distributive Negotiations' (2013) 38 Journal of Economic Psychology 26.

[14] Roger Fisher and William L Ury, *Getting to Yes* (Penguin Group 1981).

[15] Eg, Adam Galinsky and others, 'Regulatory Focus at the Bargaining Table: Promoting Distributive and Integrative success' (2005) 31 Personality and Social Psychology Bulletin 1087; Femke S Ten Velden, Bianca Beersma and Carsten KW De Dreu, 'When Competition Breeds Equality: Effects of Appetitive versus Aversive Competition in Negotiation' (2011) 47 Journal of Experimental Social Psychology 1127; see also Abigail A Scholer and others, 'When Risk Seeking Becomes a Motivational Necessity' (2010) 99 Journal of Personality and Social Psychology 215.

[16] Femke S Ten Velden, Bianca Beersma and Carsten KW De Dreu, 'When Competition Breeds Equality: Effects of Appetitive versus Aversive Competition in Negotiation' (2011) 47 Journal of Experimental Social Psychology 1127.

accountability and oversight pressures negotiators experience,[17] and the relative match or mismatch of a person's regulatory focus with salient characteristics of the situation (eg, whether they are the buyer or seller in the transaction).[18] Moreover, promotion and prevention foci appear to activate different moral schema and influence different tendencies toward deception.[19] Negotiators with a promotion focus are more prone to deceive others by omitting information the other party would be interested in knowing, whereas negotiators with a prevention focus are more prone to deceive others by making false statements. In sum, ample evidence indicates that regulatory focus is intricately associated with several important phenomena that are central to negotiations.

Taken together, the negotiations literature clearly indicates that regulatory focus has important and wide-reaching effects on negotiations, the first stage of the contracting process. Thus, it is important for negotiators to understand their chronic regulatory focus, as it is their default approach to the exchange. However, because regulatory focus can also be contextually induced, there is an opportunity for organizations to actively induce a specific regulatory focus to better align a negotiator's view of the transaction with its characteristics.

2.4 Regulatory focus theory and contract frames

In addition to negotiator regulatory focus, the way that the contract is designed also has the potential to impact the exchange and relationships. Specifically, contract frames created during the design and review processes can emphasize the potential for losses (activating prevention focus) or the potential for gains (inducing promotion focus). Thus, contract frames can influence the partners' emotions, cognitions, behaviors, and relationship in the exchange. However, this influence has not traditionally been considered in the contracting literature. Instead, studies generally have taken either an economic or a sociological perspective in examining how contracts impact exchanges and on-going partner relationships.

Work based on transaction cost economics (TCE) suggests that contracts primarily provide safeguards to protect against opportunism ("self-interest seeking with guile")[20] in exchanges. Although this theory acknowledges the influence of humankind's limitations on information processing by stipulating that all contracts are unavoidably incomplete, the theory does not consider other psychological impacts on the exchange which could potentially undermine performance and the development of the exchange relationship. Thus, from the perspective of TCE, contracts and their safeguards have a positive impact on exchanges because they allow them to occur, even when transaction characteristics, such as high asset specificity (when one party makes a large irreversible investment in assets that are only valuable in this particular exchange with this specific exchange partner), increase the potential for holdup (when the other partner decides not to honor the terms of the deal following that irreversible investment). Additionally, TCE views contracts as having a positive impact on the exchange relationship in that they are irreversible, specific investments that also encourage long-term relationships. Contracts not only allow exchanges to occur in the first place, but also allow them to continue on a long-term basis.

In contrast, the sociology-based relational view of the firm suggests that contracts have a negative impact on exchanges and exchange relationships.[21] For example, this view espouses that formal contracts actually cause, rather than protect against, negative behaviors in the exchange TCE.[22] From this perspective, contracts weaken, rather than strengthen, on-going partner relationships. As a result, this literature advocates for the use of informal governance rather than contracts.[23]

The one common implicit assumption in these two views is that contracts play a prevention role in the exchange. That is, contracts are designed to prevent negative events from occurring[24] and are thus assumed to be framed in a prevention manner. Furthermore, the prevalence of prevention-framed contracts in practice (arising from legal training and performance metrics focused on avoiding negative outcomes), only serves to support this assumption. This prevention role is what allows exchanges to occur in the face of hazards, allowing the on-going relationship to continue. In contrast, in the relational view of governance, the prevention role of contracts does not allow trust to develop between the parties, harming the exchange and the on-going relationship. However, neither of these perspectives considered that contracts could be framed in different ways that would have different effects on

[17] Ann C Peng, Jennifer Dunn and Donald Conlon, 'When Vigilance Prevails: The Effect of Regulatory Focus and Accountability on Integrative Negotiation Outcomes' (2015) 126 Organizational Behavior and Human Decision Processes 77.

[18] Kirsten C Appelt and E Tory Higgins, 'My Way: How Strategic Preferences Vary by Negotiator Role and Regulatory Focus' (2010) 46 Journal of Experimental Social Psychology 1138; Kirsten C Appelt and others, 'Regulatory Fit in Negotiation: Effects of ''Prevention-buyer'' and ''Promotion-seller'' Fit' (2009) 27 Social Cognition 365.

[19] Mara Olekalns, Christopher J Horan and Philip L Smith, 'Maybe It's Right, Maybe It's Wrong: Structural and Social Determinants of Deception in Negotiation' (2014) 122 Journal of Business Ethics 89.

[20] Oliver E Williamson, 'Opportunism and its Critics' (1993) 14 Managerial and Decision Economics 97.

[21] Jeffrey H Dyer and Harbir Singh, 'The Relational View: Cooperative Strategy Sources of Interorganizational Competitive Advantage' (1998) 23 Academy of Management Review 660; Ghoshal S and Moran P, 'Bad for Practice: A Critique of the Transaction Cost Theory' (1996) 21 Academy of Management Review 13.

[22] Sumantra Ghoshal and Peter Moran, 'Bad for Practice: A Critique of the Transaction Cost Theory' (1996) 21 Academy of Management Review 13.

[23] Jeffrey H Dyer and Harbir Singh, 'The Relational View: Cooperative Strategy Sources of Interorganizational Competitive Advantage' (1998) 23 Academy of Management Review 660.

[24] Libby Weber and Kyle J Mayer, 'Designing Effective Contracts: Exploring the Influence of Framing and Expectations' (2011) 36 Academy of Management Review 53.

how people interpret and respond to them. Therefore, the introduction of contract frames into the literature suggests that contracts can play either a prevention role or a promotion role in the exchange, depending on the way that they are designed. This novel psychological approach opened the door for new theorizing regarding how to use contract frames to actively manage exchanges and relationships.

When a contract is prevention framed, the contract design focuses the exchange partners on preventing negative events in the exchange, prompts vigilant behavior, and reifies the common assumption that the other party is potentially opportunistic. This view of the other party negatively influences downstream interpretations of any ambiguous behavior during the relationship, which leads to even more suspicion and more negative emotions in the exchange. These negative attributions and emotions impede the development of trust between the parties, leading to an arms-length exchange relationship. As a result, the theory predicts that prevention contracts act as substitutes to trust, because trust does not develop between the exchange partners under this contract frame.[25]

In contrast, when the contract is promotion framed, the contract focuses exchange partners on achieving positive events in the exchange. However, the impact of this frame on the exchange and relationship will depend upon the transaction characteristics. When the transaction requires flexible, creative, or cooperative behavior, a promotion contract is predicted to build trust in the relationship because the focus on positive events will lead to eager behavior that supports creativity, flexibility, and cooperation in the exchange. Moreover, ambiguous behavior in the exchange is interpreted in a positive light, leading to more positive emotions in the exchange. These positive emotions are predicted to lead to the development of trust between the exchange partners, which would indicate that promotion contracts act as complements to trust in tasks requiring eager behavior. However, when the transaction requires vigilant behavior, the theory suggests that a promotion contract is unlikely to lead to vigilant behavior, resulting in unmet exchange goals. Even under a promotion contract, unmet exchange goals lead to dejection-related emotions. Therefore, under these circumstances, trust is less likely to develop between the parties under promotion contracts when exchange goals are not met. If, however, a prior positive relationship already exists between the parties, a promotion contract may still be used to preserve this on-going relationship, even if the focal exchange requires vigilant behavior. Despite a negative outcome, the further cooperation and flexibility of the two parties in trying to meet the exchange needs is likely to overcome the negative impact of the dejection emotions, continuing to build trust in the relationship.

This idea of matching prevention and promotion framing to particular transaction characteristics, as well as whether the focus was on the focal exchange or maintaining a long-term relationship with the partner, was further developed and tested empirically.[26] In this paper, a sample of IT services contracts was used to test when prevention versus promotion-framed duration clauses would be used in contracts. Specifically, the study examined the use of early termination and extendibility clauses as examples of prevention and promotion language, respectively. The paper predicted that extendibility clauses would be used when there were higher levels of exchange hazards and when the success of the focal transaction was important to the parties. For example, if the buyers were more geographically distant and if it were difficult to measure quality in the exchange, there would be a greater need for trust between the parties, as there would be a higher potential for opportunistic behavior in the exchange. Additionally, when the long-term relationship was the primary concern, extendibility clauses were also predicted to be used. For example, if the parties had prior relationships in other lines of business, and if the project involved reusable technology, the continuation of the overall relationship would dominate the success of the immediate exchange, so parties should be likely to use a promotion-framed extendibility clause. Strong support was found for these predictions, suggesting that contracting managers instinctively understand that prevention and promotion framing can be used to facilitate particular outcomes in the exchange.

Another paper expanded on the idea of contract frames and trust to incorporate learning.[27] This paper posited that prevention or promotion contract frames differently impact the development of competence and integrity-based trust, because they influence what is learned from the exchange. That is, parties learn different information from the exchange depending on whether it is governed by a prevention or a promotion contract. The difference in learning should occur because different attributions are made under prevention and promotion frames.

The idea of attributional differences was explored empirically in a paper that examined the effects of contract frames on trust development, as well as the underlying cognitive or emotional mechanisms responsible for the effects.[28] In this paper, an experiment based on the behavioral economics Trust Game[29] was adapted to include a joint venture between two parties. In the game, the participant was told to take on the role of a manager of a company that had

[25] ibid.
[26] Libby Weber, Kyle J Mayer, Jeffrey Macher,'An Analysis of Extendibility and Early Termination Provisions: The Importance of Framing Duration Safeguards' (2011) 54 Academy of Management Journal 182.
[27] Libby Weber, 'A Socio-cognitive View of Repeated Interfirm Exchanges: How the Co-evolution of Trust and Learning Impacts Subsequent Contracts' (2017) 28 Organization Science 744.
[28] Libby Weber and Christopher Bauman, 'The Cognitive and Behavioral Impact of Promotion and Prevention Contracts on Trust in Repeated Exchanges' (2019) 62 Academy of Management Journal 361.
[29] Partha Dasgupta, 'Trust as Commodity' in Diego Gambetta (ed), *Trust: Making and Breaking Cooperative Relations* (Basil Blackwell 1988).

the opportunity to invest in a joint venture with another firm. The manager then decided whether to invest eight units of resources in the joint venture or internally (or a combination of both). The resources invested in the joint venture would multiply by a factor of 5, and those invested internally would multiply by a factor of 1.1. However, the number of resource units that the participant received back from the joint venture was determined by the other party. Contracts could be introduced by the other party (controlled by the researchers) to reduce the uncertainty regarding the amount that the participant would receive back from the joint venture. The experimental manipulation consisted of either introducing no contract, a prevention contract, or a promotion contract to govern the transaction. Using the contracts cost each party one unit of resources. So, at some point in the exchange, the other party could propose no contract, even if the parties had previously used one to govern an early round of the exchange. On the round in which the contract was removed, the investment in the joint venture represented the behavioral trust that the participant had in the other party, as there was no written contract to govern the amount that the participant would receive from the joint venture. In this paper, the earlier propositions that prevention contracts acted as substitutes to trust development and promotion contracts acted as complements to trust development were tested, as this task required cooperation. Both of these hypotheses were supported, as no trust developed in the prevention condition, while trust developed in the promotion condition. However, the trust in the promotion condition proved to be fragile, as a violation of the prior contract norms in the promotion condition, led to a significant drop in trust in the subsequent round. In addition, the underlying mechanism for trust development was examined. Prior work proposed that cheerfulness emotions experienced under promotion contracts are more likely to support trust development, while quiescent emotions experienced under prevention contracts are less likely to support trust development. Additionally, this paper hypothesizes that attributions of benevolence will be made to the other party under promotion contracts but not under prevention contracts. That is, under a promotion contract, the participant will credit the other party for positive events. However, under a prevention contract, the contract will be credited for the other party's positive behavior. Support was found for the attribution mechanism, but not for the emotional mechanism. However, this is not to say that emotions do not impact trust development, just that in the context of the joint venture investment scenario, attributions were driving the development of trust in the exchange.

Contracting managers and lawyers have begun to recognize the need to expand the promotion role in contracting, as opposed to using the largely default prevention approach. But, using negotiation and contract theory to predict the impact of prevention and promotion foci and frames on exchanges and on-going exchange relationships was developed under the classic contracting scenario described above. The contracting field, however, is experiencing the beginning of a potentially significant digital transformation, with the introduction of AI-enabled tools and smart contracts, which is likely to dramatically change this classic contracting scenario. As a result, it is also important to examine how these tools and their changes to the contracting process impact negotiator prevention and promotion foci, as well as contract frames.

3 Negotiator focus and contract frames in the digital age

With the advent of new technologies and increased access to data, many firms now recognize that the contracting process is ripe for innovation. There are currently a variety of tools that automate the contracting process by leveraging big data and artificial intelligence (AI) capabilities to help firms negotiate, design, review, and manage their contracts more efficiently and effectively.[30] Additionally, the use and proliferation of blockchain technology has enabled self-executing contracts, or smart contracts. Smart contracts have a significant impact on contract management, as they can allow for automated contract performance and, in some cases, enforcement. As AI and blockchain-enabled technologies proliferate in contracting practice, it is critical for managers to consider their implications on negotiator focus and contract frames, and in turn on overall exchange performance and on-going partner relationships.

3.1 AI contract negotiation tools and negotiator frames

Contract negotiation automation tools use AI to streamline negotiations for routine contracts such as supplier-buyer contracts. These contract negotiation tools function similarly to a chatbot that is trained to negotiate with an exchange partner within very specific, pre-specified parameters. Contract negotiation automation tools are still relatively new to the market, and their capabilities are limited to simple negotiations for a limited scope of contracts. For example, companies with a large volume of routine contracts use this technology to automate price negotiations by outlining a set of parameters upfront.

[30] Contract performance, or the process by which each party fulfills its contractual obligations, has the potential to cover a diverse range of activities, depending on the contract subject and parameters. Therefore, while the success or failure of contract performance is a key data point for training algorithms, discussing how AI contracting tools may help a firm perform under a contract, beyond a general management function (i.e., providing information about how a previous similar contract was performed successfully or unsuccessfully), is outside the scope of this chapter. Data on previous contracts that includes details about contract performance can be used as part of a firm's automated contract management system.

Automating this negotiation saves costs by avoiding a protracted back and forth with vendors.

However, despite this limited use, automation tools are likely to impact the negotiation frame for these contracts for at least two reasons. First, the AI negotiation software seeks to limit negative outcomes in the exchange and, in doing so, focuses on identifying potential risks in the exchange, thus increasing the likelihood of inducing a prevention focus in the human negotiator. This prevention focus will affect how they perceive their partner company, how they evaluate offers they receive, and ultimately the contract design they propose and accept. Second, the prevention frame introduced by AI negotiation software may be at odds with the nature of the relationship already developed with a long-term partner. For example, if a buyer is negotiating with a supplier during the course of a successful long-term exchange relationship, they may both have already established a trust-based relationship. The negotiation automation tool, however, may be more inclined to negotiate along more risk-averse parameters, inducing a prevention focus in the negotiations. This focus on preventing negative outcomes in the negotiation is likely counter to the expected positive tone in prior negotiations, which may undermine the trust developed from the prior exchange relationship. As a result, it is critical for firms to carefully examine the parameters that their AI negotiation tools focus on, and discern whether exclusive attention to those issues implicitly induces a prevention focus in partner contract negotiators. If so, it is important for contract managers to either override these defaults with additional issues that allow them to actively manage which regulatory focus is induced, matching it to the exchange characteristics, or to override selected negotiated terms with long-term partners to redirect the focus away from risk mitigation. By actively managing these aspects of the automated negotiation, contract managers can prevent significant negative influences on exchange outcomes and on-going relationships with partners due to a systematic prevention bias in AI negotiation tools.

3.2 AI contract drafting tools and contract frames

AI contract drafting software generates an initial draft of the contract based on the negotiated terms. To do so, it suggests clauses to include in the draft and proposes different content for these clauses. The contract manager or lawyer then accepts, rejects, or edits the clauses based on the negotiation and the firm's position. To develop this initial contract draft, the tool must be trained by analyzing prior contracts to learn which clauses to suggest for a particular contract type. However, the limited availability of large repositories of contracts for training the AI has led many firms developing these automation tools to train their AI on publicly available contracts, such as those from the United States Securities and Exchange Commission (SEC). These contracts, while encompassing transactions between a variety of companies, are all drafted by lawyers whose goal is to mitigate risk and account for contingencies in order to protect their clients. As a result, AI drafting tools are primarily trained on prevention framed contracts, increasing the likelihood that contracts drafted using AI software will also be prevention framed.

Like AI contract negotiating tools, drafting tools focus on risk mitigation, which leads to a prevention frame bias in two ways. First, the tool will suggest clauses based on mitigating risk, whether it is an issue in this exchange or with this partner, because it is designed to save attorneys and contracting professionals time in drafting clauses that predict and anticipate contingencies, rather than replace the need for human involvement in contract drafting. Again, most of the safeguards or contingency clauses are prevention-framed, biasing the contract in that direction. Second, because more prevention clauses are likely to be included in any one contract, a snowball effect will occur as more users at a company draft contracts using automation tools. That is, because of how the AI algorithm works, the more frequently a suggested prevention framed clause is accepted in a draft contract, the more likely this clause will be suggested in future contracts. Thus, a firm's contracts are likely to become even more prevention framed over time. Furthermore, in focusing on risk mitigation, an AI drafting tool is likely to suggest generic boilerplate clauses that are designed to mitigate negative events that are unlikely to even occur in the focal exchange. As a result, the contract will tend to be overly prevention-framed, while potentially not providing relevant protection against disturbances likely in the focal exchange. Together, this prevention bias is likely to harm an exchange that requires eager behavior, as well as the development of trust between the parties.

Additionally, the exchange could be impacted if there is a disconnect between the partner's expectations for the exchange and the contract frame that results from using the contract drafting automation software. As explained, the likelihood that a prevention framed contract will result from using contract drafting products is high, unless there is active intervention from the users during training and use. If the partner's expectation for the exchange is that a promotion contract will be offered for them to review (which is likely after a positive negotiation experience), but in fact a prevention contract is provided, the partner could be put off by the inclusion of additional negative terms and assume that this prevention-framed contract suggests the focal firm's lack of trust in the exchange or partner firm.

Finally, contract drafting AI software can be used to generate contract templates to increase consistency across firm contracts, which is difficult to achieve in large firms that draft a large volume of routine contracts. Contract templates are frequently used, as firms rarely start the contract drafting process from a blank sheet of paper. For example, templates in a practice group at a law firm are often passed down from partner to associate in a Word document. These templates are largely based on a partner's preferences with little regard to firm standards or what a different group—or even different partners in the same group—are doing. Thus, there is room for discretion in framing contract templates as prevention or promotion in the traditional process. However, as previously discussed, contract drafting automation products largely train on prevention-framed contracts. If this tool is used to draft contract templates, they are more likely to be prevention-framed, rather than promotion-framed. By removing this discretion, the use of this contract automation for generating templates further reduces the likelihood that negotiated contracts will play a promotion role in the exchange.

In conclusion, there are a number of ways in which AI drafting software is likely to further bias contracts towards a prevention frame. Again, this focus on avoiding negative occurrences in the exchange is likely to prevent eager exchange behavior and trust development in the exchange with new partners. Furthermore, it is likely to damage prior trust-based relationships, as the partner's expectations of a promotion-framed contract for review are likely to be violated. Finally, AI drafting tools can indoctrinate a prevention frame into all of a firm's contracts by removing contract managers or lawyer's discretion to frame contract templates, and instead generating prevention-framed ones. While these tools offer the potential for consistency in contract templates, it is crucial for managers to be aware of the systematic bias of their contract frames that can be introduced or enhanced as a result of using AI drafting software, and actively intervene to limit its impact. For example, lawyers or contract managers can train their AI drafting tools on promotion-framed, as well as prevention-framed, contracts, increasing the likelihood of the tools also suggesting promotion-framed clauses. Promotion framed contracts often result when the parties want to facilitate the continuation of the exchange, so contracts used in between long-term exchange partners, for example, would help to train the AI on promotion framed contracts. Promotion framed contracts frame goals as opportunities and describe safeguards in terms of rewards; contract design in promotion framed contracts focuses exchange partners on achieving positive events in the exchange. Therefore, in order to train AI drafting tools on promotion contracts, managers must include examples of successful contracts between exchange partners that, for example, consistently describe safeguards as rewards rather than penalties (as in a prevention contract), and potentially can train the AI to pick up on visual design patterns or tone when distinguishing between prevention or promotion framed contracts. Furthermore, contract managers or lawyers can intentionally re-frame the suggested prevention-framed clauses to be promotion-framed. In this case, they will actively introduce and edit promotion-framed clauses into the contract. However, this increase in discretion in drafting comes at the cost of decreasing the efficiency of automation provided by the AI drafting tool, at least until AI incorporates the promotion-framed clauses.

3.3 AI contract review tools and contract frames

Like contract drafting automation products, contract review automation tools are currently used to improve the efficiency of reviewing routine third party contracts.[31] This software populates and suggests clauses from the company's clause library, created from compiling prior contracts written by in-house or external legal counsel. Use of contract review automation products thus lowers the cost of adding clauses and tailoring a contract received from an exchange partner, maintaining consistency across units at the firm, and mitigating risk across exchange partners.

Again, contract review automation products are focused on ensuring that the contracts serve the company's goals in terms of risk reduction. To do so, this tool scans the contract, looking for clauses whose wording could introduce unnecessary risk or the absence of clauses that could mitigate it. The tool then suggests new wording, a replacement clause, or a clause to add to the contract that addresses these issues. Again, these suggested clauses or edits are more likely to be prevention-framed, as a result of the largely prevention-framed clause library. More importantly, however, because contract managers and lawyers are trained to mitigate risk, and accepting these prevention-framed additions or changes requires one click of a mouse, they are more likely to accept them, leading to even more prevention-framed contracts than without the suggestions of the AI reviewing software. Furthermore, like the AI drafting tool, the AI review tool may even propose extraneous prevention clauses, unrelated to the exchange, that are more likely to be included in the contract due to these same factors.

As a result, AI review software has the potential to further the already systematic prevention bias. To combat these effects, managers must be aware that the AI review software will currently bias contracts towards prevention. They can either address this bias by training the AI review tool on promotion-framed contracts or, again, actively reframing and editing the suggested clauses to inject a promotion-frame into the contracts.[32] Moreover, they must also step back and evaluate the psychological impact that adding or changing a particular clause to be more prevention-framed can have on the exchange and the exchange relationship, instead of evaluating their inclusion solely on the basis of their impact on risk reduction.

[31] Beverly Rich, 'How AI is Changing Contracts' Harvard Business Review (Boston, 18 February 2018) <https://hbr.org/2018/02/how-ai-is-changing-contracts> accessed 15 December 2019.

[32] Currently, not all contract automation tools are programmed to automatically learn from the contracts that are drafted or reviewed with the tool. Therefore, if lawyers or contract managers are actively editing suggested clauses to be promotion focused, they would have to then ensure that these contracts, when finalized, are being used to train the AI.

3.4 AI contract management tools and contract frames

Contract management tools often use AI to extract key data points (i.e., renewal dates, party names, applicable law, etc.) from a firm's contracts to help firms monitor and perform their contracts. One main focus in contract management tools is to help firms recognize and categorize risk exposure to provide a baseline for potential strategic changes in the future. As such, this software collects data on when partner firms fail to meet deadlines or miss quality specifications, inducing the lawyer or manager's prevention focus towards the partner. For example, AI contract management software products can provide metrics on which exchange partners consistently fail to pay on time. Concrete data about a long-term supplier's chronic failure to pay on time and the resulting loss caused by the supplier's truancy may lead the buyer firm to view the supplier as potentially opportunistic and, in turn, lead to the buyer drafting a prevention focused contract. Contract management tools can also provide insights to the firm about a previous contract for the same goods, for example, and indicate whether or not there were issues with performance. As a result, the ability of AI contract management tools to collect and analyse data that is focused on negative events in the exchange, and their negative consequences for the focal firm, increases the likelihood of a bias towards prevention contracts. Again, lawyers and managers have to actively manage this AI tool, collecting data on both positive and negative events across exchanges, and be aware of their own regulatory focus when interpreting this data.

3.5 Smart contracts and contract frames

Perhaps the most influential new technology affecting contract management is the development of smart contracts. Smart contracts are self-executing contracts in a blockchain that are primarily used for simple exchanges. These contracts effectively govern spot market exchanges that involve transacting for a specific, limited purpose such that the transaction can be memorialized in lines of code (i.e., if A, then B; if no A, then C). Thus, managing contract execution becomes automated.

Because smart contracts tend to be best suited for simple transactions that can be easily coded, it is possible that they may be used to govern sections or clauses of complex contracts. For example, if a contract includes a sale of property as a condition precedent to a larger real estate deal, the parties could use a smart contract, instead of a third-party escrow company, to govern the sale. The smart contract could verify and record the parties' identities and the transaction, and properly allocate the title to the buyer and payment to the seller. Smart contracts could save the parties time in monitoring, performance, and enforcement costs. This piecemeal approach to contracts may help firms reduce costs in enforcement, as exchange partners do not have to consider adding clauses that address monitoring or enforcement.

From a contract frame perspective, smart contracts can be used to confer financial penalties or bonuses on one partner in the exchange upon performance of a specific, measurable event. Designing contracts to automatically execute bonuses rather than penalties suggests a smart contract could be promotion-framed. However, smart contracts could just as easily be prevention framed, if penalties are automatically administered when a condition is not met. Given that there is still uncertainty about the blockchain technology that underlies smart contracts, the use cases of smart contracts are limited, so it is difficult to accurately predict how smart contract frames will evolve.

However, while the costs of drafting (coding) a prevention or promotion framed smart contract are equal, there are other factors that may help us predict likely trends. First, smart contracts – which are lines of code -- are likely to be designed by lawyers to conform to the law (and, often, the most frequently used template), suggesting a prevention-framed contract. However, the smart contracts are then actually written by coders, rather than lawyers. These contracts rely on simple "if then" statements as they are merely lines of code. Because coders are not trained to focus on preventing negative events from occurring in exchanges, there is a greater likelihood promotion contracts could be introduced. However, because smart contracts execute automatically, there is a lack of flexibility in smart contracts. This rigidity is counter to the spirit of a promotion contract, as flexibility is fostered and rewarded in the pursuit of an ideal goal. Thus, the very structure of a smart contract may be counter to the expectations of a promotion-framed contract. Finally, even promotion-framed smart contracts could potentially impair the development of trust in the exchange. Because the contract is automatically enforced, attributions for positive behavior to the partner are less likely under promotion-framed smart contracts than under traditional promotion-framed contracts. Thus, the contract, rather than the partner, will always be seen as the reason that the positive event occurred, reducing the basis for trust in the exchange. So, the structure of smart contracts may reduce the positive impact of its promotion-frame on the exchange and the on-going partner relationship. As a result, it is unlikely that smart contracts will have a strong positive impact on the exchange and the relationship from a contract frame perspective.

4 Future opportunities and practical implications

Given the training data available, contracts biased towards prevention, rather than promotion, are more likely to result from use of contract automation products for negotiation, drafting, review, and management. Automating prevention clauses seems, at least for now, to be more common and more likely for the foreseeable future. Automating promotion clauses is more difficult because they are more likely to be partner-specific (instead of boilerplate) and require active rather than passive users to ensure that the software goes beyond a risk management function.

However, as the technical capabilities of AI improve and (privately held) contract data becomes more widely available, automating promotion clauses will be more feasible. Additionally, the trend towards contract simplification and new contract design patterns contribute to overly-'lawyered' templates falling into disfavor. For example, if more privately held contracts are available for use in training contract automation products, it is more likely that promotion clauses will be included as an option for users because some privately held contracts are between firms with a longterm preexisting relationships. In these situations, where the firms have established trust based on successful prior exchanges, the exchange partners may use promotion framed contracts focused on achieving positive events or outcomes. However, as noted in empirical work on the topic, privately held contracts often do include safeguards[33], suggesting that even with the input of privately held contracts into a training data set, oversight and intervention into the contracts' parties (and their exchange history) and content may be necessary. At a minimum, it is likely that based on sheer volume alone, including privately held contracts into training databases for automated contracting products would increase the likelihood of adding the option to draft promotion or prevention contracts, though it is equally likely that proactive efforts would still have to be made to ensure that the AI is able to properly identify promotion framed contracts.

Furthermore, as contract automation tools lower the cost of formal contract preparation, agreements that were previously based on handshakes may now be more likely to be written and signed. These handshake agreements tend to occur between parties with an established relationship, and are more likely to be promotion framed rather than prevention framed based on the prior positive exchange between the parties. Thus, this formalization would further increase the range of clauses and contracts used for training AI contracting tools and may increase the likelihood of producing promotion-framed contracts.

Additionally, as AI technology improves, this software could combine the negotiation, drafting, and review phases of contracting. For example, some AI products can identify and account for speech intonations and patterns to tease out subtleties in meaning and latent topics. If these capabilities were used during negotiations and coupled with historical data on past transactions between the exchange partners, the software could generate a contract that accounts for the content, relationship, and history of the exchange. This more "embedded" approach to contracting would increase the likelihood that promotion and prevention-framed contracts would be matched to relationship needs in the exchange.

Moreover, if the goal of AI-enabled products more generally is to lower the cost of prediction[34], then, in the context of contracting, it may be more efficient for the exchange partners to use a product that combines contract negotiation, drafting, and review. In doing so, a combined automation product would bring the partners together for a "smarter" negotiation that leverages the AI's capabilities to better predict each party's best outcome, resulting in a contract that can be accepted or edited on the spot. Training the AI on a partner's exchange history will provide each partner with more insights about the other's anticipated expectations and actions. This additional data may lead to promotion clauses when past performance is positive (i.e., the partner performed the contract terms satisfactorily) and prevention clauses when past performance is negative.

Another element of contract automation lies in the contract's outcome. Because the "best" contract is a moving target that depends on audience, contract automation products currently try to optimize towards a maximum favorability result for a given user. However, the general goal for contracts is to effectively govern an exchange, promoting positives, facilitating performance, and avoiding breach. With this in mind, contract automation products could begin to incorporate (through training data) outcome measures that quantify the likelihood of breach or litigation (or both). The addition of this particular metric would seem to skew the tool towards favoring prevention framed clauses due to the emphasis on minimizing risk exposure by drafting clauses that impose penalties for nonperformance. However, this idea could be expanded to include a more robust outcome metric that also accounts for the exchange histories and subsequent changes between those partners and similar partners, in addition to litigation histories or breaches. As a result, it may ultimately yield more promotion framed contracts, as it becomes clear that these contracts result in fewer costs to each partner in the long run, whether through avoiding litigation or renegotiation (or both). Thus, as contract automation software improves, both in terms of the underlying AI and the user experience, contract frames need to continue to be an important consideration in terms of the software's training and output.

As contract automation software becomes more widely used in businesses and law firms, the interactions between these products and the people engaged in contract design become more salient for several reasons. First, the job function of managing and overseeing contract automation software will become more prominent as these tools become more developed and widespread. Additionally, in considering contract frames in AI tools, there will be a need within many

[33] See Anna Hurmerinta-Haanpää, 'The Functional Contracting Framework: Assessing the Impacts of Contract Functions, Framing, and Regulatory Focus' in Marcelo Corrales, Helena Haapio and Mark Fenwick (eds), *Research Handbook on Contract Design* (Edward Elgar, forthcoming).

[34] Ajay Agrawal, Joshua Gans and Avi Goldfarb, *Prediction Machines: the Simple Economics of Artificial Intelligence* (Harvard Business Press 2018).

firms for a relationship manager – someone beyond a contract manager and beyond a lawyer, to take an active role in attending to the firm's exchange relationships by actively managing negotiator and contract frames. The relationship manager will be able to, for example, analyse characteristics of the exchange and the prior relationships with a partner, and actively manage the AI tools to ensure the appropriate negotiation focus and contract frames. This job function will be difficult to fully automate and thus may offer a new, expanded path for lawyers and contract managers who are concerned about automation of their traditional job roles.

Thus, the increased proliferation of contract automation tools will force lawyers and contracting professionals to deeply understand the impact of negotiator focus and contract frames. To this extent, lawyers and contracting professionals will need training to learn to identify and shift the contract frame to match the focal transaction or portfolio of transactions; to identify and shift the AI to prevent a prevention bias in a firm's routine contracts; and to identify the goal and frame of the exchange relationship upfront, enabling, especially in the context of smart contracts, the coders to design contracts that accurately reflect the goal and frame of the exchange.

In summary, regulatory focus has important effects on contract design, and current AI contracting tools tend to focus on identifying risk, which enhances the bias towards creating prevention-framed contracts. Of course, the key benefits of using AI contracting tools are that they can catch or prevent mistakes that would otherwise hinder performance and promote consistency across a firm's contracts and negotiations. However, despite these benefits, there are costs – as documented in the contract framing literature – to adopting a prevention focus. It is also worth noting that though the association between AI contracting tools and prevention focus is not necessarily immutable, it is easy to see how it exacerbates the prevention contract trend, and why it may be difficult to change, at least in the short-term.

More broadly, lawyers and contracting professionals should reconsider the role that contracts play in an exchange relationship. If some routine prevention contracts can be fully automated and will only need a quick final review from a lawyer or contracting professional, this suggests that contract automation products can function more as a substitute to lawyers' or contracting professionals' work on routine contracts. Perhaps in this scenario, the key job role would be to specify the parameters along which the contract should be drafted or reviewed for a specific exchange relationship. Promotion contracts, however, will always depend on the nuances of the exchange relationship at the individual level, given the trust involved, and are thus likely to depend on the role that the individual lawyers or contracting professionals play in this relationship. As such, contract automation products are likely to play a more complementary role when drafting and reviewing promotion contracts. Thus, the importance of contract frames for successful use and integration of contract automation products has implications for contracts, firm strategy, and careers.

5 Conclusion

In the current chapter, we highlight psychological aspects of negotiator regulatory foci and contract frames that impact exchanges and exchange relationships in specific ways. This work suggests that contracts negotiated and written without a careful consideration of regulatory focus are unlikely to optimally govern their intended transactions, particularly as contracts are largely prevention-framed in practice. As a result, firms may be missing opportunities to strategically manage their contracting process to generate the best possible contract design, exchange and relationship outcomes.

However, this prior work was conducted in the traditional contracting paradigm, in which individuals negotiate, draft, review and manage contracts. With the advent of AI contracting tools and smart contracts (in addition to new contract design patterns), it becomes important to understand how this technology impacts negotiator foci and contract frames, as it is already difficult to institute promotion contract frames in the traditional paradigm.

As we discussed, contract automation tools currently enhance the traditional bias towards prevention. Thus, managers need to be aware of these effects, and actively work to overcome them when a promotion contract would be more appropriate for the exchange and relationship. However, the contract automation tools' tendency towards prevention has the potential to change as these tools become more widespread and as the underlying technology improves. As the AI technology improves and as more firms use these tools, it is likely that more promotion-framed clauses will be used in training the AI. This is because with better technology and more users, the AI is more likely to be trained on a broader range of contracts instead of just routine contracts and publicly available contracts, both of which tend to be prevention framed. In turn, this broadened exposure to different contracts will allow the tools to offer clauses that are both promotion and prevention framed. However, the addition of promotion framed clauses will require active management of AI contract tools by lawyers and contracting professionals who have deep knowledge about both contract frames and AI technology.

If the active management of contract frames in AI contracting tools does not occur, their utility may ultimately be limited. Without intervention, contract automation tools will skew even more towards solely creating prevention framed contracts, leading firms to experience negative effects when promotion contracts are more appropriate for the exchange and the relationship. Because contract automation has the potential to transform contract design for the better (eg, saving costs and increasing consistency), limiting the applicability of these tools to prevention contracts could have profound negative effects on innovation in contract design. Therefore it is critical that contract frames are considered when designing and using tools for contract automation in order to increase exchange performance, enhance partner relationships, and increase the potential for contracting innovation.

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