Procurement Argumentation: Conceptualising a New Meta-Model

Leon Laureij, Scenter BV, Hoofdstraat 152, 3972 LE Driebergen-Rijsenburg, Netherlands,
laureij@scenter.nl, +31 (0) 641 461 269
Sicco Santema, TU Delft, Landbergstraat 15, 2628 CE Delft, Netherlands,
s.c.santema@tudelft.nl, +31 (0)15 – 2783819

Summary

Human interactions of procurement practice are defined by arguments about the client organisation's need, the purchased commodities, and the commodities' benefits. We identify the basic argumentation structure of such exchanges, exposing the human logic behind procurement practice. We present a conceptual exploration of the literature and an analysis of a previously published procurement case study. The analysis suggests that procurement practice should include arguments about 'what' the client organisation needs, 'how' the requested commodity should be supplied, and 'why' the purchased commodity would fulfil the need. We discuss implications of procurement argumentation for practitioners and analysts of supply chain management.

Keywords

Procurement argumentation; purchasing; interactional exchange

Submission category: Working paper

Introduction

Why is it that when experienced and trained professionals get involved in a purchasing project, they appear to (a) get caught up by the many formal rules of the trade, and as a consequence (b), feel discouraged to think independently? As consultants, we encounter this issue in purchasing projects in various industries. Purchasers trying to help their organisation make effective and legitimate procurement decisions get caught between on the one hand, highly formalised supplier selection procedures, and on the other, informal preferences of their internal clients. The risk of this conundrum is that it devolves in dangerous maltreatment of procurement rules. In worst-case scenarios, purchasers treat the rules ironically, disguising informal preferences of the organisation as the outcomes of formal procurement procedures. But what could they do if the alternative to them appears to be the cynical treatment; myopic rule following without any consideration for their client organisation's strategic interests? In this conundrum, purchasers' rational/professional accountability is prohibitively restricted.

As scholars, we signal a possible root cause of this problem in the literature of supply chain management. Professionals of procurement appear to operate based on the same faulty assumption as the one on which models of procurement have been constructed; that when organisations and individuals act, they look for formal rules that they can follow. Already five decades ago, it was established in the social sciences that organisations and their human agents attach no such value to formal rules in their everyday interactions. The sociologist Harold Garfinkel (1967/1984) famously demonstrated in his breaching experiments that people are not 'judgmental dopes,' acting as they do because they have internalised certain rules or norms that were simply imposed on them. Instead, he showed that people's application of socially accepted rules only happens in retrospect; they refer to rules when they feel moved to account for their past actions. This insight was part of a shift in how social scientists understand the ways that organisations come to be, and how they try to control their employees' behaviour.

In this paper we join this view as an alternative to viewing purchasers as judgmental dopes. We start a search for a practical model that clarifies how rational accountability is and can be established in decision-making for procurement. We build this model based on a sociological

understanding of how organisational decision-making actually works, as opposed to how the rule-following perspective views it. The model will be derived from argumentation theory, as it forms the bridge between human communication and rationality that we seek to retrieve in supply chain management literature. This is our theoretical objective. The inspiration comes from Laureij's (2013) dissertation, which developed an argumentation-theoretical analysis of procurement processes. From that theoretical base we proceed to render the insights practically applicable for purchasers—our practical objective. In this paper we develop a 'procurement argumentation model' and describe the first practical contribution that it can make: to simplify the production and interpretation of texts that people involved in a tender need to exchange—that is, the request for proposal, the proposals, the contract, et cetera.

To achieve our theoretical and practical objectives, we start by asking the deliberately broad research question, *How can argumentation theory help purchasers design and carry out procurement processes?* In order to answer this question we describe our principles and methodology of model development in the methodology section. The first step of our methodology, presented in the theory and model building section, consists of a review of the diverse literature relevant to our research question. It results in the conceptual development of a procurement argumentation model. The second step of our methodology consists of a case analysis, in which we illustrate and test the utility of our conceptual model by applying it to a previously published procurement case study. In the concluding section we discuss the implications of our findings and the limitations of this study.

Methodology

In order to develop a concise and practical answer to our research question, we will develop and test a model of procurement argumentation. Our model-building methodology consists of two steps. First, we conduct a review of (a) relevant literature in supply chain management (SCM), (b) seminal works in social science, and (c) argumentation theory. The review of SCM literature is intended to illustrate our problem statement that extant procurement models, which are based on the premise that organisations and people strive to follow rules, are not consistently being applied as such in practice. The seminal social scientific insights that we discuss suggest an alternative to the 'rule-following premise.' We operationalise that alternative using argumentation theory as the basis for a new procurement model.

We conclude step one with the introduction of Toulmin's (1958/2003) often cited practical argumentation model, which we apply to a fictional example of a simple procurement case. From this application we derive an adaptation of the Toulmin model to fit procurement practice. This is an analytical exercise to generate a generic structure of argumentation as it appears in procurement interactions. The result is an initial model of procurement argumentation that is based on widely recognised insights from the practice and theory of both SCM and argumentation.

As the second step of our methodology, we test and illustrate the utility of the procurement argumentation model by revisiting a previously published case study of a procurement project. We show how the model offers new, basic insights into the challenges that the case presents. The selected case study (Gelderman, Semeijn and De Bruijn, 2015) describes a public procurement project of ICT services in The Netherlands. The study was presented at the 23rd Annual IPSERA Conference in 2014 and then published in the Journal of Purchasing & Supply Management. We selected this case study because its descriptions show how a procurement project's interactions shape the argumentation about what services should be supplied and how. This provides the data from which we reconstruct the arguments that guided the case's purchasing process. As such, we follow a pragmatist empirical approach, analysing language use reconstructed from how it functioned in the interactions of an

emerging context (Heritage, 1984; Searle, 1975). The following two sections develop steps 1 and 2 of our methodology.

Step 1: Theory and model building

The rule-following assumption in supply chain management literature

Textbooks on purchasing and supply chain management typically treat the standard purchasing process as a series of steps or stages that can be prescribed and then followed (e.g., Simchi-Levi, Kaminsky and Simchi-Levi, 2008; Van Weele, 2010). However, in practice such formalised procedures do not lead to consistent techniques for, for instance, supplier selection (Masi, Micheli and Cagno, 2013). This is especially evident in cases where the purchasing process has been modelled as a specialised variant of the standard textbook process. For instance, Hypko, Tilebein and Gleich's (2010) review of literature about performance-based contracting shows not only that this procurement model has lead to inconsistent results, but also that the model has in practice been described in wide-ranging terms with differing interpretations. As another example, consider a meta-analysis sizing up effects reported by 149 empirical studies of the interplay between contractual and relational governance in procurement (Cao and Lumineau, 2015). One of the main meta-analytic results is that the reported effects of both specialised procurement models are internally contradictory.

As an explanation of this persistent anomaly, we signal the generic assumption that formulating stages, procedures and rules for procurement operations leads to purchasers behaving in theoretically preferred ways. This assumption can be found again in SCM theorists' responses to the observed inconsistencies in procurement practice: They investigate in greater detail what the different interpretations and applications of a procurement model entail, and/or propose a new or adapted model that should account for interpretation differences and (hopefully) keep future applications consistent. This type of response can be found in all three (review) studies mentioned above (Cao and Lumineau, 2015; Hypko et al., 2010; Masi et al., 2013).

The social scientific alternative of accounting

What is problematic about this assumption? As we previewed in the introduction, social scientific research tells us that organisations and people do not simply internalise and follow rules that were imposed on them. People would go through life as, using Garfinkel's (1967/1984) term, 'judgmental dopes,' if they would treat social or professional rules as such—as if the rules were natural laws. Garfinkel's research showed instead that rules typically take effect through people's efforts to retrospectively rationalise and account for their past actions. The organisational psychologist Karl Weick (1979) demonstrated how such efforts of 'accounting' form the backbone of how people and organisations 'enact' their own environment. These insights put people's 'sense making' efforts on the centre stage of organisational practice and research. It is sense making and accounting that lends significance to social rules, conferring on them a formal status through the discourse that constantly enacts and re-enacts the institutional environment (Heritage, 1984).

We retrieve these seminal social scientific insights as our starting point for studying procurement practice. Extending the sense-making perspective, we focus on the *verbal* dimension of the practice, or how practitioners enact their environment through their everyday use of language. It may seem like a platitude to say that all organisations and organisational efforts come into being through human communication. But especially in a highly formalised practice such as procurement, what remains central in all that is said and done among the involved parties, is what is 'said.' Procurement is about 'saying' or declaring that a certain product or service will or should be supplied in certain ways, to certain ends, and by a certain supplier. This is most evident for formally consequential documents such as the request for proposal, suppliers' bids/proposals, the contract award, bid rejection protests, the contract,

supplier performance evaluations, court rulings, et cetera. Such documents function as the main organisational 'actions' that constitute the backbone of any procurement process—that is, if the actions are performed in ways that can be accounted for or rationalised by reference to prevailing institutional rules.

A defining quality that these organisational actions of procurement have in common, yet which is habitually overlooked by theories, models, and practitioners, is that they are all verbal. This means that procurement practice is structured in largely similar ways as the most ordinary of verbal activities; from individual utterances (or, "speech acts"; Searle, 1975) to everyday conversations, to ongoing discussions and debates, to ultimately, full-blown fields of discourse. Laureij (2013) illustrates and explains how purchasers use such verbal structures to generate the rational and professional dimension of their trade: The formal rules, procedures and declarations that the institutional environment demands of them. In order to describe the systematic, strategic ways in which purchasers thus rationalise their organisational actions, we now turn to argumentation theory. This discipline can be seen as forming the bridge between logic/rationality and human communication.

Argumentation and the organisational domain of procurement

The term argumentation refers to the exchange of arguments through human interaction. It is a structured verbal activity that people engage in when attempting to convince one another of their respective standpoints (derived from the definition of argumentation by Van Eemeren and Grootendorst, 2004). Argumentation theory exposes both the structure and rationality of this verbal activity, illuminating the ways people discuss and enact the issues that matter to them and their environment. Argumentation research has clarified how this works in various domains of organised human interaction, such as the political (Zarefsky, 2014), corporate (Palmieri, 2014), and legal domains (Dahlman & Feteris, 2013).

Our analytical focus differs from that of previous studies on arguments in procurement, whose understanding of argumentation is based on formal logic and the systems-based automation of procurement data (e.g., Huang and Lin, 2010; Matt, Toni, Stournaras and Dimitrelos, 2008). Instead, we focus on the linguistic appearance of procurement argumentation, meaning the (spoken, but mostly written) language expressions people use in procurement to discuss the issues of their practice. Argumentation brings structure to human interaction both in terms of the substantive information used to form claims and evidence, and in terms of the communicative process used to exchange and test that information (Jackson and Jacobs, 1980). Argumentation theory is as such also systems-based, but taking everyday human interaction as the natural system in which arguments take shape.

Procurement processes can be understood as strings of interactions supporting an exchange of arguments between supply chain practitioners. Purchasers and suppliers engage each other on issues stemming from a need articulated by a client organisation. They make and exchange arguments about such things as: what the client's need consists of, what kinds of products or services it calls for, what it is that makes such commodities desirable, how the commodity should be evaluated, the terms for purchasing and utilising the commodity, and so on. How these arguments are structured and exchanged functions as a defining feature of the interaction processes driving procurement (Laureij, 2013). To explain how this works, we first turn to the origins of argumentation theory and introduce a generic argumentation model.

Argumentation theory and the Toulmin model

Stemming from Aristotle's studies in the art of persuasion known as rhetoric, and formal and informal discussion procedures known as dialectic, argumentation survives today as an academic discipline. The most frequently used textbook example of ancient Greek argumentation goes as follows (Van Eemeren, Grootendorst and Snoeck-Henkemans, 1996):

(1) All humans are mortal;

(2) Socrates is a human; *therefore,*

(3) Socrates is mortal.

In Aristotle's logic, the form of this example constitutes the categorical syllogism. This form consists of two categorical statements (1 & 2): the premises, which, if true, necessitate the truth of the third categorical statement: the conclusion (3). A modern adaptation of Aristotle's syllogism is recognisable in Toulmin's (1958/2003) often cited argumentation model. Figure 1 captures the example of Aristotle's syllogism in Toulmin's visual model.

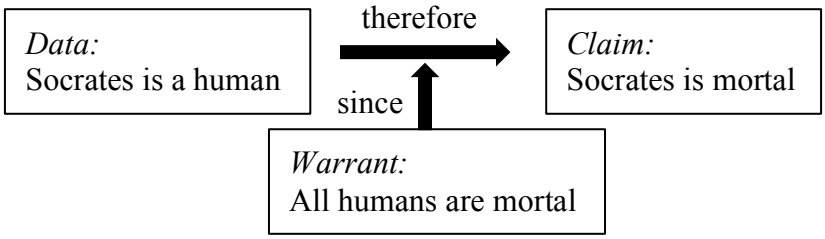

Figure 1: The Toulmin model of argumentation applied to Aristotle's syllogism

The three main components of claim, data and warrant in Figure 1 show functional resemblance with the conclusion and two premises of Aristotle's syllogism. The arrows represent the inferences that can be drawn based on the statement at the tail end of each arrow. The *claim* is the statement that requires argumentation in order to be accepted. That argumentation appears in the form of *data* and *warrant*. Data in the model means observable facts presented in order to render the claim acceptable (an inference represented by the 'therefore' arrow). The warrant then serves to justify the argumentative relationship between data and claim (the justification inference is represented by the 'since' arrow). Whereas the data typically cites particular facts, the warrant in principle concerns a general statement expressing a rule of a more universal nature.[1]

The Toulmin model with its claim, data and warrant portrays the standard components of human reasoning that are naturally present (or implied) in verbal discussions. The model's generality for human reasoning can be confirmed in its ancient roots, as well as in contemporary adaptations. It has been widely adopted as a generic argumentation model in textbooks on critical thinking (e.g., Inch and Warwick, 2010) and argumentation (e.g, Rieke, Sillars and Peterson, 2013). A little practice with applying Figure 1 to mundane examples of everyday argument (e.g., 'I prefer to bike to the office' or, 'where should we go for dinner?') will show its robustness. Also in present-day scientific modelling, the Toulmin model's general applicability in varying contexts of discourse remains an important feature (e.g., Rigotti and Greco Morasso, 2010). This general applicability and its accuracy in representing human reasoning and discussion are important reasons for us to adopt it as the basis for a model of procurement argumentation.[2]

Constructing a procurement argumentation model

The Toulmin model's components of claim, data and warrant can be defined relative to the typical issues that arise frequently in any given organisational practice. In procurement, one central issue to be resolved can be defined as: *What is the achievement or performance that a client organisation could purchase to fulfil its need?* When applying the Toulmin model, the

[1] Figure 1 concerns an application of Toulmin's 'simple' model. He has also developed an extended model, including "backings" as separate statements of support for the acceptability of the data and/or the warrant; a "qualifier" statement for nuancing the degree to which the data support the claim; and a "rebuttal" statement indicating a possible exception to the supportive relationship between data and claim (Van Eemeren et al., 1996).

[2] A critique of the Toulmin (extended) model shows a limitation of its robustness in cases of more advanced analyses of argumentation, for instance regarding the question how the acceptability of the data or the warrant (as opposed to the claim) can be conclusively defended through discussion (Van Eemeren et al., 1996).

answer to this 'what' question takes the argumentative position of the claim (upper right in Fig. 1). Support for this claim should come from the answer to the question, *How could one realise the required performance?* This is the 'how' question, whose answer takes the place of data in the Toulmin model (upper left in Fig. 1). Stating *how* a given performance could be realised (the method) functions as support for the claim *that* the performance could be purchased. But such support can only be accepted if one can answer the question, *Why would one utilise the proposed method in attempting to realise the desired performance?* This 'why' question addresses the warrant, which is conditional for justifying that the method could actually realise the performance (or, that the data indeed supports the claim—bottom in Fig. 1). Figure 2 visually presents this argumentation structure with a typical (fictional) example related to the procurement of ICT.

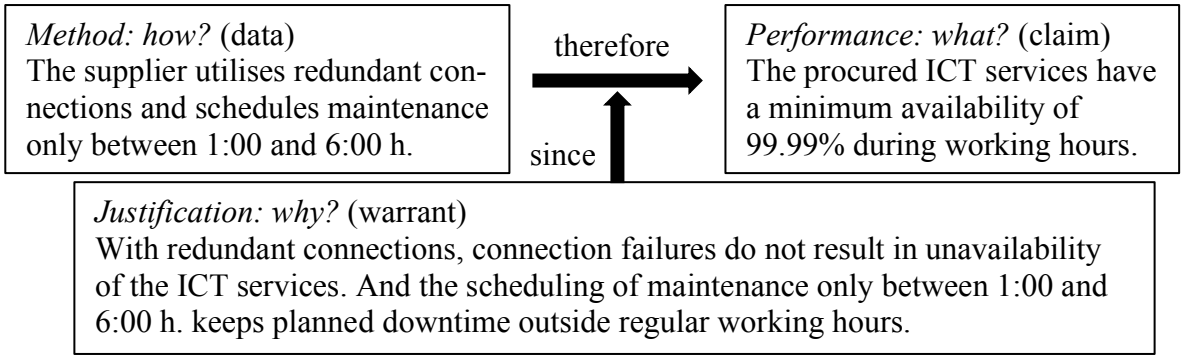

Figure 2: Procurement argumentation model illustrated with a fictional RFP for ICT services

Figure 2 presents the basic structure of procurement argumentation that the adapted Toulmin model exposes. The model's adaptation to procurement practice resides in renaming the components of claim, data and warrant. The italicised components identify the generic issues that typically arise between bidders and purchasers in an RFP process, with the arrows indicating the argumentative relationships as in the Toulmin model. This yields a general model for procurement argumentation. In this model, a *performance statement* requires corroboration in the form of a *methodological statement*; the method description serves as proof for the attainability of the stated performance. The capacity of the methodological statement to support the performance statement should in turn be 'warranted' by expert reasoning, stating why the method could indeed realise the performance. The *justification statement* provides this warrant. Applying these new component names in the model results in a specification of the type of arguments that can be made. This procurement argumentation model is specialised for the reconstruction of causal argumentation,[3] which is typical for procurement practice.

Each one of the three statement types could be proposed by a supplier or requested by a purchaser. The generality of the model supports the prediction that any kind of issue arising in procurement practice can be reconstructed using this model. For example, an RFP for ICT services will of course involve a variety of issues regarding the performance that a supplier should offer, beyond the question of service availability that defines the example of Figure 2. Other *performance issues* in ICT procurement could be the level of data protection, the average time it takes to resolve end user issues, the level of end user satisfaction, et cetera. *Methodological issues* of ICT procurement, such as the types of servers, modes of data transfer, ways to contact a helpdesk, et cetera, are then discussed relative to the *performance statements* that require support. *Justification issues*, then, require the kind of technical

[3] Based on the Toulmin model, at least five distinct types of argument can be identified: generalisation, cause, sign, analogy, and authority (Rieke et al., 2013).

expertise that explains why a certain type of server is best suited to realise, for instance, a desired level of data protection.

The exchange and contestation of procurement statements as the ones in Figure 2 happens through interactional processes such as an RFP, contracting discussions, supplier performance evaluations, court procedures, et cetera. Although each of these processes is marked by its own distinct interactional structure, that structure can in each case be traced back to the generic argumentation structure of Figure 2. Moreover, the procurement argumentation model can be understood and used as a theoretical basis for the (re-)design of procurement processes in order to secure the rational accountability of procurement decision-making.[4] The model identifies the opportunities for accounting in any procurement discussion and facilitates the structure by which such accounting should rationally proceed. Support for these claims will be explored in the second step of our methodology: illustrating and testing our model by analysing a procurement case.

Step 2: Procurement argumentation in practice: A case study revisited

The case study

We revisit the case study by Gelderman et al. (2015), "Dynamics of service definitions: An explorative case study of the purchasing process of professional ICT-services." It provides a practical context for illustrating the procurement argumentation model and testing its utility. The case describes a public procurement project for ICT services. The central problematic of the case analysis is the amount of effort that went into defining and specifying the required ICT services. The descriptions of these efforts provide the data for a reconstruction of the procurement argumentation that guided the interactions between the main players of the case: the purchasing team, the internal client, the candidate suppliers and the ultimately selected supplier. We revisit the case analysis to illustrate how our conceptual procurement argumentation model clarifies the practical difficulty of developing the service definitions, and how the model provides avenues for critique and alternative solutions.

The case study identifies five peak activities in the observed 20 months of developing the ICT service definitions (number of total months into the project timeline is indicated where this could be derived from the text):

1. Initial alteration of service definitions (4 months):
   The purchasing team reworked the technical specifications and contract terms of the (underperforming) incumbent supplier.
2. After consultation with the market and the client organisation (8 months):
   Candidate suppliers and internal clients provided feedback on preliminary service definitions.
3. After pre-qualification:
   Two remaining candidate suppliers again provided input in the developing contract specifications, which the purchasing team adapted in order to fit the client organisation's internal processes.
4. After contract-award (19 months):
   During the transition of the ICT services to the selected supplier, the service definitions were adjusted due to interpretation differences between supplier and internal client.
5. During the ordering/execution stage (20 months):
   Service definitions continued to be altered regularly in deliberation between supplier and the client organisation.

In the remainder of this section, we discuss two major observations regarding the service definition activities that the case study reported. First, we discuss the large number of times

[4] The procurement argumentation model thus serves both descriptive and normative functions. As such, we approach it as an instrument for 'communication design,' or the design of a specialised type of human interaction using recognised communication tools or concepts (cf. Aakhus and Jackson, 2005).

that the definitions had to be altered throughout the process, extending into the execution stage. Second, we analyse the topics that were subjects of the discussions among the players of the case, the issue types they represent in terms of procurement argumentation (Fig. 2), and what their relative frequency suggests about the effectiveness of the procurement process.

Service definition alterations after contract award: a necessity?

Gelderman et al. (2015) observe that difficulty in achieving adequate service definitions is characteristic of ICT procurement. As for the case that they studied, they attribute the large amount of effort that was expended for this purpose to the many contingencies of the required service, the changing conditions on the ICT market, and the lack of technical expertise at the client organisation. Of the five peak activities summarised above, the last two are problematic from a traditional contracting perspective. First, because interpretation differences about the service arose between supplier and client after the contract award, while these ought to be resolved before the award in order to make a legally binding contractual agreement. And second, because these interpretation differences lead to alterations of the contract specifications that should have been final. Gelderman et al. write the following about these complications after the contract award (p. 224):

> "Problems arise mainly when new services are required. During the project issues arose that required the attention of the project team members. The drawbacks and problems in this long and complex project were handled by a time-consuming, labor intensive approach in which the different parties regularly discussed and solved the problems. Instead of solely relying on contractual governance the project was managed through relational governance."

This relational governance that the case study authors describe appears to have arisen as an operational alternative to the default of contractual governance. They observe that during the execution stage of the case, "[d]iscussions about specifications take place on a regular basis to allow for differences in interpretation and organizational dynamics" (Gelderman et al., 2015, p. 224). The authors frame this as a necessity given the "information asymmetry" (p. 226) between the ICT supplier and the client. They propose "continuous buyer-supplier interaction" (p. 226) before and after the contract award in order to facilitate the contract alterations and they conclude: "The combination of contractual and relational governance appears to be most suited for the handling of various kinds of (implementation) problems" (p. 225). We question this conclusion (a) because of the amount of communication that relational governance requires, which not only is expensive but also increases the risk of further miscommunication; and (b) because the solution may be legally questionable in many (public) procurement contexts. An alternative might be possible if one studies more closely what the service definitions that had to be changed were about. That is what we will do next.

Performance, methodological, and justification arguments about ICT service definitions

The case study by Gelderman et al. (2015) provides another example of the difficulty for supply chain practitioners to follow the rules and procedures of procurement practice. But instead of attempting to develop a new procedural model to fit the anomalous reality (such as the combination of contractual and relational governance that the case study authors propose), we reconstruct the argumentation that the practitioners of the case applied, and evaluate its effectiveness for their practice. As will appear, the purchasing process could be rearranged based on the procurement arguments that need to be exchanged, without detailing and formalising new procedural rules for the practitioners to follow.

Table 1 below is a copy of Gelderman et al.'s (2015) Table 1, which shows the development of the service definitions per service category across three versions: Version 1.0 after the initial alteration of service definitions; version 2.0 after consultation with the market and the client organisation; and version 3.0 after contract award. The service definitions are

quantified in the table by the number of text lines that it took to describe each service category. The grey highlights are our addition, which we explain below.

Table 1
Development of lines in service definitions per service category.

	Version 1.0	Version 2.0	Version 3.0	Increase (%)
Total	**440**	**432**	**1455**	**70**
Generic	**144**	**128**	**1164**	**88**
Tactical	***42***	***47***	***626***	***93***
Innovation	6			
Service delivery management	8		450	98
Knowledge management	6	11	50	88
Chain orchestration	22	36	126	83
Continuous improvement		7	40	100
Reporting		4		
Operational	***51***	***35***	***249***	***80***
Agreements with other suppliers	12	15		
Implementation ProRail roadmap	22		60	63
Expertise on demand	8	10	42	81
Safety and security	3	3		
Linking with ProRail IT structure	6	7	147	96
Object oriented management	**347**	**339**	**540**	**36**
Server management	41	41	60	32
Storage management	21	21	60	65
Datacenter	13	13	30	57
Network	8			
Service desk	35	35	80	56
Client	31	31	40	23
Software distribution	25	25	70	64
Asset management services	19	19		
Technical applications	94	94	120	22
Other applications	60	60	80	25

Table 1: Development of lines in service definitions (Gelderman et al., 2015, p. 223), with likely methodological issues highlighted

The first observation to make about Table 1 is that 70% of the service definitions of version 3.0 were developed after contract award. This quantifies the problem of altering a contract after awarding it to a supplier, which we discussed above at the end of the last subsection. Another analytical interest that the table facilitates is the breakdown of service categories, representing the topics and issues that the main players of the case discussed in order to alter the service definitions. Following the conceptual procurement argumentation model of Figure 2, we highlighted in grey those service categories that likely dealt with *methodological issues*. The ones that remain un-highlighted represent likely *performance issues*, or the issues that most directly deal with *what* the ICT service was supposed to deliver. This type of issue is sometimes referred to as 'the question behind the question.' All the grey methodological issues are then about *how* those performances could be realised, and serve as support for the attainability for those desired performances. The overwhelming proportion of methodological issues relative to performance issues is central to the point we seek to develop.

Taking version 1.0 of the table as the baseline, the total number of positive and negative changes in the number of lines per service category that resulted in versions 2.0 and 3.0 is 1185. 965 of those changes occurred in the service categories that can be understood as

methodological issues in procurement-argumentative terms. In other words, 82% of the alterations to service definitions had to do with the methods for realising the ultimately required ICT performances. Of course, it is possible, following the model of Figure 2, that the discussions regarding those 82% also partially involved *justification issues*. The point to make here is that the client organisation was actively involved in so much of the procurement discussion that required the kind of technical expertise that (also according to Gelderman et al., 2015) the suppliers possess much more than the client.

Reasonable discussion in procurement practice

The problem that the case presents, then, is that the client organisation tried to engage (candidate) suppliers in a discussion about issues on which it has no expertise. Normative theories of argumentation stipulate that all parties to a reasonable discussion need to be positioned such that they can form their own standpoints and that they should be predisposed to formulate their own arguments and test the other's arguments (e.g., Van Eemeren and Grootendorst, 2004). The client organisation of the case may have been predisposed to formulate and test arguments, but was not positioned to form its own standpoints on the issues the discussion engaged.

The conceptual model of procurement argumentation exposes the structure behind the case's procurement interactions and reveals the main problems. First, the purchasing team put much work into achieving and maintaining consensus between client and supplier about *how* the ICT services should be supplied ('method' in Fig. 2). All the focus on the formulation and reformulation of service definitions distracted attention away from the issue of 'what' performance the client needed the ICT services to achieve ('performance' in Fig. 2). Without such attention, the purchasing team and the supplier could not justify 'why' the developing service definitions would be desirable to the client organisation ('justification' in Fig. 2).

The methodological issues were subject to continuous alteration, under the authority of the buying organisation. In the meantime, the justification issues were grounded in trust, interaction and relational governance between the client and the supplier. We maintain that it would be more desirable from an argumentation-theoretical perspective to ground service definitions in an expert understanding of the methods required for realising the desired performances. Such an expert understanding is conditional on the ability to justify *why* the methods could realise those performances and attain the client's objectives. And in order to facilitate such technical expertise in a reasonable discussion, the suppliers that possess it should be given the accountability to resolve the justification and methodological issues of procurement discussions. This way the client organisation would maintain accountability for specifying *what* it needs, and will not risk deciding the discussions about *how* their objectives should be realised and *why*.

Conclusion: Implications of procurement argumentation in practice and theory

The basic argumentation structure of procurement practice forms the backbone of the interactions between purchasers and suppliers. Making this structure explicit facilitates analysis of the interactional difficulties they encounter, such as those of the case study. The conceptual procurement argumentation that we propose exposes the reasoning of procurement and offers avenues for critique and new understanding. The insights could support further innovation in SCM theory and practice, by facilitating practitioners to understand the discussions they have and ought to have with stakeholders. Such a new understanding could replace purchasers' and suppliers' struggles to follow formal rules, and allow them instead to focus on creating rational accountability in the procurement process.

This conclusion and its implications are tentative, as the procurement argumentation model that we propose is yet conceptual. Further research should ground the model more thoroughly in SCM literature and further test the model's validity and utility by confronting it with the diverse manifestations of procurement practice.

References

Aakhus, M., Jackson, S., 2005. Technology, interaction, and design. In: K. L. Fitch & R. Sanders (Eds.), Handbook of Language and Social Interaction. Lawrence Erlbaum, Mahwah, NJ, pp. 411–435.

Cao, Z., Lumineau, F., 2015. Revisiting the interplay between contractual and relational governance: A qualitative and meta-analytic investigation. Journal of Operations Management 33–34, 15-42.

Dahlman, C., Feteris, E. (Eds.) 2013. Legal Argumentation Theory: Cross-Disciplinary Perspectives. Springer, Dordrecht, NL.

Garfinkel, H., 1984. Studies in Ethnomethodology. Polity Press, Cambridge, UK. (Original work published 1967)

Gelderman, C.J., Semeijn, J., De Bruijn, A., 2015. Dynamics of service definitions: An explorative case study of the purchasing process of professional ICT-services. Journal of Purchasing & Supply Management 21, 220–227.

Heritage, J., 1984. Garfinkel and Ethnomethodology. Polity Press, New York, NY.

Huang, S.-L., Lin, C.-Y., 2010. The search for potentially interesting products in an e-marketplace: An agent-to-agent argumentation approach. Expert Systems with Applications 37, 4468–4478.

Hypko, P., Tilebein, M., Gleich, R., 2010. Clarifying the concept of performance-based contracting in manufacturing industries. Journal of Service Management 21 (5) 625-655.

Inch, E.S., Warwick, B., 2010. Critical Thinking and Communication: The Use of Reason in Argument. Sixth ed. Allyn & Bacon, Boston, MA.

Jackson, S., Jacobs, S., 1980. Structure of conversational argument: Pragmatic bases for the enthymeme. Quarterly Journal of Speech 66, 251–265.

Laureij, L.V., 2013. Supply Chain Contracting as Disagreement Management: Institutionalizing Procurement Practice through Communication Design. (Unpublished doctoral dissertation). Rutgers, The State University of New Jersey, New Brunswick, NJ.

Masi, D., Micheli, G.J.L., Cagno, E., 2013. A meta-model for choosing a supplier selection technique within an EPC company. Journal of Purchasing & Supply Management 19, 5-15.

Matt, P.-A., Toni, F., Stournaras, T., Dimitrelos, D., 2008. Argumentation-based agents for eProcurement (short paper). Proceedings of the 7th International Conference on Autonomous Agents and Multiagent Systems, 12-16 May 2008, Estoril, Portugal.

Palmieri, R. 2014. Corporate Argumentation in Takeover Bids. Argumentation in Context 8. John Benjamins Publishing Company, Amsterdam, NL.

Rieke, R.D., Sillars, M.O, Peterson, T.R., 2013. Argumentation and Critical Decision Making. Eighth ed. Pearson, Boston, MA.

Rigotti, E., Greco Morasso, S., 2010. Comparing the argumentum model of topics to other contemporary approaches to argument schemes: The procedural and material components. Argumentation 24, 489-512.

Searle, J.R., 1975. A taxonomy of illocutionary acts. In: K. Gunderson (Ed.), Language, Mind and Knowledge. University of Minnesota Press, Minneapolis, MN, pp. 344–369.

Simchi-Levi, D., Kaminsky, P., Simchi-Levi, E., 2008. Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies. McGraw-Hill/Irwin, Boston, MA.

Toulmin, S.E., 2003. The Uses of Argument. Cambridge University Press, Cambridge, UK; New York, NY. (Original work published 1958)

Van Eemeren, F.H., Grootendorst, R., 2004. A Systematic Theory of Argumentation: The Pragma-Dialectical Approach. Cambridge University Press, Cambridge, UK.

Van Eemeren, F.H., Grootendorst, R., Snoeck-Henkemans, A.F., 1996. Fundamentals of Argumentation Theory: A Handbook of Historical Backgrounds and Contemporary Developments. Lawrence Erlbaum, Mahwah, NJ.

Van Weele, A.J., 2010. Purchasing & Supply Chain Management: Analysis, Strategy, Planning and Practice. Fifth ed. Cengage Learning, London, UK.

Weick, K. E., 1979. The Social Psychology of Organizing (Vol. 2). McGraw-Hill, New York, NY.

Zarefsky, D. 2014. Political Argumentation in the United States: Historical and Contemporary Studies. Argumentation in Context 7. John Benjamins Publishing Company, Amsterdam, NL.