

# **CLIENT-CONTRACTOR RELATIONS: HOW FAIRNESS CONSIDERATIONS AND INTERESTS INFLUENCE CONTRACTOR VARIATION NEGOTIATIONS**

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## **ABSTRACT**

In Sweden, it is common that contractors propose variations to the design. Also, in traditional general contracts it is customary that contractors are entitled to replace products specified in the tendering documents with “equivalent” ones. In this paper, factors influencing the conditions for arriving at a constructive and value-adding dialog in such situations are discussed. The theoretical framework used is theory of intuitive fairness judgements and cognitive information-processing biases. The empirical basis is a qualitative case study of client-contractor interaction in a building project. It is argued that a “fairness constraint” sets the rules for interaction. To challenge and reject the contractor’s proposals without running the risk of being perceived as a harmdoer, the client must present arguments and justifications that will be accepted by the contractor. Principal driving forces and dispositions that affect the client, the design team members and the contractor in negotiations of contractor variations are identified. These biases are found to be important in two ways: because of their effect on individual information-seeking and decision-making, and because of their effect on the perceived legitimacy of the participants. The latter aspect has implications for the conditions for communication and joint decision-making.

## **KEYWORDS**

Client-contractor relations, fairness, decision processes, contractor variations, negotiation

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## INTRODUCTION

Making appropriate tradeoffs between competing requirements and quality criteria of a building project in order to achieve customer value is a core problem of lean construction. In the design phase, different specialists are responsible for different but interdependent systems, often in collaboration with multiple customers with conflicting needs (e.g., Ballard and Koskela 1998). The interdepartmental collaboration required in customer-focused product development is difficult to arrive at in permanent organisations (Dougherty 1996), and the temporariness and contractual barriers of construction project teams present still greater difficulties. To integrate constructability aspects and the contractors' knowledge into the design phase is especially problematic, as the contractual arrangements shape interests in such a way that problem-solving and value management are counteracted.

Several strategies have been employed to achieve a joint optimisation of product characteristics and construction aspects. One method is to introduce constructability criteria and incorporate construction knowledge into the design process (Alarcón and Mardones 1998), and design and build contracts represent another strategy. In recent years, long-term but informal strategic partnering has been introduced so that the prospect for future work for the provider may outweigh the conflictive incentive system of the formal contracts (Miles and Ballard 1997).

In Sweden, design and build contracts have become increasingly used since the 1970s. However, the general view of clients is that design-build contracts have not resulted in great gains considering design-production integration, and many clients continue to use traditional contractual arrangements. In Sweden, strategic partnering has not gained much interest from clients. One reason is that the contractual relations, at least on the surface, are less adversarial than in the UK and US, and far less money is spent on conflict resolution. Another reason is that the larger main contractors in Sweden are so few that clients fear reduced competition. Finally, strategic alliances are considered inconsistent with public procurement regulation. However, there is an ambition to integrate constructability aspects into traditional, general contracts by encouraging contractors to propose variations to the initial design. There is a clause in the majority of projects where traditional contracts are used that states that products "equivalent" to those specified in the tendering documents may be used, provided that the client approves of the changes. An important reason for this is that the Swedish law of public procurement prohibits tendering documents to be specified so that only one supplier can fulfil the requirements. Yet, the practice is not limited to public procurement, and contractor variation proposals that do not fall under the formal equivalence rule are common.

This system causes some problems for industrial relations, and especially design consultants criticize the "equivalence" clause. In their view, production considerations are given too much priority in the negotiations following contractor variation proposals, and aspects such as long-term quality and aesthetics tend to be overlooked. On the other hand, contractors consider clients and design professionals to be too suspicious towards proposed variations. Clearly, the equivalence rule is controversial and gives rise to strong feelings.

In this paper, the problems of attaining constructive and creative decision-making in this context are discussed. The theoretical background is concerned with human perceptions of fairness and the influence of interests on information seeking and decision-making. Examples

of contractor variation negotiations from a case study of the client-contractor interaction in a building project are used to identify important driving forces and dispositions that affect the decision-making of clients, design consultants and contractors. The discussion has implications not only for the management of contractor variations in this specific situation, but for value management in general. A shorter, preliminary discussion was presented in Kadefors (1999). The following section outlines formal rules and the practical application of the equivalence rule.

## **EQUIVALENCE RULE**

In the standard for Administrative Instructions, AF AMA 92 (Svensk Byggtjänst 1993) the clause concerning equivalence reads as follows:

“Instructions concerning execution of work or goods with the addition ‘or equivalent’ give the contractor the right to choose a version of equivalent quality instead of the version prescribed. Should the contractor wish to avail himself of this right, he shall inform the employer in advance in each individual case so that there is time to consider the question of equivalence.” (AF 2.21)

In the motives pertaining to this clause it is pointed out that the client has the right to verify equality, and that this wording implies that the client has the last say concerning the choice of alternative (Hultenberger and Molin 1994). If the client wishes to stick to the original product although the contractor’s suggestion is considered equivalent, the client has to pay the difference. It is also stated in the motives that the client should indicate more precisely in the specifications the degree of choice the contractors have in each case as well as what method should be used to verify equality (Hultenberger and Molin 1994). However, in practice it is not very common that clients specify in which respects equality is important, and many aspects are not objectively measurable by any widely accepted standard. Determining equivalence, therefore, often becomes a matter of negotiation and persuasion as much as of quantitative comparison. It is also common that contractors propose variations that do not fall under the equivalence rule. In such cases the client has no formal obligation to accept the proposed change, but in practice the resulting discussions may be much the same.

## **EMPIRICAL EXAMPLES**

The case study concerned a large public building with high quality requirements. The client was a public agency, and the contract form was a traditional lump sum contract. In Sweden, it is common that the design professionals are not asked about contractor variations, but that decisions are made by the client’s project management function together with the contractor. In this case, the design team participated during the construction phase and gave their advice and opinion concerning contractor proposals.

### **A. CLIENT’S VIEW**

The client’s project manager welcomed suggestions from the contractors, but his principle was not to accept variations (that did not fall under the equivalence rule) if the cost savings were not split by the parties.

**The client's project manager:** *"If the contractor asks us if he may use plasterboards from another manufacturer than the one we have prescribed we can't say 'No, that's not equivalent', because the end product is just as good. We could never prove that. But if he wants to replace pump A with pump B, I let my men check it: 'Is pump B as good as pump A? Does pump B look the same as pump A, does it have external connections in the same places as pump A or will this change entail further changes?' And if we find that it is not as good as the one we originally proposed but good enough to fulfil our needs, then we want a reimbursement. Because then we get a product that is not quite as good as the one we have bought. We have to do this kind of balancing all the time. It's all about having an organization that is able to evaluate the contractors' proposals."*

The client's project manager also considered contractor variation proposals very valuable in that the contractors were encouraged to study the design closely, thereby providing additional opportunities to detect design mistakes at an early stage when they may be corrected at quite low cost.

## **B. CONTRACTOR COMMENTS**

In some cases it was very important to the contractor that the variation was accepted, even if the equivalence rule was not considered applicable, because the difference in constructability was so big. The main contractor's planning engineer described such a case in the following way (I = interviewer):

**The engineer:** *"Well, they rejected this one. But it was an incorrect rejection, or it was based on incorrect information. So we'll bring it up again, because it's very important to us. And we don't see that there are any great problems, they are all possible to solve if you only want to. But we always have to ask a couple of times before we get our way."*

**I:** *laughs.*

**The engineer:** *"No, but it is as though the discussion has to go back and forth for a while."*

**I:** *"Just for the sake of it, you mean?"*

**The engineer:** *"Yes, it's a bit like they feel that it is better to say no first and then think about it for a while. Because some of our proposals have been accepted at the end."*

In this case, the proposal was finally accepted by the client. Another example of a variation that was very important to the contractor was a change from in situ-cast to pre-cast concrete elements for the spiral staircase. This proposal was not accepted, but the contractor kept on coming up with new arguments and technical solutions until a decision had to be made for production reasons.

**The contractor's site manager:** *"It is difficult to do the formwork for the staircase, it is supported only in the centre. We suggested a prefab construction instead, but it failed because of some service zones that couldn't be incorporated. But we believe that it would have been possible to solve that as well if we had only had time to work a little more on it."*

Thus, the contractors often found the client team's attitude overly critical and their objections irrelevant.

### C. DESIGN TEAM COMMENTS

The architect's design manager had a different view of the staircase discussion:

**The design manager:** *"The contractor wants to change the stairs from in situ-cast to pre-cast, we have had several meetings about it already. I find the situation difficult, after three meetings it's hard to say no. In situ-casting is clearly better, but the contractor says that it is difficult to build and for us it is hard to decide how much there is in that. There is a risk that the concrete work will look bad if it is really as difficult as they say. But I don't like the joints between the prefab elements."*

**I:** *"But if it is really impossible to build, shouldn't the contractor have pointed that out at the time of the procurement?"*

**The design manager:** *"Maybe, and formally they have no right to make this substitution. The term "equivalence" is the greatest problem in construction, but in this case it is not possible to claim that prefab is equivalent to in situ-casting. Still it's difficult to turn down the contractor's request. It's the same problem concerning the stone cladding: the contractor is pushing about making a trip to Bulgaria to look at the stone quarry. But I think that we should make the tests first. You put yourself in a predicament when you start to discuss, then it is difficult to say no."*

**I:** *"But couldn't you just say no the first time they ask if you are sure of your preferences?"*

**The design manager:** *"Yes, but they don't ask in that way. They ask if it would be possible to consider alternatives and then it's difficult to refuse, because you should also listen to the contractor. You don't push things to the limit, it's a question of giving and taking. We often feel uncertain in relation to contractors and I would like to know how calculating they really are in their dealings with us. Sometimes we think that we have had a fruitful co-operation, but you never know, we were maybe too naive."*

Although there was no formal obligation for the client to accept the variation proposal, it was not considered feasible to reject the proposal without good arguments. Thus, the client side seemed to experience a pressure to accept a contractor variation if there was much to gain for the contractor and little to lose for the client, regardless of formal equivalence rules.

### DISPOSITIONS AND DRIVING FORCES

In these excerpts from the case study several dispositions and driving forces which affect decision-making may be discerned. In the following, some salient aspects are explored more in detail: the fairness constraint, intuitive information processing biases and driving forces such as economic interests, status aspects and civic spirit. The influence of these factors on the different participants' attitudes towards a proposed variation is then summarized in Table 1.

#### FAIRNESS CONSTRAINT

The first aspect relates to the above discussion of the informal obligations of the client not to reject a contractor proposal without reason. The client took care not to treat the contractor badly, and sometimes this required that they did not make use of their formal rights. The reason for this seemed to be that the client was dependent on the good-will and cooperation of the contractor. Construction specifications are more or less incomplete and erroneous, and

defects in contractual documents may lead to extra work for the contractors and extra costs for the client. However, what is considered “implied” in the documents is, to some extent, a matter of interpretation, and the contractors may choose to make use of their formal rights to varying extents. Also, quality in construction is not transparent and constructions may be hidden by subsequent work. The implication is that the contractor has the power to harm the client considerably. Even passive actions, such as failing to inform the client of potential problems, may be very harmful. Perceptions of injustice give rise to strong feelings of anger, and it is important for the client to avoid a situation where the contractors feel unfairly treated. As the design manager said, “you don’t push things to the limit, it’s a question of giving and taking”. Because the formal contract is faulty and quality is not transparent, the client must adhere also to informal fairness rules regulating exchange relations (see also Kreiner 1976 and Kadefors 1997). This may be termed a “fairness constraint” (Kahneman et al. 1986) on the relation.

Fairness perceptions depend on many factors and may be modified in different ways. In theory of organizational justice (see e.g., Folger and Cropanzano 1998 for an overview), there is emphasis on the role of procedural justice. This implies that the decision-making procedure is considered fair and that people are treated with respect in interpersonal contacts. “Voice”, or the opportunity to express one’s view, has been identified as a major determinant of procedural justice. It is also very important that decision-makers provide acceptable explanations and justifications for controversial decisions. Bies (1987) characterizes the situation of a perceived harmdoer—often a manager—as a “predicament” of injustice and discusses how social accounts, such as lessening apparent responsibility by claiming mitigating circumstances, may influence perceptions of fairness.

The strategy of the client side may be interpreted using theory of human fairness perception. Under A in the previous section, the client’s project manager expressed his view that the management of contractor variations is “all about having an organization that is able to evaluate the contractor’s proposals”. In effect, however, this qualified organization not only evaluates the proposals, but can also produce powerful arguments to justify the decision in case of a rejection. It is important to note that the contractor has considerable influence concerning what kind of arguments that are needed to preserve perceptions of fairness. For example, the contractors seemed to see the discussion about the staircase (see under Section B above) as a matter of solving technical problems. The aesthetic considerations of the design manager were not mentioned by the contractor. Thus, it is possible that the design team preferred to frame the discussion in technical terms because these would be more readily accepted by the contractor.

Another aspect that seems to be related to fairness perceptions is the remark of the design manager that “you should listen to the contractor” (see Section C). This suggests that “not listening” may in itself be considered unfair by the contractor. Thus, in comparison with strict adherence to the initial specifications, the practice of opening up for contractor variations may, in itself, be seen as a way of improving the perceived fairness of the decision-making procedure by increasing contractor “voice”. Thereby, contractors are invited to contribute to the project, their expertise is acknowledged and opportunities of finding win-win solutions are introduced into the project. However, such openness seems to entail risks, because the increase in perceived fairness due to “voice” may easily be outweighed by feelings of injustice

if the proposals are rejected. As the design manager said: “You put yourself in a predicament when you start to discuss, then it is difficult to say no” (see Section C). Thus, without the capacity to critically examine contractor proposals and to produce justifications for decisions, the fairness constraint may force the client side to accept variations that they do not really consider as adding value.

The next section discusses cognitive biases that may interfere with the goals to make sound tradeoffs between different aspects of building quality and process efficiency.

### **INTUITIVE INFORMATION-PROCESSING BIASES**

Although one may hardly speak of “objective” decisions in construction, there is still an ideal of unbiased and creative decision-making. However, it is well known that individuals tend to arrive at conclusions they prefer (see e.g., Gilovich 1991). This is called motivated reasoning, and Kunda (1990) suggests that the causes of such biases are that motivation influences cognitive processes for information search and evaluation. One important factor is the general tendency to use positive hypothesis-testing strategies, i. e. to search for information that may confirm the desired hypothesis rather than for conflicting evidence. Information that supports a preferred alternative is also readily accepted as relevant and credible, while contradictory evidence is questioned and examined more critically. Moreover, as these biases are largely unconscious, people motivated to arrive at a particular, directional goal may still perceive themselves as being perfectly objective. However, there seem to be limits as to how biased strategies people may employ. Kunda (1990) suggests that the tendency to adopt a biased decision strategy is constrained by the decision-maker’s ability to justify the reasonableness of processes as well as conclusions: “people motivated to arrive at a particular conclusion attempt to be rational and to construct a justification of their desired conclusion that would persuade a dispassionate observer.” By contrast, when people are motivated to arrive at an accurate conclusion rather than a particular one “they spend more cognitive effort on issue related reasoning, attend to relevant information more carefully, and process it more deeply, often using more complex rules.” (Kunda 1990). Kunda also discusses findings on how motivated reasoning may be avoided, and concludes that to urge people to come up with counter-arguments to their preferred alternative seems to be effective.

The implications of the concept of motivated reasoning thus are that individuals who for some reason have stronger preference for one outcome alternative, will adopt more biased information-seeking strategies. Furthermore, the emphasis in the theory of organizational justice of the importance of reasonableness, justifications and explanations is further validated and the requirement to produce arguments that would persuade “dispassionate observer” is introduced. In the following section, some important interests influencing people’s motivations in contractor variation negotiations are discussed.

### **ECONOMIC INTERESTS**

The most openly recognized interests in business relations are economic incentives. The contractor normally has a direct economic interest in getting a variation accepted by the client. As the contractor is the initiator of the proposal, it may be assumed that a contractor will not propose a variation that is not desirable to the contractor company itself. The design professionals, on the other hand, are required to be objective in their choice of design and not

to have any relations to particular manufacturers. The client, finally, may profit economically from a variation provided that the “value for money” is improved. Thus, the client may be seen as accuracy-driven.

In addition, there are indirect economic aspects that cannot be ignored. Parallel to the variation discussions, there are other negotiations going on concerning claims due to changes and alterations. To improve their position in these negotiations, the contractors have an indirect economic interest to call the drawings and specifications in question, and thereby the general capability and competence of the design team. The client has the contrary interest to defend both the contractual documents and the design team. For the design professionals as well, there is an indirect economic interest in that too many approved contractor variations may affect the client’s impression of their professional competence and, thereby, their reputation and chances of getting future appointments.

### **STATUS ASPECTS**

There are more subtle aspects of the design-construction relations than pure economic interests. Simon (1976) defines authority as “the power to make decisions which guide the actions of another.” Thus, because the design team produces documents that guide the work of the contractors, there is an implicit hierarchy where the design team is superior and the contractors are subordinate. Such authority relations are also found between design departments and production departments within companies (e.g., Ricciardi 1999). When the contractor is encouraged to question the design and choice of material and the design professionals are required to justify their decisions, this status relation is contradicted. Thus, the design team should feel uneasy about variation proposals as their implicit authority is questioned, while contractors would welcome the opportunity to reverse the relationship.

### **CIVIC SPIRIT**

Finally, all participants involved are, to some extent, motivated by desire to do a decent job and to produce a building that they consider “good” in terms of user value. The obligation to contribute to society is one aspect of the professional identity of the design team members as well as of the craftsmanship ideal of the contractors. This may be called the civic spirit aspect. In this respect, all participants are motivated by accuracy goals.

### **SUMMARY**

The interests influencing the decisions and decision-making of different participants are summarized in Table 1 below. The conclusion is that although they may perceive themselves as objective, all three parties are motivated by directional goals in some respect, and consequently, are prone to arrive at their preferred conclusion.

However, there are some differences in how strong this bias appears to be. In the situation outlined, the client has the most neutral position, while the contractor is strongly biased towards gaining acceptance for the proposed variation. The design team members are also biased, but have no direct economic interest in the decision. It is also of importance that the initial decision process in the design stage may be considered relatively accuracy-driven. This may influence how much faith the design-team has in their own decisions as compared to the contractors’ proposals.

Table 1: Likely Mode of Decision-Making (accuracy-driven or directional) and Positioning of Participants (accept or reject) with Reference to Different Driving Forces.

<b>Driving force</b>	<b>Design team</b>	<b>Client</b>	<b>Contractor</b>
Economic interest, direct	Accuracy-driven	Accuracy-driven	Directional: accept
Economic interest, indirect	Directional: reject	Directional: reject	Directional: accept
Status aspects	Directional: reject	Accuracy-driven	Directional: accept
Civic spirit	Accuracy-driven	Accuracy-driven	Accuracy-driven

## CONCLUSIONS

Variations have a win-win potential, and a great number of variation proposals is less controversial and provocative than submitting many claims. An image-conscious contractor, therefore, concentrates on variations. For a client, however, variations may be as harmful as claims, although it is quality rather than budget that runs the risk of suffering.

In creative decision-making, people should be prepared to question their own beliefs and listen to and consider the views of other participants. However, interests influence the participants' strategies for information-seeking and -evaluation so that they will tend to arrive at a particular, desired conclusion rather than at a decision that may be considered the best. In contractor variation negotiations, both clients, consultants, and contractors are driven by specific interests, although the contractor is probably the most affected. Therefore, in order to attain constructive and value-adding decision-making, the client must have an organization that is able to critically evaluate the contractor's proposals. Also, to avoid that the contractors feel unfairly treated, it is necessary that rejections are justified with arguments that the contractors accept. It is natural that the design team helps the client in this situation. One problem, however, is that the contractors and the design professionals do not perceive each other as neutral or "dispassionate". Contractors are considered to be motivated by short-term economic gains, and the design team to be motivated by professional pride and fear to admit mistakes. This means that the discussion partners may attribute each other's opinions to disguised self-interest and biased information-processing. Thereby, important information and suggestions may lose in legitimacy and run the risk of being overlooked and not properly attended to. In fact, interests seem to give rise to two interrelated sets of problems: firstly, that construction team members are biased in their information-seeking and decision-making and, secondly, that team members may perceive each other as biased. Furthermore, that the behavior of a participant may be attributed to multiple driving forces and dispositions increases the risk for misunderstandings and, thereby, the vulnerability of the relation.

Miles and Ballard (1997) argue that team building and partnering that ignores the self-interests of the parties can never fully achieve the goals of lean construction. For one-off project relationships, this means that the contracts have to be changed. The discussion in this paper relates to the argument of Miles and Ballard, as it addresses human dispositions affecting behavior in contractual relations. Contracts shape interests, and interests may hinder

creative decision-making, not only on the level of the individual but also by influencing conditions for communication on the group level.

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