In Theory

The Meaning of Intuition for the Negotiation Process and Outcome

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Intuition is a useful tool for negotiators, as negotiations are often highly complex endeavors in which people make holistic judgments with incomplete information and no time for deliberation. Therefore, one might expect that intuition greatly influences negotiations and their outcomes and that negotiators would use intuition to their advantage. However, there is almost no systematic research into the meaning of intuition for negotiation. In this conceptual paper, drawing on five interviews of experienced negotiators, we apply general research on intuition to the specific case of negotiation and find that negotiators use intuition specifically for attribution and social interaction. We distinguish different intuition attitudes; identify preparation, time, and negotiation stages as relevant drivers for the use of intuition in negotiation; clarify the distinction between intuition and routine; and shine new light on the concept of domain-specific knowledge.

Keywords: negotiation, intuition, attribution, social interaction, domain-specific knowledge

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Introduction

There has been vast research into many aspects of intuition. These topics include intuition in the context of bounded rationality (Simon 1947); intuition and cognitive biases (Kahneman and Tversky 1973); intuition and dual process theory (Hodgkinson and Healey 2008); intuition and time constraints, changing conditions, and stress (Klein 2004); the neurobiological foundation of intuition (Mintzberg 1976; Springer and Deutsch 2001); the meaning and use of intuition for decision making (Isenberg 1984; Agor 1986; Khatri and Ng 2000; Klein 2004; Sadler-Smith 2004); and the acquisition of intuition (Shanteau 1992; Klein 1998). For a historical overview, see Akinci and Sadler-Smith (2012). Yet, there is no systematic research into the meaning of intuition for negotiation. Leading literature reviews on intuition do not even mention negotiation (e.g., Dane and Pratt 2007; Akinci and Sadler-Smith 2012), and research papers on negotiation do not mention intuition even when addressing highly relevant topics such as time pressure (e.g., Stuhlmacher, Gillespie, and Champagne 1998; De Dreu 2003). Consequently, we know almost nothing about how people use intuition in negotiation and how intuition influences the negotiation process and negotiation outcomes.

This situation recalls a quote by Albert Einstein: "The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift" (Klein 2004: 23). One reason for overlooking the role of intuition in negotiation might be the difficulties of observing intuition and investigating it through rigorous methods. In addition, some promoters of the concept have "treated intuition as an occult force of nature and linked it to phenomena such as extrasensory perception" (Klein 2004: 18), detracting from the value attributed to it by the scientific community. Many researchers understand intuition not as an ability, but as a "source of bias and error" (Klein 2015). For instance, intuition or the appeal to intuition has been identified as an essential source of overconfidence (Kahneman and Klein 2009). Consequently, many researchers have seen no value in researching intuition, and this is specifically true regarding the research of intuition in negotiation.

However, negotiation is particularly suited to, and likely to benefit from, intuition. Negotiation is typically complex; information is uncertain, fragmented, and partly strategically distorted; and responses are often required on the spot in the midst of ongoing talks. In such a setting, some people devise sophisticated solutions without having adequate time for deliberate planning, whereas others do not. Over the years, research has shown that intuition is substantial and relevant and that it can support decision making when used wisely. Even Howard

Raiffa, one of the most important advancers of decision-centered negotiation research, acknowledged the existence and potential of intuition: "The human brain can be a magnificent synthesizer of disparate pieces of nebulous information, and often formal techniques and procedures thwart and inhibit this mysterious mechanism from operating efficiently" (Raiffa 1968: 272).

In light of the role that intuition plays in negotiation, a discussion on the meaning of intuition for negotiation is long overdue. When and how do negotiators base their decisions on intuitive judgments? What are the drivers for the use of intuition? What is the meaning of intuition for attribution? How do time pressure, social interaction, and other factors influence intuition? We believe that seeking answers to these questions will lead to a greater understanding of negotiation.

This is an exploratory, theory-building paper; our research strategy follows the prescriptive–descriptive approach of James Sebenius (2009). Through our work we seek to better understand intuition's role in negotiation processes and outcomes. We begin with a review of the literature on intuition, clarifying the concept and outlining research insights into how intuition is acquired and applied. Next, we apply these general insights to the specific case of negotiation, discussing the relevance of intuition to negotiation, its use for attribution and social interaction, and the meaning of time for the use of intuition. This application is supported by a number of interviews with experienced negotiators. Our data collection is presented not as empirical research, but as a preliminary exploration to inspire and guide conceptual work in this area. We look at where and how intuition is specifically used, identify relevant drivers of intuition in negotiation, and distinguish different individual intuition attitudes. Further, we distinguish intuition from routine and shine a new light on the domain concept.

Review of Intuition Research

A Short Outline of the Development of the Concept

Philosophers have been concerned with the role of intuition for centuries (Osbeck 2001) and research on intuition reaches back several decades (Akinci and Sadler-Smith 2012). In 1938, Chester Barnard wrote *The Functions of the Executive,* in which he recognized the role of intuition in management. In 1947, Herbert Simon systematically investigated intuition within a broader study of human choice, characterizing it as speedy and tacit and as a form of recognition (see also Simon 1992).

The developments after Simon can be characterized by two research streams that are based on different assumptions and interests and have been largely isolated from each other (Kahneman and Klein

2009). On the one hand, there is the "natural decision-making" (NDM) approach—applied research with a focus on recognition in the tradition of Simon. This research offers insights into intuition, conditions, and benefits—insights that are based largely on real-life data and case studies with little reliance on cognitive research. It has a positive stance, pointing to the benefits of intuition in settings where the possibilities of deliberate planning are restricted due to complexity, uncertainty, and time pressure. Contributors to the development of the NDM approach include Gary Klein (1998, 2004, 2015), Kenneth Bowers et al. (1990), and Raanan Lipshitz (1993).

On the other hand, there is the "heuristics and biases" (HB) approach, a more theoretically oriented research stream that is rooted in behavioral decision making and bounded rationality research (Kahneman and Klein 2009). This approach focuses on evidence from controlled laboratory experiments based on cognitive research. The starting assumption is that decisions are based on deliberate choices between alternatives. The HB approach has a rather skeptical stance toward intuition, pointing to the inferiority of heuristics compared to algorithms and systematic analysis. Contributors to the development of the HB approach include Amos Tversky and Daniel Kahneman (1971, 1973) and Daniel Kahneman and Shane Frederick (2002).

Kahneman and Klein affirmed the validity of both the NDM and HB approaches in a joint publication that integrated the concepts of recognition and heuristics for a more comprehensive understanding of intuition. Most importantly, both researchers acknowledged that decisions based in intuition can be superior (relative to the agent's preferences) to decisions arrived at through deliberate planning. The key challenge of research and practice is how to balance opportunities and risks. This integration should also open a door to bringing the study of intuition into the study of negotiation.

The Substance of Intuition

Most researchers, advocates of both the NDM and HB approaches, would agree with Seymour Epstein (2008) that intuiting involves processing information automatically, rapidly, and effortlessly while keeping cognitive resource spending to a minimum. In terms of dual process theory, intuition therefore belongs to System 1 of information processing. In contrast, System 2, which is typically associated with rational decision making, is "voluntary, effortful, and controlled" (Kahneman and Klein 2009: 519). The underlying assumption of the dual process theory—and behavioral decision theory in general—is that human rationality is bounded, particularly because (1) information is incomplete and (2) information processing is time consuming and imperfect (Conlisk 1996).

Humans are not able to make all decisions rationally; they are unable to explore all alternatives and compare them based on (a full knowledge of) their outcome. To remain able to act, people are therefore forced to use other, nonrational information-processing methods. Intuition is one such method; others are emotion, instinct, and routine. These nonrational information-processing methods can (but may not) be useful strategies for dealing with the bounds of rationality; researchers are debating if and when this is the case for intuition. Based on this understanding, NDM as well as HB researchers broadly agree on three characteristics of intuition:

1. Intuition is based on tacit knowledge and the process of intuiting is taking place *nonconsciously* or subconsciously (Shapiro and Spence 1997). Individuals cannot give a complete account of the reasons for their judgments. In this regard, intuition is fundamentally different from planning as a deliberate and conscious effort.
2. Compared to deliberate planning, intuiting is a *swift process* (Jung 1933; Kahneman 2003). An intuition is just there on the spot. This speed is what makes intuition specifically attractive in certain decision-making settings.
3. The process of intuiting is *holistic*. Marie-Hélène Raidl and Todd Lubart (2001) argued that intuition consists of "linking disparate elements of information" (219), which means that intuition is the establishing of links where information is missing. Intuition is the building of a consistent picture from scattered, partial information. This third characteristic does not follow directly from the bounds of rationality, but is specifically characteristic of intuition, shaping its meaning for action taking.

Notwithstanding their agreement on these three points, the NDM and HB approaches offer fundamentally different perspectives on the substance of intuition. For NDM researchers, intuition is essentially the recognition of cues that give one access to information stored in one's memory and allow one to form coherent interpretations of phenomena (Bowers et al. 1990)—as Simon wrote, "Intuition is nothing more and nothing less than recognition" (Simon 1992: 155). For example, Klein (2004) has observed that the reliability of experienced firefighters to instantly judge the stability of buildings is the manifestation of intuition as recognition. These conclusions are subconscious as people are not (at least not fully) aware of the cues and how these cues lead them to certain conclusions; as Kahneman and Klein (2009) put it, intuition is the taking advantage of tacit knowledge. Intuitions lead to holistic judgments such

as those used to evaluate the stability of a building on fire or the severity of a child's illness (Klein 2004); such judgments allow one to select from available alternatives. Serena Chen and Shelly Chaiken (1999) argued that intuition often involves emotion; this is expressed in phrases such as "gut instincts," "gut feelings" (Shapiro and Spence 1997), and "feeling in our marrow" (Barnard 1938). Erik Dane and Michael Pratt (2007) characterized the outcome of intuitions as charged judgments. Understood as recognition, intuitions do not produce genuinely creative solutions; the creative element is the association between an unfamiliar situation and a certain attribute.

In contrast to NDM scholars, HB scholars substantiate intuitions as simplifying heuristics, i.e., mental shortcuts that reduce complex tasks—"a difficult question is answered by substituting an easier one" (Kahneman and Klein 2009: 522). Heuristics are practical methods that are not constructed to be optimal but to be sufficient. In this sense, they are a procedural equivalent to Simon's (1955) principle of satisficing. Heuristics speed up decision-making processes and make them more manageable. Cinia Akinci and Eugene Sadler-Smith (2012: 522) have distinguished three main types of heuristics in uncertain environments: "(1) representativeness heuristic (i.e. 'what is typical'); (2) availability heuristic (i.e. 'what comes easily to mind'); (3) adjustment and anchoring (i.e. 'what happens to come first')." Primarily on the basis of laboratory experiments, HB researchers offer evidence that heuristic-based intuition is inferior to algorithms and other System 2 decision-making procedures; much research looks at why this is so. One line of argumentation points to the structural superiority of comprehensive analysis as compared to simple heuristics (Kahneman and Frederick 2002). Another line of argumentation points to the distorting effect of anchoring (Kahneman and Tversky 1973), inconsistency (Goldberg 1970), and an inappropriate use of heuristics by experts using insights where they do not apply, often leading to overconfidence (Kahneman and Klein 2009).

HB researchers do not fully explain why they move away from heuristics as the main category of their research but introduce a new category for it—intuition. They also do not explain why heuristics are an appropriate representation of what is commonly understood as intuition (Betsch and Glöckner 2010). We do not wish to question the empirical relevance of heuristics for action taking. However, one of our foci is the potential benefits of intuition for negotiation; due to their inferiority, heuristics are less relevant here, so our analysis focuses rather on pattern recognition. Heuristics remain of interest to the discussion of possible limitations and pitfalls.

The Acquisition and Application of Intuition

Although more research is needed in order to understand better how intuition functions (Akinci and Sadler-Smith 2012), past research sheds some light on how intuition is acquired and applied.

Acquisition. The assertion that recognition is the substance of intuition is based on the following principles: (1) there are specifiable cues, (2) people recognize these cues (even though partly subconsciously), and (3) people draw appropriate conclusions from these cues (Kahneman and Klein 2009). Recognizing cues and drawing appropriate conclusions from them is based in (tacit) knowledge; therefore, NDM researchers assume that intuition is learned. They focus on the question of how this learning takes place.

One key concern of NDM researchers is the construct of *domain-specific knowledge*, also called *domain knowledge* (Hogarth 2001). According to Patricia Alexander (1992: 34), domain knowledge is "the realm of knowledge that individuals have about a particular field of study.… As such, domain knowledge encompasses declarative (knowing that), procedural (knowing how), and conditional (knowing when and where) knowledge … and can operate at a tacit or explicit level." Conceptually, and with regard to the structure of intuition, domain knowledge requires people to be familiar with the matters to be judged—in the firefighter example, those are fire and the stability of structures. In this sense, a domain has been characterized as an area of expertise (Shanteau 1992; Klein 2004). Intuition builds on (mostly tacit) knowledge in relevant areas. Dane and Pratt (2007) emphasize that in order to make accurate and efficient intuitive decisions, domain-specific knowledge must cover the complexities of the matters with which a person is concerned. In this sense, domain knowledge is specific and highly complex at the same time while heuristics are unspecific and simple (Kahneman and Klein 2009).

With regard to the acquisition of domain-specific knowledge, Klein (1998, 2004) points particularly to the meaning of experience. Firefighters, for instance, acquire domain-specific knowledge mostly from participation in firefighting operations. Other researchers have pointed to the meaning of attitude, motivation, talent, and deliberate practice (Ericsson et al. 2006). In line with this, Kahneman and Klein (2009: 521) are convinced that "some people will develop skilled intuitions more quickly than others. Talent surely matters." Research indicates that the acquisition of domain-specific knowledge is also driven by the structure of the domain. In this regard, James Shanteau (1992) pointed to the meaning of four drivers: (1) uncertainty, (2) the difficulties

of predicting human behavior, (3) the repetitiveness of tasks, and (4) feedback.

Application. As discussed above, intuition consists of holistic judgments—for example, a judgment that a burning building is unstable and likely to collapse (Klein 2004). Intuitive judgments are not decisions as such, but people can use them to make decisions (Gawande 2003). In order to do so, decision makers must recognize their intuition and rely on its accuracy, explicitly or implicitly.

In this way, intuitive and analytic reasoning can be integrated (Hogarth 2001; Betsch and Glöckner 2010); System 1 of information processing begins to interact with System 2. Lisa Burke and Monica Miller (1999: 95) reported that 91.5 percent of their observation group "combined intuition with data analysis." The benefits of intuition are speed and—sometimes—accuracy; intuition is therefore an asset for decision making. Although intuitive judgments are not based on reason, they can be rationalized in two ways. First, it is possible to observe the intuitive judgments of a certain person in a certain context; if these judgments turned out to be accurate in the past, there is good reason to rely on them in the present. If an experienced firefighter has demonstrated good intuition in many situations, it might be rational to rely on that in an emergency where no deliberate analysis is possible. Second, it is also possible to use intuitive judgments as starting hypotheses for deliberate reasoning. Klein (2004) reported that in emergencies, firefighters consider only one single alternative and do not compare different alternatives. In these cases, alternatives are directly developed based on intuitive judgments and critically reflected on afterward. If upon reflection the result is deemed negative, the alternative that led to that result is dropped. Both ways lead to a higher form of rationality that includes making use of intuition for decision making (Isenberg 1984). It appears that intuition is particularly valuable when the possibilities for rational planning are restricted due to time pressure or knowledge deficits.

Accordingly, research offers evidence that the accuracy (and use) of intuitive judgments (compared to deliberate planning) depends on the structure of the environment. Naresh Khatri and H. Alvin Ng (2000) found intuition relatively strong (compared to analytical approaches) in unstable industry environments where time pressure is relatively high, data less reliable, and data collection rather costly. Kahneman and Klein (2009: 524) found "that algorithms significantly outperform humans under two quite different conditions: (a) when validity is so low that human difficulties in detecting weak regularities and in maintaining consistency of judgment are critical and (b) when validity is very high, in highly predictable environments, where ceiling effects are

encountered and occasional lapses of attention can cause humans to fail." Stewart Shapiro and Mark Spence (1997) found that in complex, ill-structured settings, managers often extracted a subset of the available data in order to make the process more manageable. Decision accuracy decreased when the subset consisted of misleading or redundant variables or sources. Raiffa (1968) described how decisions can even be distorted by rationalizing intuitive "gut feeling" judgments.

Generally, intuition appears to be a reasonable alternative when deliberate planning is burdened by complexity, instability, uncertain and fragmented information, and, most of all, time pressure.

Intuition in Negotiation

In this section, we apply general insights from research on intuition to the specific case of negotiation. This application is informed by interviews that we conducted in March and April 2017 with five professional, experienced negotiators. Interviewees had worked fourteen to twenty-four years for a Danish manufacturing firm in positions requiring them to conduct negotiations. We used these interviews only as a source of inspiration—to raise questions and guide the application of previous research. We did not "induce" any theoretical conclusions from the interviews. Rather, we formulated some expectations that might guide future research on intuition in negotiation.

We first take a look at the general relevance of intuition to negotiation and how the structure of negotiation meets the conditions for the use of intuitive judgments. After that, we look more closely at attribution, social interaction, and time.

Relevance of Intuition to Negotiation

Roger Fisher, William Ury, and Bruce Patton have defined negotiation as "back and forth communication designed to reach an agreement" (1991: xvii). Communicating with people means dealing with their emotions and perceptions. Information is distributed among parties and some information—for example, reservation points—is strategically hidden, leading to structural ignorance. Negotiators are often unclear about interest structures—those of their counterparts as well as their own. In addition, negotiators often must make decisions on the spot within an ongoing conversation. There can be strategic breaks, but reacting too slowly can be understood as a signal of weakness and incompetence. Negotiation settings are therefore usually very fuzzy, dynamic, and complex, substantially limiting the possibilities and benefits of deliberate planning. Negotiators must read other people and make sense of information. Making accurate judgments is also particularly important for negotiators, for example, judgments such as those regarding the

trustworthiness of one's counterparts. All these actions—making on-the-spot decisions, filling knowledge gaps, putting the pieces together, and making holistic judgments—characterize situations that research has found to be optimal for the use of intuition. Therefore, we expect that intuition is highly relevant to the practice of negotiation.

One specific challenge regarding the acquisition of intuition in negotiations is that feedback is often withheld or strategically distorted. Counterparts give misleading impressions about their reservation points and try to convey strength where none may exist; they lie about facts or otherwise distort information. This missing or distorted feedback might affect intuitive judgments, i.e., the conclusions from cues to holistic attributes. These information deficits are not resolved after negotiations end.

We observed that our interviewees seemed to fall into two groups, one perceiving the meaning of intuition for their behavior as rather high ("intuitive group") and the other as not high ("analytic group"). Analytical negotiators stated that they preferred to have time to get an overview of a problem and think it through, but they also acknowledged the meaning of intuition—for themselves, but even more for their counterparts. Such individual differences have been described before—for instance, by Chester Barnard (1938) and Henry Mintzberg (1976)—but have not been well researched. The interviews as such are not of evidentiary value, but they open up an interesting perspective. This leads us to our first expectation (e1): *Some negotiators have a higher propensity to rely on intuition than others*. It would be illuminating to qualify this difference and investigate its impact on negotiation: How important are context factors? How important are individual dispositions and attitudes? What does this mean for the negotiation process and outcome?

Attribution

As Fisher, Ury, and Patton (1991) and later Chia-Jung Tsay and Max Bazerman (2009) have emphasized, perception and attribution play an important role in negotiation. In negotiation, people typically have private information, for instance, about their interests or their BATNA. Much of this information is relevant for the other party as well, both for value claiming and value creation. However, because it is private, the other party can receive this information only by way of transfer. This information transfer is typically incomplete due to communication restrictions, but also because information is strategically hidden or distorted. As a consequence, negotiators must make sense of the information they receive from the other side and make conclusions based on their interpretations of verbal statements or body language. This process is called attribution (Gilbert 1994).

Several studies have investigated this process of attribution. Researchers have found that sinister motivations were attributed in cases where expressed motivations for action were "too good to be true" (Robinson and Friedman 1995) or arguments and reasons for proposals were not convincing (Gates 2016). In this context, framing plays an important role (Ross and Ward 1995). Research also has found that the ability to make accurate attribution generally decreases the possibility of an impasse and tends to make negotiation outcomes more integrative (Trötschel et al. 2011).

The structure of attribution matches that of intuition almost perfectly: holistic judgments are concluded from cues. Attribution might therefore be the aspect of intuition that is most relevant to negotiation. In contrast, deliberate (nonintuitive) attribution is a complex process, requiring a high degree of planning (Shapiro and Spence 1997), and it is not always possible to keep current with all relevant facts and analysis (Lewicki, Barry, and Saunders 2015). The only way to use deliberation is to focus on subsets or isolated aspects of the problem at hand. However, as John Carroll, Bazerman, and Maury (1988) point out, complexity reduction can have counterproductive consequences as it often leads to distortion and suboptimal results. We thus form our second expectation (e2): *People use their intuition for attribution in negotiation and benefit from doing so*. The development of intuition, therefore, has a positive impact on the attribution process and outcome.

Interviews supported this expectation and identified the points in the attribution process at which intuition was used in negotiation. Interviewees substantiated attribution as "an ability to read situations and to uncover what is going on" (IP 3). They pointed in particular to body language and physical signals, including the counterparties' dress, body posture, eyes, voice pitch, and throat twitching. They mentioned that they were also well aware of their own body language. Interviewees detailed how attribution helps them to:

- understand the counterparty's situation;
- understand what the counterparty needs to achieve;
- understand the counterparty's underlying drivers;
- understand advantages resulting from the counterparty's underlying motivations;
- understand if the counterparty has sinister motives;
- decide whether or not they are negotiating with the right person;
- rebut the counterparty's critical arguments; and
- identify a common goal in order to realize win–win potentials.

Intuition therefore helped negotiators better understand how their counterparties act, communicate, and behave. One interviewee (IP 5) pointed out that intuition helps one to anticipate the counterparty's actions, especially if the counterparty is better prepared than oneself.

These findings, again, do not provide any systematic qualitative evidence, but in combination with the existing research on intuition, they suggest a need to acquire a better understanding of the meaning of intuition for attribution in negotiation. Relevant research questions include: Where and how is attribution based on intuition? How reliable is intuition in negotiation (especially against the background of poor feedback)? How does one recognize or avoid overconfidence and error? One way to investigate these questions might be open-ended interviews with people who reflect broadly on important choices they have made. These interviews might focus on the underlying considerations of such important decisions. It may be insightful to investigate the degree to which interviewees repeatedly faced the same type of situation. In this way, relevant domains and domain-specific knowledge might be qualified.

Social Interaction

Several researchers have found that social interaction affects both the negotiation process and its outcome (Tsay and Bazerman 2009). Social interaction can even lead to Pareto-inefficient solutions if these are socially more accepted (Loewenstein, Thompson, and Bazerman 1989). For example, Sally Blount and Max Bazerman (1996) found that people were more inclined to negotiate seven dollars for both themselves and their counterparties than eight dollars for themselves and ten dollars for their counterparties just to avoid a comparatively unbalanced outcome. Bazerman et al. (1998) also found that communication helped negotiators outperform game-theoretic models. The road to reaching these results often appears irrational from an individual but not from a dyadic perspective. Ann Tenbrunsel et al. (1999) found that people tend to prefer dealing with others with whom they are familiar rather than with strangers.

Managing social relationships is perhaps even more complex than attribution. A study by Gerald Ferris et al. (2009) on dyadic work relationships identified eight "key" dimensions to developing and managing relationships. The study found that the meaning of the dimensions varies depending on the stage of relationship building. When starting a new relationship, the dimensions of respect, affect, and instrumentality are particularly important.

The most interesting finding from our interviews is that only those interviewees who characterized themselves as intuitively minded addressed the topic of social interaction. In contrast, analytically minded

interviewees mentioned that intuition helps them read their counterparties but did not put that into a context of social exchange. Researchers should explore these disparities.

Interviewees highlighted the meaning of intuition particularly for the initial contact, stating that intuition helps one to understand someone upon meeting him or her, which is important in building a professional relationship. In an ongoing business relationship, intuition is particularly important to one's sense of what to expect from the counterparty. By helping one to understand the counterparty's point of view, intuition facilitates the parties' rapport. Rapport—a close and balanced relationship in which the parties understand each other and identify their shared ideas, values, and beliefs—helps to establish a smooth flow of communication and understanding (Tickle-Degnen and Rosenthal 1990).

Another finding is that intuition might help people get a sense of when it is beneficial to set aside professional pride for a higher goal. This might give one a sense of knowing when to stop asserting one's position: "[B]y being intuitively aware during negotiations, I have identified situations where I needed to stop before I would burn any bridges, and then get back into an appropriate and suitable direction instead" (IP 3).

In conclusion, the existing research on intuition points to the relevance of intuition for social interaction in negotiation and the interviews suggest the variety of factors that might be important in this regard. This leads us to our third expectation (e3): *People use their intuition in social interactions in negotiation and benefit from doing so*. The development of intuition therefore has a positive impact on the social interaction process and outcome in negotiations. This expectation, again, mostly addresses the holistic synthesis of intuition. One research strategy might be the investigation into individual differences to better understand the effects of intuition. In what way do people from the analytic group (those using less intuition) interact in negotiations differently than the nonanalytic group?

Time

Time is an important aspect of negotiation, shaping both processes and outcomes. It is also important for distinguishing different communication channels and negotiation types. One such distinction is between negotiations that are synchronous (such as face-to-face meetings and video conferences) and those that are asynchronous (such as e-mail conversations) (Pesendorfer and Koeszegi 2006).

Asynchronous negotiations allow some time for deliberate planning before messages are sent to counterparts. In synchronous negotiations,

possibilities for such planning are limited. There are ways to deal with these limitations, such as taking strategic breaks and assigning different roles to members of negotiation teams, with certain team members focusing on analysis (in parallel with the talks). Still, many decisions cannot be contemplated fully and must be made on the spot. Here, intuition is particularly relevant because of its speed; in many cases, there is simply no alternative (Gawande 2003). This is another conceptual connection between intuition and negotiation and leads us to our fourth expectation (e4): *Greater synchronicity in negotiations leads to greater reliance by negotiators on intuition (ceteris paribus)*.

We posit two moderating factors in the relationship between time and intuition: preparation and routine. Both substitute for deliberate planning *during* the negotiation, but in different ways. The essence of preparation is to anticipate relevant issues and undertake deliberate planning *in advance* of the talks where there is sufficient time. The fruits of such preparation are available to the negotiator on the spot during the talks. Therefore, this is our fifth expectation (e5): *The more negotiators are prepared, the less they tend to rely on their intuition*.

"Routines" are negotiators' standard solutions for commonly encountered problems (Betsch, Fiedler, and Brinkmann 1998; Betsch et al. 2001). Often these solutions are based on trial and error and repeated deliberate planning (Kesting and Smolinski 2007). Routine solutions are employed on the spot during negotiations. We therefore come to our sixth expectation (e6): *The more negotiators follow routines, the less they tend to rely on their intuition*. In this regard, researchers might inquire about the relevance of internet-based negotiation support systems (see Vetschera, Kersten, and Koeszegi 2006) to the meaning of intuition in negotiation.

The distinction between different negotiation stages is also related to the aspect of time. Almost all interviewees mentioned that they rely on intuition in the beginning of a negotiation. The openings of negotiations always include factors that are hard to plan for, such as: What is the counterparts' mood and what is their strategy? How do they open the negotiation? When negotiating for the first time, what type of personality do they display? Openings therefore often require adapting plans to the actual situation. As one of the interviewees (IP 4) put it, "In the beginning, it [intuition] helps me to draw the battle lines in my mind." Here, all dimensions of intuition come into play: complexity, speed, and the holistic synthesis.

Interviewees also mentioned the endings of negotiations. The focus here is on wrapping up in order to get an overview of both the negotiations and possible agreements. Negotiators must judge if the negotiation process and outcome are satisfactory for them and whether the

negotiation can be closed or there are issues remaining that require further discussion. The ending therefore mostly addresses the holistic synthesis of intuition.

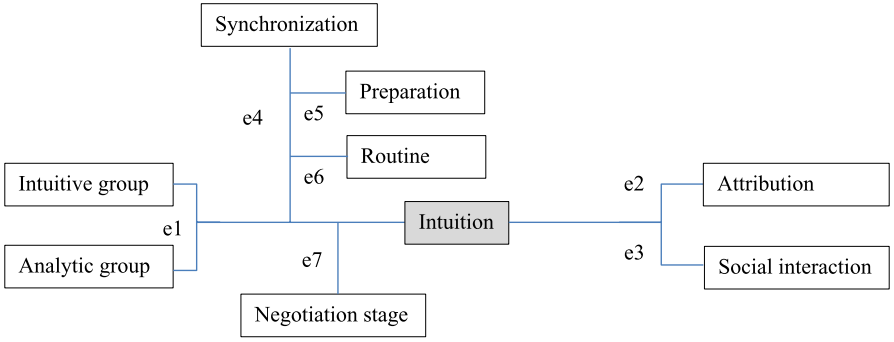
These interviews do not provide hard evidence of the ways that time influences the role of intuition in negotiation, but they draw attention to the relationship between negotiation stages and related tasks and lead us to our seventh expectation (e7): *Negotiators use intuition in different ways depending on the stage of the negotiation*.

Discussion

In this article, we applied general research insights into intuition to the specific structure of negotiations. This application led us to formulate seven expectations about how intuition influences negotiation processes and outcomes. Figure One shows the connections between these expectations.

Attribution and social interaction are the two functional areas in which negotiators might use their intuition most successfully. In both areas, information is incomplete and partly distorted, making deliberate planning difficult and often not very meaningful. In addition, the nature of human (inter)action makes attribution and social interaction highly complex and intangible. Negotiators rely on intuition to make holistic judgments such as determining the other party's trustworthiness or the right stopping point for a negotiation. These insights are particularly significant for negotiators in valuing different alternatives and assessing their consequences. In this way, we expect that the use of intuition for attribution and social interaction in negotiation follows the structure as described by Simon (1992) and Klein (2004).

Figure One
Antecedents and Impact of the Use of Intuition in Negotiation
[Colour figure can be viewed at wileyonlinelibrary.com]



Our interviews led us to consider the insights of Barnard (1938) and Mintzberg (1976) regarding individual differences in the use of intuition. Some negotiators might rely more on their intuition for attribution and social interaction than others. However, given the structure of negotiation on the one hand, and that of intuition on the other, one can expect that this relationship is moderated by two variables: synchronization and the negotiation stage. Synchronization is primarily related to time pressure, and the negotiation stage to uncertainty and complexity; both are relevant to the use of intuition (Shapiro and Spence 1997; Khatri and Ng 2000). We further expect that the effect of time pressure is moderated by preparation and routine, both offering qualified judgments on the spot (substituting the need for intuitive judging).

To our knowledge, both preparation and routine have never been researched in relation to intuition. However, we expect them to be relevant drivers—not only for negotiation, but also for the use of intuition in general. Moreover, there might be an interaction between these two drivers because preparation might also increase domain-specific knowledge and thus enhance intuition as well (although perhaps only to a minor extent). We think that more research is needed to understand the underlying mechanisms.

One issue that caught our attention is the structure and role of domain-specific knowledge in negotiation. This led us to reconsider the concept more generally, seeking broader clarification. We observed the interviewees' confusion between routine and intuition, as suggested in several of their statements. One interviewee said: "[I]f you have had many repeating negotiation situations, you can rely on your experience to negotiate intuitively.… from my twenty-five years of negotiation experience, I have seen that as negotiation situations repeat, you can start to rely more on your intuition to be efficient (IP2)." There were more statements by other interviewees pointing in the same direction.

Routine and intuition appear very similar but are structurally different. First, routine determines the course of action—what to do when. It is like a subconscious roadmap, leading to the automation of action taking (Nightingale 2003; Kesting and Smolinski 2007). One example of a routine is the procedure for waking up patients in a hospital. Nurses trained in this routine know exactly what to do when without any need for planning. New nurses, lacking such knowledge, must reflect deliberately on every step they take. In contrast with routine, intuition leads to judgments, such as concluding that a person is not reliable. These judgments can influence acts as they contribute to predicting the consequences of different alternatives. However, they are not roadmaps and do not comprehensively determine the course of an act. Second, the (partly tacit) knowledge on which routine is based is act-specific; it

consists of one specific solution for one—and only one—specific problem. When applied to a different problem, such a solution usually leads to a suboptimal outcome (Betsch, Fiedler, and Brinkmann 1998).

In contrast, intuition is not act-specific and can apply to many different problems. Intuition is specific *as it concerns one specific relation between cues and holistic judgments*, such as the cues suggesting that a person is unreliable. This judgment, however, can apply to many different situations such as negotiating with a supplier, hiring an employee, or planning a hiking trip in the mountains. In all these very different acts, the judgment that a person is unreliable can have an important impact on one's decision making. This implies that people need much broader knowledge to develop intuition than to develop routine. To develop strong intuitive judgments, people need to know the broader context in which these associations may be made (Dane and Pratt 2007). This is what domain-specific knowledge is all about. In contrast, routine requires only the knowledge of one specific solution to one specific problem.

What is the relevant domain for intuition in negotiations? In our interviews, we found that people relied on their intuition in areas where they seemed to have little domain-specific knowledge, particularly with regard to technical issues. One interviewee (IP 1) stated: "My intuition especially plays a role when I am not familiar with the situation or area." This observation seems to contradict existing research, which suggests that intuition builds on domain-specific knowledge (Dane and Pratt 2007). So what is wrong here? Let us take a closer look at the example of a negotiation involving technical issues. Here, not being familiarized with something can mean two things. First, it can mean that (otherwise) technically skilled negotiators are not prepared for this specific negotiation, lacking the required specific information and the ability to make technical evaluations. In this case, there is no contradiction with what we observed in our interviews as we found underprepared negotiators relying on their intuition more strongly than prepared negotiators. Second, it can (and in our interviews did) mean that negotiators are not technical experts; they are not familiar with (have no domain-specific knowledge about) the broader area (or domain) that is at issue in the negotiations. If this is the case, intuitive judgments are unreliable. It is therefore dangerous for negotiators to listen to their intuition. So why did interviewees state the opposite, saying that they rely on intuition in these cases?

We think it is because the interviewees were talking about a different domain: negotiation skills. In other words, if they lack relevant technical knowledge, experienced negotiators (and all negotiators in our sample were experienced) tend to rely on negotiation-related intuitive

judgments; intuition can help experienced negotiators navigate around their deficits in technical knowledge. Against this background, we expect negotiation to be an independent and highly relevant domain on its own.

Finally, we found the comments of one interviewee (IP 5) particularly meaningful. This interviewee stated, "I use my intuition to a greater extent when it is an important negotiation.… At the end of the day, this is a question of getting more out of it—in terms of information, viewpoints, positions, and facts presented to me. My intuition helps me understand these things and create a picture of where I am, and that will be a driver for solutions.… I think the importance of negotiations will turn up the volume of my intuition and focus.…" This interviewee apparently used his intuition in important negotiations because he was convinced that he could rely on and draw insights from it, insights that he could not acquire from any other source. These statements break with the expectations of the HB approach, according to which intuition is only a second-best solution. If this was the case, people would be more likely in important negotiations than in unimportant negotiations to rely on deliberate planning rather than intuition, given that planning capacities are often restricted and planning is costly. However, these interviewees obviously understood intuition as a first and best solution. Are they correct in their assessment or would it be wiser to reject intuition in favor of a comprehensive analysis? Are negotiators overestimating the accuracy of their intuition? The significance of the negotiation might be a good entry point into investigating this question.

Conclusion

In this article we sought to show that intuition is highly relevant to the field of negotiation. Negotiation meets all conditions for the use of intuition. Negotiation is highly complex and negotiators must make holistic judgments based on incomplete information, often quickly and on the spot. Our interviews with experienced negotiators strengthened our belief that to some extent, negotiators build their behavior on intuition and they can benefit from doing so. A deep understanding of processes like attribution and social interaction in negotiation is possible only when the meaning of intuition is taken into account.

We found that the fundamental insights of intuition research apply to the field of negotiation in certain distinct ways. Much more research is needed to understand how negotiators use intuition and what this means for the theory, practice, and pedagogy of negotiation.

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Interview 1: 24.03.2017 – in-person interview - approx. 2.5 hours (IP1).
Interview 2:.03.05.2017 – in-person interview - approx. 1.5 hours (IP 2).
Interview 3: 03.05.2017 – in-person interview - approx. 1 hour (IP 3).
Interview 4: 03.05.2017 – in-person interview - approx. 1.5 hours (IP 4).
Interview 5: 08.05.2017 – in-person interview - approx. 1 hour (IP 5).
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