Are we ready for a rational discussion? The existence of biases in construction dispute negotiation

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Abstract. Embedded in a network constellation of multi-stakeholders with various professional backgrounds and differing goals, the construction industry is featured with adversarial relationships and inevitable disputes. Therefore, high quality communication and negotiation among the parties are essential in achieving speedy and less costly dispute resolution. As rational evaluation underpins quality negotiation decisions, are construction disputing parties rational as they assumed? Are there any biases that could possibly prohibit them from making prudent judgement? This study seeks to understand the existence and impact of bias in construction dispute negotiation (CDN). The existence of four types of bias in CDN were discussed: preconception, self-affirmation, optimism and interest-oriented. Three categories of de-biasing strategy were also suggested to support the efficient settlement of construction dispute. Vast resources would be saved and amicable relationship among the collaborating parties could be developed when the impact of bias was curbed. Stepping into the digital era, construction dispute resolution professionals should develop the capabilities needed to harness the benefits of technologies for innovative ways of designing a bias-free dispute resolution mechanism.

1. Rational conversation is the key to successful dispute negotiation

The construction industry, encompassing real estate, infrastructure, and industrial structures is the largest ecosystem in the global economy, accounting for 13% of the world’s GDP [1]. With the ever-growing in scale, construction projects have also become more and more complex and sophisticated, requiring close collaboration from different organizations and even from different countries. The differences in organizational and personal interests set the multiple stakeholders up for inevitable conflicts and disputes that might jeopardize successful project delivery [2, 3]. Construction professionals are not unfamiliar with dispute resolution, as the process is renowned for its lengthy, protracted and costly attributes [4, 5], especially formal legal procedures such as arbitration and litigation could take longer time and more resources [6]. Moreover, processes such as arbitration and litigation have the power to damage business relationship among the collaborating parties and harm long-term cooperative opportunities [7]. Thus, it is well recognized that negotiations and neutral-assisted resolutions are the collective beneficial resolutions for relationship maintenance and overall project success [8, 9].

Due to the nature of construction project, it is common that disputing parties are involved in negotiation situations where large amount of money, long-term opportunities and earning potentials are put at stake [10]. High-stake negotiation could easily heat up the situation and put the parties under great
desperation to reach a quick deal [11]. Being steered by emotions, anger or disappointment, disputing parties might overlook notable chances of settlement, in extreme situations even win-win options are forsaken [12]. Therefore, as rational evaluation is considered a prerequisite for quality decisions, rational conversation is the key to successful dispute negotiation.

2. Are construction professionals immune to bias?
Since rationality is a key quality for a successful negotiation, it is essential that construction negotiation parties make unbiased judgment and decisions. However, Bromiley and Papenhausen [13] claimed that complete rational human decisions cannot be expected in reality. Human decisions are not always made through deliberate analysis as the limitation of rationality was rooted in cognitive judgments [14, 15]. With the simplified application of heuristics, people tend to make systematic and predictable errors, resulting in bias in their decision making [16, 17]. Construction professionals are no exception. Unsatisfactory outcomes of decision-making bias, such as ineffective risk management, poor project planning and failure to respond to failing signals were reported [18, 19, 20]. Thus, the rationality of construction professionals is subject to the impact of biases.

Even in construction dispute resolution process, faulty judgements were often observed. Examples include the famous endowment effect phenomenon and reactive devaluation phenomenon [21, 22]. Endowment effect phenomenon was firstly raised by Richard Thaler, who was the 2017 Nobel laureate in economics science. This phenomenon captures the irrationality in human judgement when people tend to overvalue the items they own [23]. Because of this ownership attachment to their belongs, it will take much psychological effort for people to giving them up, as this would be considered as losing their identity [24, 25]. This happens in the context of construction dispute resolution when people consider their previous assessments, beliefs and positions as part of themselves, thus leading to the reluctance to step back and make changes [26]. Another renowned example demonstrating the partiality during construction dispute resolution is reactive devaluation phenomenon, representing an unjustified aversion on the proposals and suggestions raised by the opponents [27, 28, 29]. Undervaluing the counterpart’s proposal would result in the rejection of a bona fide offer and make amicable settlement even more difficult [30]. Therefore, the occurrence of these faulty judgments forms psychological barriers against amicable dispute settlement.

3. Four main types of bias in construction dispute negotiation
Li and Cheung [31] first examined the types of bias that may happen in construction dispute negotiation. Four types of bias were identified and validated in the construction dispute negotiation process, namely preconception bias, self-affirmation bias, optimism bias and interest-oriented bias [32, 33, 34]. These four types of bias were found underlying and explaining other partiality and faulty judgements in construction dispute resolution [35].

Preconception bias, as the name indicated, describes the preconception disputing parties form before entering or at the commencement of negotiation. This preconception shapes how the disputing parties view their counterpart, their estimations to the counteroffer as well as their strategies in collecting and interpreting information. This unjustified preconception may lead to the under-evaluation and aversion against the arguments and evidence provided by the counterpart—reactive devaluation, and in turn the rejection of a proposal settlement which might derive the most utility. Moreover, inadequate effort was put to examine whether the preconception was grounded in truth or not [33]. Li and Cheung [35] found that this previously formed preconception is difficult to remove and could be even hardened along the negotiation process.

This preconception also links to the second type of bias: self-affirmation bias, meaning that disputing parties are inclined to confine their information collection scope and pay disproportionate attention to the information that confirms their points and arguments. Under self-affirmation bias, information interpretation serves the intention to prove already formed assessments, thus prevents the assimilation of information from the opposite perspective. This limited access to information and subjective
interpretation drive the disputing parties away from complete and objective understanding of the situation.

The third type of bias, optimism bias depicts the emotion and attitudes of the disputing parties during the negotiation process. Overly optimistic negotiation parties tend to have overconfidence in their standing points and assessments, thus leading to unrealistic expectation to the negotiation outcome. This overconfidence on their assessments and position could strengthen their ownership attachment to their beliefs, leading to a stronger endowment effect on their formed assumptions. This wildly optimistic attitude makes it difficult for negotiating parties to calm down and communicate on potential compromises. Thus, the happening of optimism bias might result in strategic bargaining habits and opportunistic behaviours in negotiations, which would destroy mutual trust and impede acts of good faith [36, 37].

The fourth type of bias is interested-oriented bias, which stems from the human nature of self-serving [38]. Self-serving nature is a cognitive discourse whereby people tend to claim contribution while attribute negative outcomes to external factors, it is a manifestation of self-protection whereby self-esteem is maintained by shifting the responsibility of negative results [38, 39]. Affected by interested-oriented bias, negotiating parties put their own interests ahead of their counterpart. With the intention to fight for a larger piece of the “fixed pie”, negotiating parties might consider making compromise as losing their proportion of interests [40]. When the dispute failed to reach an amicable settlement, with no rethink of their insistence on pursuing their interests that could have led to the impasse, they would believe the counterparts should be fully responsible for the unsatisfactory outcome.

4. The caveats in using third-party neutrals

When negotiating parties have difficulty in reaching a mutual agreeable settlement, third-party neutrals are the professionals to facilitate the settling process [41, 42]. The employment of third-party neutrals, such as dispute resolution advisors (DRA) and mediators, are a critical part of the dispute resolution service sector [5]. In order to better facilitate the communication, it is essential for the third-party neutrals to gain the trust from both parties by upholding their impartiality and neutrality. However, since the negotiating parties are subject to the effects of bias, could the third-party neutrals be possibly bias-free?

Cheung et al. [43] investigated the possibility of construction dispute resolution third-party neutrals being affected by judgmental biases. A simulation was designed to mimic a construction dispute resolution process and the behaviours of the third-party neutrals were recorded to examine their neutrality when receiving different sets of information. Notably, their study confirmed the possibility for biases to creep in third party neutrals’ decisions, especially under the influence of opportunistic behaviours of the project participants. When third-party neutrals are under the effects of bias, they are unlikely to have a complete picture of the issues in dispute. Their credentials as well as their service in facilitating settlement would be seriously jeopardised. Thus, special caveats to guard against bias would be prudent as the impartiality of standing neutrals are the corner stones for the usefulness of alternative dispute resolution mechanisms. Moreover, Cheung et al. [43] highlighted in their study that third party neutrals of less experience are more inclined to practise biased behaviours. Thus, training and experience can be important determinants of third-party neutral’s ability to remain rational. The above collectively highlight that the use of third-party neutrals could not eliminate bias from construction dispute negotiations.

5. Then, how to reduce bias?

Li and Cheung [33] proposed three categories of approach that could be deployed to mitigate biases in construction dispute negotiation, these are strategy-based, attitude-based and process-based. Strategy-based approach was designed for reducing preconception bias and self-affirmation bias with two types of measures: 1) suggesting the disputing parties to allow adequate time and effort in making decisions, review the cases multiple times before an assessment to be made, and be open to alternative assessments that might be different from the previous ones; 2) suggesting the disputing parties to deliberately
consider the opposite, form the habit of readily questioning the soundness of previous positions and pay special attention to the information and evidence that might be opponent to their formed ideas.

Attitude-based approach was developed mainly to deal with interest-oriented bias and optimism bias [35]. The approach is to encourage the disputing parties to be rational and consider long-term business relationship. Under attitude-based approach, the disputing parties are suggested to avoid their heated emotions and calmly consider potential mutually beneficial gains and long-term development plan with cooperative partnership building. Besides, disputing parties are also to develop empathy, trying to put in the shoes of the counterpart and respectfully listen to their grievances.

Last but not least, process-based approach was found helpful in minimizing preconception bias and interest-oriented bias [44]. Dispute resolution mechanism design is to be optimized by conducting training sessions before the commencement of negotiations. The process of re-assessment, review and reconstruction of ideas should be required when starting a new round of negotiation, and the initial needs should be re-evaluated before negotiation offers to be made. The notion of re-thinking the design of dispute resolution mechanism also suggests new members to be added at each new round of negotiation to ensure fresh observations and remove preconception.

6. Embracing debiasing in reality testing

Notwithstanding that third party-neutrals are not immune to decision making biases, with adequate training on their techniques, they would be at better position to help the negotiating parties staying away from biases. Incorporating bias minimizing instruments into the third party-neutrals toolkit would prove invaluable in maintaining conducive dispute resolution environment.

Reality testing is a commonly used strategy for mediators to steer the disputing parties on rational courses [45, 46]. In the process of reality testing, by raising previously designed questions, a mediator would guide the negotiating parties in a process of reviewing and re-estimating their assessments and decisions during the negotiations. Therefore, reality testing creates more opportunities and environment for the negotiating parties to chew on their assumptions and acknowledge their unrealistic beliefs and expectations [47]. Li and Cheung [44] explored ways to integrate bias mitigation measures into mediators’ technique of reality testing. To cultivate a less-biased mindset of the negotiating parties, seventeen reality testing questions were developed in Li and Cheung [44]. By asking these reality testing questions, mediators could help the negotiating parties to be aware and self-realize their biased behaviours. The seventeen reality testing questions include three types: questions about decision making strategies, questions about attitudes during the dispute resolution process and questions about designing the dispute resolution mechanism. The usefulness and practicality of these reality testing questions were verified by construction dispute resolution professionals with more than twenty years’ experience. Based on their assessment, questions about decision making strategies were rated as the most helpful as these could encourage the negotiating parties to re-visit their assumptions and decision-making process. Questions about attitudes were ranked as the second most helpful when emotion controlling was acknowledged as critical yet most challenging. Questions about designing the dispute resolution mechanism were rated as the third most useful. Therefore, it is instrumental for third party-neutrals to receive relevant training and develop necessary capabilities in enriching their toolkit to help the negotiating parties to make sound decisions.

7. Future of construction dispute negotiation

The emergence of industry 4.0 and relevant continually evolving technologies, such as machine learning, the Internet of things (IoT), blockchain, etc. are leading business in this digital journey across industries [48]. In the construction industry, as huge volumes of data are generated and considered as valuable assets, as well as the speedy embracement of digital technologies, the nature of construction dispute resolution would be dramatically changed in both dispute matters and resolution methods [49, 50]. One simple example could be the use of collaborative technology, like video conferencing in reducing the cost, streamlining the process and improving the efficiency of cross jurisdiction dispute resolution, where the disputing parties and expert witnesses will not have to commute to the other side of the world.
to attend hearing and interviews [51, 52]. Another example is before entering dispute resolution process, the negotiating parties could use artificial intelligence based data analytics applications to collect and synthesise data from past arbitrations and trials or gain the knowledge of the behaviours of a particular judge or arbitrator on historical cases [49]. More knowledge, understanding and preparation before entering the dispute resolution process could help achieve early settlement and boost efficiency. The diffusion and application of digital technology surely have brought many new opportunities, will the application of artificial intelligence and machine learning be able to avoid human cognitive limitations and eliminate biases in construction dispute negotiations? Stepping into the digital future of construction industry, to better harness the disruptive technologies, construction dispute resolution professionals need to explore and develop suitable capabilities for building a more rational and efficient dispute resolution community.

8. References
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