

Analysing the Macrostructure of Spoken Strategic Communication: An Application of Argumentation Analysis on High-Technology Newly Public Firms' Earnings Conference Calls

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A firm's ability to fulfil their strategic goals largely depends on how they communicate their strategies with stakeholders. Argumentation plays a prominent role in the process of communicating with stakeholders, with the intention of persuading them and achieving goals of strategic significance. In this respect, analysing argument structure is of particular importance, since determining the components that comprise an argument is a prerequisite for evaluating its acceptability and, consequently, its ability to persuade. Therefore, employing a framework that is specifically developed for the analysis of argument structure can help address questions that are not otherwise tractable. The relatively few available empirical studies in strategic communication employ frameworks that are not optimized for spoken communication. As such, there is scope to adapt/refine existing frameworks to facilitate meaningful analysis of spoken strategic communication. In this paper, therefore, we draw on existing frameworks and posit an adaptation that enables us to analyse the macrostructure of spoken arguments. We demonstrate the application of this adapted framework by analysing earnings conference calls involving three high-technology firms and financial analysts. By doing so, our study contributes to management practice and the literatures on strategic communication, as well as financial communications and investor relations.

Introduction

In today's complex world, a number of stakeholders (e.g. customers, employees, suppliers, financial-market stakeholders, communities, etc.) can affect firms' ability to fulfil their strategic goals. Consequently, firms recognize the strategic significance of communications with such stakeholders and devote substantial amounts of time and resources to appropriately shape them. Specifically, strategic communication is concerned with 'the purposeful use of communication by an entity to engage in conversations of strategic significance to its goals' (Zerfass *et al.*, 2018, p. 493). In this study, we focus on the verbal communication of such issues with the intention to persuade stakeholders and achieve goals of strategic significance. Adapting previous work on argumentation, we propose a methodological framework that is appropriate for the analysis of arguments advanced in a spoken strategic communication context.

Strategic communication is inextricably linked to the body of work on strategy and leadership, as well as a number of communication-focused subject areas within the field of management, such as organizational communication, business communication skills, corporate communication and marketing, advertising and public relations (Hallahan *et al.*, 2007). Scholars in strategic communication, and the aforementioned related areas, primarily attempt to elicit insights by employing analytical frameworks such as narrative analysis, discourse analysis and content analysis examining frames, metaphors and analogies, as well as signals (for a review of the relevant literature, see Gao, Yu and Cannella Jr, 2016). Studies involving narrative analysis examine how businesses use stories to achieve goals such as resource acquisition, legitimacy and stakeholder support (e.g. Dalpiaz and Di Stefano, 2018; Lounsbury and Glynn, 2001; Martens, Jennings and Jennings, 2007). Similarly, scholars employing discourse analysis examine how the use of different discursive strategies may lead

to legitimacy and stakeholder cooperation (e.g. Vaara, Kleymann and Seristö, 2004; Vaara and Tienari, 2002; Vaara, Tienari and Laurila, 2006). Finally, legitimacy and stakeholder support/cooperation seem also to be a focal point for studies involving content analysis, examining how the use of frames (e.g. Fiss and Zajac, 2006), metaphors and analogies (e.g. Cornelissen, Holt and Zundel, 2011), as well as signals (e.g. Lewis, Walls and Dowell, 2014), can help businesses achieve such goals.

While eliciting valuable insights, the aforementioned analytical frameworks have not been specifically developed for the analysis and evaluation of argument structure. Hitchcock (2002, p. 289) defines an argument as 'a spoken discourse or written text whose author (the arguer) seeks to persuade an intended audience or readership (the Other or the Others) to accept a thesis by producing reasons in support of it'. As such, argumentation is inextricably linked to persuasion, which is also at the heart of strategic communication. In line with relevant prior work (e.g. Palmieri, Rocci and Kudrautsava, 2015; van Werven, Bouwmeester and Cornelissen, 2015), we posit that argumentation plays a prominent role in the process of communicating with stakeholders with the intention to persuade them and achieve goals of strategic significance. In this respect, analysing argument structure is of particular importance, since determining the components that comprise an argument is a prerequisite for evaluating its acceptability (Govier, 2013), and consequently its ability to persuade. Therefore, employing a framework that is specifically developed for the analysis of argument structure can help address questions that are not tractable using those methods outlined in the previous paragraph (see Arora *et al.*, 2016).

The question that naturally arises from the above is: If determining the components that comprise an argument can prove so useful in analysing (and in turn evaluating) strategic communication, then why, as Harmon, Green and Goodnight (2015) suggest, is argument structure one of its most overlooked aspects? The answer seems to come from researchers such as Gao, Yu and Cannella Jr (2016) and Van Dijk (1997), who suggest that scholars who do not have a background in communication and discourse can easily get confused by the various forms of language in their analysis. In line with this, researchers analysing argument structure in various fields acknowledge the level of complexity it entails (e.g. Gasper and George, 1998; Simosi, 2003). As such, relatively few studies engage in examining argument structure in strategic communication and the field of management more broadly (for a selection of relevant publications, see Appendix 1).¹ Furthermore, their conceptual richness notwithstanding, we deem it important to

¹It is important to note that while we acknowledge that there is a body of work on argumentation and rhetoric in strategic

offer more specific guidance on how to undertake analysis of argumentation structures when available information makes it difficult to make inferences about the key elements of these frameworks, which we discuss in subsequent sections. Following on from the above, it is important to not only bring further attention to methods that can help researchers analyse (and in turn evaluate) argument structure, but also make these methods more applicable to contexts where information about all elements of existing frameworks is not available.

Further, the otherwise well-developed and rich literature on the analysis of the argumentation structure of strategic communication has an important lacuna, namely, the analysis of spoken strategic communication. Yet, spoken communication is favoured by firm stakeholders because it is easier and quicker to follow compared to written communication (Barry and Elmes, 1997; Guo, Sengul and Yu, 2020). Also, researchers concur that written and spoken strategic communication differ significantly from one another in terms of formality, involvement, resources used and persuasive functionalities served (e.g. Barry and Elmes, 1997; Mikašauskienė and Čiročkina, 2020). There is, therefore, the need to develop a framework or a methodological approach that is optimized for the analysis of spoken strategic communication.

Earnings conference calls (ECCs) are an important form of spoken strategic communication that offer useful incremental information, making them particularly popular with financial-market stakeholders who largely base their decisions on them (Jancenelle, Storrud-Barnes and Javalgi, 2017; Matsumoto, Pronk and Roelofsen, 2011; Palmieri, Rocci and Kudrautsava, 2015; Price *et al.*, 2012). Our paper uses the context of ECCs, which are an important form of spoken strategic communication between a firm and external investors, to propose a method to analyse the argumentation structure of this form of communication, in the absence of information feeds into the existing analytical frameworks. It draws on important existing frameworks such as those of Toulmin (1958), Fletcher and Huff (1990) and Freeman (2011), but includes adaptations that, we believe, considerably expand the ability of researchers to undertake the analysis of the macrostructure² of arguments in a wide range of contexts where spoken strategic communication is the norm. We demonstrate

communication and the field of management more broadly, we have identified fewer relevant publications which specifically focus on argument structure. This is also in line with Ketokivi and Mantere (2021), who emphasize the scarcity of management literature on argument structure.

²The study of *argument macrostructure* focuses on how different argument components fit together to provide support for one or more conclusions/claims, whereas the study of *argument microstructure* focuses on the internal structure of individual argument components (Freeman, 2011).

the applicability of the proposed method using a case study design, by utilizing ECC transcripts from three high-technology firms: Facebook, Splunk and Zynga.

The remainder of this paper is structured as follows: the next section provides support for the decision to focus on ECCs and describes our corpus; the following section examines different approaches for analysing argument macrostructure, as well as their application in other contexts; the subsequent section explains how we performed our analysis, presents the fundamental, additional and higher-order components of our framework and addresses how it extends prior work; and the final section discusses the contribution of our work, addresses its limitations and makes suggestions for future research.

Context and corpus

Earnings conference calls

Executives use various forms of strategic communication to interact with and persuade key stakeholders, especially financial-market stakeholders. However, evidence found in the literature suggests that not all forms of strategic communication are of equal significance. Specifically, researchers have found that annual reports are of low relevance to the capital markets (Barker, 1998). Quarterly disclosures, on the other hand, seem to be among the most relied-on sources of information (Barker, 1998; Hollander, Pronk and Roelofsen, 2010; Landsman and Maydew, 2002) as they provide shareholders and other financial-market stakeholders with more timely information (Leftwich, Watts and Zimmerman, 1981). ECCs are a form of voluntary quarterly disclosure that is becoming increasingly popular, wherein executives and financial-market stakeholders communicate directly with one another (Jancenelle, Storrud-Barnes and Javalgi, 2017; Matsumoto, Pronk and Roelofsen, 2011; Palmieri, Rocci and Kudrautsava, 2015; Price *et al.*, 2012). In fact, after press releases, ECCs are the most popular means of disseminating firm information to the investment community (NIRI, 2004).

ECCs usually take place a few hours after the release of a firm's earnings report (Graaf, 2013; Jancenelle, Storrud-Barnes and Javalgi, 2017; Palmieri, Rocci and Kudrautsava, 2015), and their participants are: (i) firm representatives such as the Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Operating Officer (COO) and Head of Investor Relations (IR); (ii) financial-market stakeholders such as analysts, institutional and professional investors; and (iii) an operator who coordinates the process (Jancenelle, Storrud-Barnes and Javalgi, 2017; Palmieri, Rocci and Kudrautsava, 2015). Customarily, ECCs consist of two parts: (i) a presentation part where firm representatives rely on prepared remarks to elaborate on the past

quarter's performance and the firm's future plans; and (ii) a discussion part where analysts raise questions and receive immediate answers (Crawford Camiciottoli, 2010; Jancenelle, Storrud-Barnes and Javalgi, 2017; Palmieri, Rocci and Kudrautsava, 2015).

Researchers concur that ECCs offer useful incremental information that reduces the information asymmetry between the firm and financial-market stakeholders (Jancenelle, Storrud-Barnes and Javalgi, 2017; Matsumoto, Pronk and Roelofsen, 2011; Palmieri, Rocci and Kudrautsava, 2015; Price *et al.*, 2012). This incremental information has been attributed to various factors, the most important being analysts and the questions they raise during the discussion part (Matsumoto, Pronk and Roelofsen, 2011; Mayew and Venkatachalam, 2012; Price *et al.*, 2012). This is in line with the view that the discussion part of ECCs is of greater informational value (Price *et al.*, 2012), as the presentation part simply echoes the content of the earnings report (Kimbrough, 2005; Matsumoto, Pronk and Roelofsen, 2007).

The existing literature summarizes the purpose of ECCs in two key objectives: (i) an informational objective to satisfy the demands of financial-market stakeholders for more and better-quality information; and (ii) a rhetorical objective to persuade the investment community to generate a positive evaluation of the firm performance (Crawford Camiciottoli, 2010; Palmieri, Rocci and Kudrautsava, 2015). Having demonstrated their importance in interacting with and persuading financial-market stakeholders, the discussion part of ECCs can serve as a useful context for examining the underlying macrostructure of spoken strategic communication.

Corpus

As previously described, we not only wish to bring further attention to the analysis of argument structure as an important method for strategic communication and management, but also draw from the work of previous researchers examining argument macrostructure to develop an adapted argumentation framework that is more applicable in practice and accounts for the elements that make spoken strategic communication and ECCs unique. Therefore, context is particularly important for the present study. Given that case studies are considered ideal for conducting 'in-depth exploration of intricate phenomena within some specific context' (Rashid *et al.*, 2019, p. 1), we follow a case study approach. Considering the importance of case selection in qualitative inquiry (Flyvbjerg, 2006), we employed the principle of purposeful sampling, whereby the researchers select 'information-rich cases to study, cases that by their nature and substance will illuminate the inquiry question being investigated' (Patton, 2014, p. 570).

We decided to focus on the first four post-IPO quarters of Facebook, Splunk and Zynga, and examine

the arguments advanced in the discussion part of their ECCs in support of their new explorative activities.³ The rationale behind this decision was that: (i) new explorative activities appear to be a frequent point of scrutiny (e.g. Benner, 2010), thus creating the opportunity for argumentation; (ii) Facebook, Splunk and Zynga all operate in the high-technology sector and we therefore expected a plurality of new explorative activities discussed; (iii) firms typically face greater uncertainty during their first post-IPO year (Kraus and Strömsten, 2012), which once again increases the opportunities for argumentation; and (iv) we wanted to ensure that the context remains unchanged for all quarters included in our analysis (i.e. young firms that all IPOed around the same time and interacted with actors they did not have an established relationship with). Our unit of analysis was the individual argumentation effort in support of these firms' explorative activities every time an analyst asked a question about them during the discussion part of the ECCs examined. This resulted in 65 argumentation efforts analysed in total. Access to ECC transcripts was gained via Bloomberg Terminals.

Argument macrostructure-analysis methods

As mentioned earlier, this study proposes a methodological framework that is appropriate for the analysis of argument macrostructure in spoken strategic communication. Freeman (2011) suggests that there are two approaches to analysing argument macrostructure found in the literature, namely the *standard* and the *Toulmin* approach. In addition, these frameworks have been adapted and extended by other scholars to facilitate argumentation analysis. In the paragraphs below, we review and discuss these approaches.

The standard approach to argument macrostructure analysis

The standard approach, which has its roots in the seminal works of Beardsley (1974) and Thomas (1986), examines argument macrostructure using diagrams, where argument components are represented by circles and logical support by arrows. The two typical argument components met in this approach are: (i) a *conclusion*, which is the statement the argument attempts to establish; and (ii) a *premise*, which is a statement in support of the conclusion. Furthermore, within this approach, six potential argument structures are

acknowledged, namely *single premise*, *divergent*, *serial*, *linked*, *convergent* and *combination*. These structures are presented in further detail in Table 1.

Despite the standard approach offering a straightforward way to analyse argument macrostructure, Freeman (2011) sees two interconnected and important limitations to it. First, with the standard approach we are asked to accept the premises offered outright or at least assume they are true. Second, the standard approach views arguments as products and is designed for the analysis and evaluation of written arguments, where one proponent makes their case for one or more conclusions, without the presence of a challenger (which is exactly why we are asked to accept the premises offered outright or at least assume they are true).

The Toulmin approach to argument macrostructure analysis

Freeman (2011) argues that, in his original work, Toulmin (1958) offers a different approach to argument macrostructure analysis, viewing arguments as a process (or procedure, if an exchange is governed by certain rules and regulations) instead of as a product. Furthermore, he explains that the Toulmin approach can capture the dialectic aspects of the exchange between a proponent and a challenger who will not accept any premises at face value. Furthermore, Gasper and George (1998) acknowledge that Toulmin's argumentation framework makes multiple contributions to the study of arguments as, instead of viewing arguments as comprised of statements that are either conclusions or premises (or both), it establishes that arguments are comprised of components that serve different functionalities which decide how the components interconnect and contribute to the conclusion getting accepted. The above are of particular importance to this study because ECCs are a context within which an exchange, governed by certain rules and regulations, takes place between a proponent (executives) and a challenger (analysts).

Toulmin presents arguments comprising six components (see Figure 1): (i) the claim (C) which is the conclusion the argument attempts to establish; (ii) the grounds (G) which is the evidence in support of the claim; (iii) the warrant (W) which is the principle that authorizes the step from the grounds to the claim; (iv) the backing (B) which is the premise the warrant is accepted upon; (v) the qualifier (Q) that indicates the strength with which the claim is made; and (vi) the rebuttal (R) that indicates the circumstances that make the warrant contestable.

Despite the benefits discussed above and its multiple contributions to the study of arguments, however, Toulmin's argumentation framework has also been criticized, especially due to its use of warrants which are largely problematic and difficult to apply in practice. For instance, van Eemeren, Grootendorst and Kruiger

³To decide whether an activity was explorative, we relied on the items found in the studies of He and Wong (2004) and Jansen, Van Den Bosch and Volberda (2006). Explorative activities were considered to be activities that introduced new products/services, extended product ranges and entered new technology fields, markets and/or distribution channels.

Table 1. Argument structures identified by the standard approach


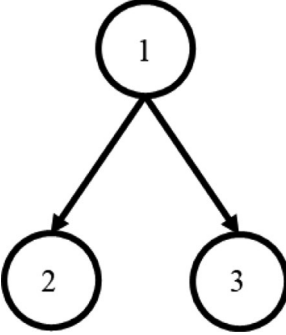
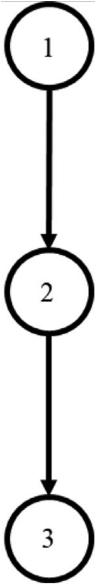
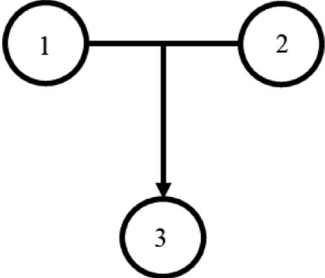
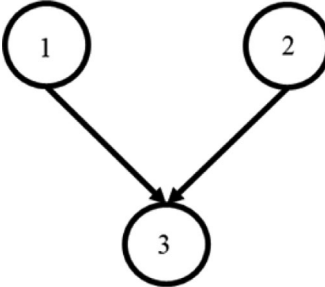
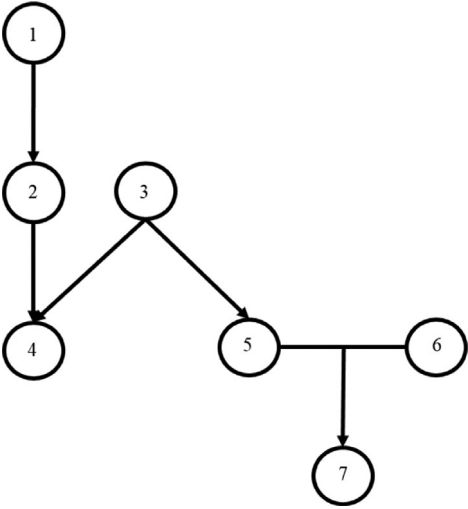
Argument structure	Description
Single premise	Represents the simplest structure met in an argument, where one premise provides support for one conclusion. Argumentation typically involves more than one premise and/or more than one conclusion, which is addressed by the remaining five structures.
	
Divergent	Involves one premise, but this premise is used to provide support for two independent conclusions.
	
Serial	Involves one final conclusion, one intermediate conclusion and one initial premise. To get accepted, the final conclusion depends upon the intermediate conclusion, which in turn depends upon the initial premise. As such, the intermediate conclusion is both a conclusion and a premise.
	

Table 1. (Continued)

Argument structure	Description
<p data-bbox="145 264 209 287">Linked</p> 	<p data-bbox="794 264 1473 575">Involves two premises that provide support for one conclusion. What sets the linked structure apart from other argument structures is that the two premises are connected by relevance and the conclusion can only get accepted in the presence of both. For example, if we wanted to establish that Thomas has been eating chocolate-flavoured ice cream, we could say: (1) Thomas has been eating chocolate-flavoured ice cream; (2) his clothes are covered in chocolate; and (3) I saw the ice-cream van leaving a few minutes ago. If we simply say that we saw the ice-cream van leaving, there is not enough evidence that Thomas bought something from the van. Similarly, if we simply say that Thomas's clothes are covered in chocolate, there is not enough evidence that he has not been eating chocolate in some other form.</p>
<p data-bbox="145 590 252 613">Convergent</p> 	<p data-bbox="794 590 1473 909">Involves two or more premises that provide support for one conclusion but are connected by modality instead of relevance, meaning that they do not depend on one another, but their combination makes a stronger case in favour of the conclusion. For example, if we wanted to establish that Thomas will have a stomach ache, we could say: (1) Thomas will have a stomach ache; (2) I saw him eating chocolate-flavoured ice cream, (3) candy and (4) drinking soda. If we simply say that we saw Thomas doing any of those things individually, there is a weak likelihood that someone will believe us. However, if we say that we saw him doing all of those things combined, we make a stronger case that he will have a stomach ache.</p>
<p data-bbox="145 924 268 947">Combination</p> 	<p data-bbox="794 924 1473 1465">Acknowledges that in argumentation, we may use a combination of all the previous structures within the same argument.</p>

(1987) argue that the difference between grounds and warrants is only clear in Toulmin's examples. A more comprehensive approach to warrants is found in theories and models of argument schemes and inferential structures. A prominent example is the argumentum model of topics (AMT) (Rigotti and Greco Morasso, 2010). Among other types of explicit and implicit premises, AMT's maxims capture the essence of the inference rules Toulmin calls warrants. Specifically, maxims represent inferential connections whose validity must be evaluated through in-depth semantic analysis. As such, warrants extend beyond the scope of our framework, which specifically focuses on argu-

ment macrostructure. That is, of course, not to say that frameworks specifically focusing on macrostructure and AMT cannot be used in a complementary manner. While the focus of the present study remains on macrostructure, consistent with Palmieri and Musi (2020; see Appendix 1), researchers in spoken strategic communication could employ both our framework and AMT in combination to elicit richer insights.

Adaptations of the standard and Toulmin approach

Both the standard and the Toulmin approach have been employed and adapted by researchers in various

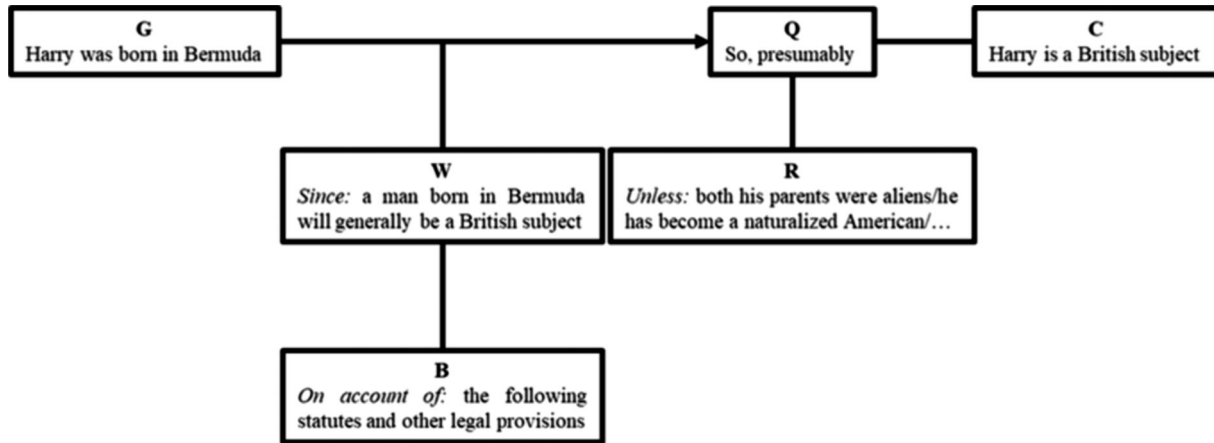


Figure 1. Example of main components of Toulmin's (1958, pp. 104–105) argumentation framework

contexts. In this section, we review some relevant adaptations, discussing their relevance to our context.

Starting with the standard approach, Freeman (2011) borrows elements from the Toulmin approach and produces an integrated model. In this integrated model, he retains the original premise and conclusion but acknowledges that an argument may have more than these two components. In particular, he introduces modalities and defeaters which resemble Toulmin's qualifiers and rebuttals, respectively. Modalities are words/statements that indicate the strength with which the premises support the conclusion. For example, 'certainly' indicates greater strength compared to 'probably'. Defeaters are statements such that, in their presence, the premises no longer lead to the desired conclusion. Regarding warrants, Freeman (2011) argues that as inference rules, they have no place in argument analysis. When a conclusion can be inferred from two explicit statements taken together, he proposes a linked structure where both are treated as premises. However, an exception is made for generalizations. If such generalizations are nomic (i.e. relating to a wider whole in a lawlike way; see Freeman, 2005), they are treated as warrants and excluded from the mapping. Finally, Freeman (2011) discusses the concept of enthymemes, which are non-explicit elements of an argument. Specifically, in the discussion of enthymemes, he acknowledges that certain premises and even conclusions can be implicit and still be considered part of an argument.

While Freeman's (2011) approach may serve as an appropriate starting point for a broader audience interested in frameworks designed for the analysis of argument structure, other studies specifically focus on strategic communication, examining how the approaches proposed by argumentation theorists apply to it and making relevant adjustments. Such a prominent example, focusing on argument macrostructure in strategic communication and proposing relevant adjustments, is the study of Fletcher and Huff (1990), who have applied

Toulmin's framework to a corpus revolving around AT&T's reformulation of strategy. While the authors retain Toulmin's claims, grounds, warrants and qualifiers, they also make certain adjustments. Specifically, they introduce subclaims whose acceptance is contingent on the context of the overarching claim an argument attempts to establish. They call the latter key claims. Furthermore, they appear to use grounds in place of backings, while they do not seem to identify any rebuttals in their context. Finally, they introduce elaborations, which are statements providing further information about any of the other components, along with reiterations, which are statements repeating information about any of the other components.

Fletcher and Huff's (1990) adaptation of Toulmin's framework further highlights two important points raised earlier in this study. First, depending on the context of argumentation, additional components may be present. Second, while conceptually sound, other components identified in existing conceptual frameworks may be difficult to identify in various contexts of strategic communication. Further, Fletcher and Huff's (1990) adapted framework is intended for written communication. As mentioned earlier, researchers concur that written and spoken strategic communication differ significantly from one another (e.g. Barry and Elmes, 1997; Mikašauskienė and Čiročkina, 2020), but there is insufficient guidance in the literature as to how to adapt frameworks for the analysis of argument macrostructure to a spoken strategic communication context. Consider, for example, the synchrono-asynchronous nature, whereby analysts ask questions during the call, but challenge executives' arguments in the reports they publish after the call. This happens both because of the strict format these calls have, and because analysts are motivated to maintain good relationships with firms to keep being provided with quality information (de Oliveira and Pereira, 2018). As such, they will typically leave the

contestation part for their reports, leaving executives with no room to further support their arguments. This, in turn, results in executives attempting to anticipate the potential points of contest and pre-empt them with appropriate arguments. As we demonstrate in the rest of this paper, our proposed method to analyse argumentation macrostructure works well in contexts such as these.

Adapted argumentation framework

The approaches discussed in the previous section serve as an important foundation for the development of our adapted argumentation framework. Consistent with an abductive approach (see Timmermans and Tavory, 2012), we used these approaches as our starting point and kept continuously moving between theory and our corpus. Specifically, we began our analysis of argument structure by using the components in Toulmin's (1958), Fletcher and Huff's (1990) and Freeman's (2011) frameworks as an a priori set of codes. As we were coding, we kept: (i) refining their definitions to better fit their application to our corpus; (ii) adding to them when new codes emerged; and (iii) removing from them when codes did not feel relevant/applicable. Furthermore, to ensure the rigour of our work, two of the authors coded the corpus independently from one another, resolved any disagreements through discussion and recoded as appropriate (see Armstrong *et al.*, 1997).

Regarding the Toulmin approach, we also took into consideration the guidance of researchers like Gasper and George (1998) and Simosi (2003), who identify some common pitfalls that can lead to the misuse of the framework. Specifically, as they explain, researchers might often: (i) try to fit everything into one diagram; (ii) try not to deviate from the original layout; (iii) find it difficult to identify each component as they might spread across multiple pages of text, in a not necessarily logical/convenient sequence; and (iv) find it difficult to visually represent components and their interconnections. To avoid the wrongful application of the framework, Gasper and George (1998) propose a number of considerations that have informed the present study: (i) the original diagram merely showcases the presence and functionality of different components, which means that there may be more than one claim (more than one linked diagram), more than one ground supporting a claim, ground supporting other grounds, etc.; (ii) claims and grounds are the only components that are always required, while others can either be explicit, implicit or unnecessary; (iii) the context and functionality/purpose of each component must always be taken into consideration before identifying them in a particular argument; (iv) diagrams must showcase the functionality of each component, as well as their interconnections.

Here, it is also important to note that while during the discussion part of ECCs, executives converse with analysts, analysis of argument structure was only applied to executive turns. The reasons behind this were: (i) in our context, it is executives who attempt to establish arguments; and (ii) the synchrono-asynchronous nature of ECCs entails that analysts do not challenge executives' arguments during the call. In fact, even though they identify some sort of argumentation in the prefaces of analysts' questions, Palmieri, Rocci and Kudraut-sava (2015) also do not annotate arguments in analysts' turns.

The process described above resulted in a number of codes/components that can be met in executive arguments. In fact, they can be used to form an adapted argumentation framework that does not stray too far from the other approaches discussed, yet is more practical and applicable to our context, accounting for the elements that make ECCs unique. These components serve different functionalities, but are not necessarily all simultaneously present in an argument. With regard to argument structures and ways in which these components can potentially connect to one another, arguments advanced in our corpus would employ a combination of divergent, serial, linked and convergent structures. Single structures were also met, though more rarely. We present these components in the paragraphs below, using relevant examples from our corpus. A summary of the components identified, along with their similarities to and differences from the other approaches discussed, as well as diagramming instructions, can be found in Table 2.

The components that were part of the other approaches presented, but excluded from our adapted argumentation framework, were warrants (and by extension backings) and qualifiers/modalities. Specifically, in dealing with conclusions that could be inferred by two statements taken together, we adopted Freeman's (2011) approach and treated their structure as linked. Explicit nomic generalizations were not met in our corpus, but had they been met they would have been treated as warrants and excluded from the analysis. Moving on to qualifiers/modalities, we found no evidence of them being used as explicit argument components. In fact, relevant prior work either does not consider qualifiers (e.g. Green, Li and Nohria, 2009; Simosi, 2003) or provides no evidence of them being explicit components rather than inferred by analysts themselves (e.g. Fletcher and Huff, 1990; Freeman, 2011; Gasper and George, 1998). Ketokivi and Mantere (2021) link the strength with which an argument is made to the type of reasoning involved (i.e. certainly or evidently when the reasoning is deductive, likely or probably when it is inductive, plausibly when it is abductive). Following on from the above, and while we acknowledge qualifiers' importance, we believe that examining the strength with

Table 2. Codes/components that emerged from argumentation analysis

Code/component name	Similarities to and differences from Toulmin's (1958) original framework, Fletcher and Huff's (1990) adapted framework and Freeman's (2011) integrated framework	Diagramming instructions
Key claim (KC)	Similar to Fletcher and Huff (1990), an argument might attempt to establish a key/overarching claim which can either be explicit or implicit. In the latter case, the key claim can be inferred from other intermediate claims in the argument (see Freeman's enthymemes). Freeman (2011) also acknowledges the possibility of such claims being present in an argument when he discusses the serial structure. However, it is important to note that not all arguments have a key claim.	Key claims connect to other argument components through serial or combination structures.
Claim (C)	Other (non-key) claims can also be part of an argument. The term 'subclaims' used by Fletcher and Huff (1990) was not deemed appropriate as not all arguments have a key claim, nor are all other claims contingent on them.	Claims connect to other argument components through a combination of divergent, serial, linked and convergent structures.
Grounds (G)	Grounds are one of the two fundamental argument components ^a (with the other being claims; Freeman, 2011). However, grounds not only provide support for key claims and claims, but also for other components of an argument. In serial and combination structures, other argument components can act as grounds as well.	Grounds connect to other argument components through a combination of divergent, serial, linked and convergent structures.
Elaboration (ELAB)	According to Fletcher and Huff (1990), elaborations are statements providing further detail about any of the other components. We clarify that unlike grounds, elaborations offer no additional evidence in support of other argument components, but rather are meant to expand on existing components.	Elaborations are attached to the argument component they are expanding on, without any arrows between them.
Reiteration (REIT)	According to Fletcher and Huff (1990), reiterations are statements repeating information about any of the other components. We clarify that, similar to elaborations, reiterations offer no additional evidence in support of other argument components. Their purpose is to remind argumentation participants of information already shared and guide them in connecting it to all relevant argument components.	Reiterations are attached to the argument component they are repeating, without any arrows between them.
Counterargument (CA)	Counterarguments have a contesting function. Toulmin (1958) identifies rebuttals, which are attacks on the warrant. Additionally, more recent work identifies ways in which arguments can be attacked more broadly (e.g. Freeman, 2011; Palmieri and Mazzali-Lurati, 2021; Palmieri and Musi, 2020; Peldszus and Stede, 2013). In particular, this more recent work identifies both rebuttals which can attack premises or conclusions, and undercutters which can attack inferential moves from premises to conclusions. We decided to use a different term because we consider counterarguments distinct argument components that play a unique role in our context. Specifically, unlike rebuttals and undercutters which are typically advanced by the challenger of an argument, counterarguments are advanced by the proponent. While they can admittedly attack both argument components and inferential moves, which would potentially call for two distinct components, we believe that any differences can adequately be illustrated diagrammatically, and instead place emphasis on a different level of granularity, namely the possibility of a proponent employing components with a contesting function. Here it is important to note that unlike counteroffers, which are defined below, counterarguments have negative connotations.	We follow an approach similar to Freeman (2011) and attach counterarguments to argument components and inferential moves, using a horizontal line.
Counteroffer (CO)	Similar to counterarguments, counteroffers have a contesting function. However, counteroffers bear positive connotations that are meant to offset counterarguments' attack on other argument components and inferential moves. As such, they are similar to Freeman's (2011) counter-defeaters and Peldszus and Stede's (2013) counter-attacks. Nevertheless, we once again decided to use a different term to emphasize counteroffers' close connection to counterarguments, which are attacks raised by proponents themselves.	We follow an approach similar to Freeman (2011) and attach counteroffers to lines connecting counterarguments to argument components and inferential moves, using vertical lines and placing an X at their point of intersection.

Table 2. (Continued)

^aIn a few of the cases examined, claims would not be supported by any explicit grounds. Referring back to Hitchcock's (2002, p. 289) definition of an argument as 'a spoken discourse or written text whose author (the arguer) seeks to persuade an intended audience or readership (the Other or the Others) to accept a thesis by producing reasons in support of it', these claims indeed did not qualify as arguments, as no supporting reasons were produced. However, we deem it appropriate to raise two points. First, while no supporting reasons were produced, executives were still trying to persuade an audience to accept a thesis which, if successful, would be of benefit to the former. Second, existing research has reached no agreement as to how such claims must be treated. For instance, Hitchcock (2002) characterizes implicit premises as a myth that should be abandoned. Similarly, Palmieri, Rocci and Kudrautsava (2015) consider any unjustified executive answers as mere opinions and distinguish them from argued standpoints. On the other hand, Simosi (2003, p. 188) explains that the analyst must use their judgement to evaluate whether the missing premises are 'well-known or assumed', or whether they are missing for other reasons. Similarly, Greco *et al.* (2018) acknowledge the possibility of having an argument whose premises are left implicit because they are taken for granted. To reach a conclusive decision on how such claims must be treated, we believe that future research could focus on a larger corpus of cases where any claims are not supported by explicit grounds and examine: (i) whether the premises can be reconstructed by the analyst; and (ii) whether there are cases where financial-market stakeholders appear to have been persuaded about the validity of these claims.

which an argument is made goes beyond the focus of this study on argument macrostructure.

Having excluded warrants, backings and qualifiers/modalities from our model, one could naturally ask: How is the Toulmin approach relevant to this study? There is a two-part answer to this question. First, unlike the standard approach, the Toulmin approach acknowledges the existence of more than two argument components. While we may not have kept the additional components that fit into Toulmin's legal context, we have applied the same philosophy in our analysis. In fact, even Toulmin acknowledges that their framework does not offer a one-size-fits-all solution and that researchers must demonstrate flexibility by taking context into consideration. Furthermore, Freeman's (2011) integrated model also introduces additional components inspired by Toulmin. Second, while we do not deny that warrants exist and are an important aspect of argumentation, we argue that their examination extends beyond the analysis of argument macrostructure.

Fundamental components

While our analysis of executive arguments reveals a number of different components, the fundamental components met in almost every argument in our corpus were two: (i) the *claim* (C), which is the conclusion the argument attempts to establish; and (ii) the *grounds* (G), which is the evidence in support of the claim. For this reason, we find it helpful to begin by examining these two components through the following excerpt about Zynga's CityVille (compared to FarmVille) from the firm's Q4 2011 ECC:

[...]

1. So I'd say when you look at CityVille and FarmVille, both are doing well.
2. As we said in the call, CityVille had a record quarter last quarter...
3. and continues to be a top – both of them are top six games on Facebook right now.

[...]

In line 1, the executive attempts to establish that both titles are doing well (*claim*). In support of this claim, they offer relevant evidence in line 2 (*grounds*). Specifically, they explain that CityVille, which is the focal point of this argumentation effort, had a record performance over the last quarter. Furthermore, in line 3, they explain that both continue to be top-performing titles on Facebook, offering additional evidence to make a stronger case for their claim (*grounds*; convergent structure). Figure 2 presents a map of the components of the argument. While helping the reader understand the basic structure of an argument in our corpus, the example presented above is overly simplistic, in the sense that it does not fully capture all the particularities of the components discussed. Specifically, the example only had one claim the executive was attempting to establish. In most of the arguments examined, however, there would be multiple claims, leading to more complicated maps. Some of these claims would be what Fletcher and Huff (1990) call *key claims*, whereby the executive would attempt to establish a key/overarching claim in either an explicit or implicit manner. In the case of implicit key claims, they would be inferred from other intermediate claims in the argument. This is also in agreement with Freeman (2011), who acknowledges the possibility of such claims being present in an argument when they discuss the serial structure. However, not all arguments had a key claim, and not all other (non-key) claims were contingent on them, which is why Fletcher and Huff's (1990) *subclaims* were not deemed appropriate as a term. Furthermore, in the cases examined, grounds would not only provide support for key claims and claims, but also for other components of an argument. In serial and combination structures, other argument components would act as grounds as well.

Additional components

Apart from the two fundamental components discussed in the previous paragraphs, executive arguments had four additional components: (i) *elaborations*;

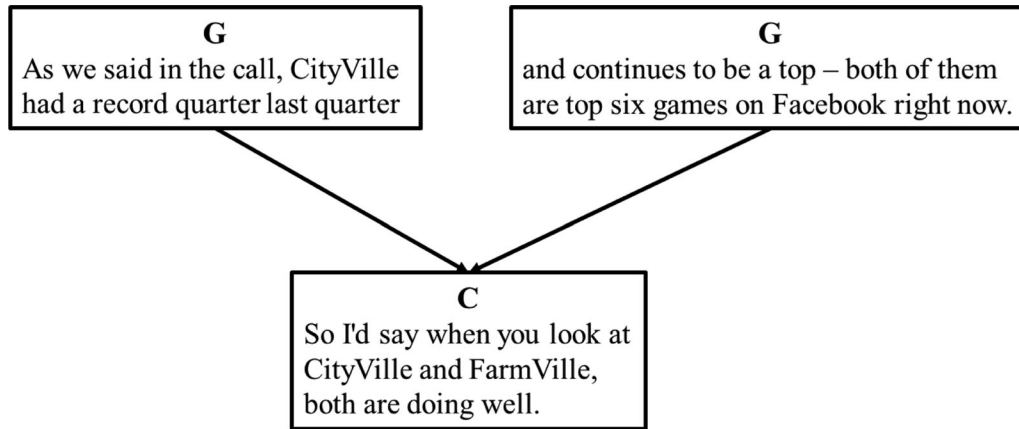


Figure 2. Example of the adapted argumentation framework applied to an argument in Zynga's Q4 2011 ECC

(ii) *reiterations*; (iii) *counterarguments*; and (iv) *counteroffers*. Specifically, similar to Fletcher and Huff (1990), elaborations are statements providing further detail about any of the other components. However, unlike grounds, elaborations offer no additional evidence in support of other argument components, but rather are meant to expand on existing components. In other words, while they do not increase the likelihood of all argumentation participants agreeing to a certain conclusion per se, they increase the likelihood of all argumentation participants having a common understanding of the information shared. Furthermore, from a practical perspective, elaborations can be useful to argumentation analysts, who would otherwise be left wondering how to code these statements. Moreover, similar to Fletcher and Huff (1990), reiterations are statements repeating information about any of the other components. However, similar to elaborations, reiterations offer no additional evidence in support of other argument components. Their purpose is to remind argumentation participants of information already shared and guide them in connecting it to all relevant argument components. We find this particularly important in spoken communication contexts such as ours, as they remind argumentation participants of other argument components they cannot return to by reading back.

At the same time, counterarguments have a contesting function. Toulmin (1958) identifies rebuttals, which are attacks on the warrant. Additionally, more recent work identifies the ways in which arguments can be attacked more broadly (e.g. Freeman, 2011; Palmieri and Mazzali-Lurati, 2021; Palmieri and Musi, 2020; Peldszus and Stede, 2013). In particular, this work identifies both rebuttals, which can attack premises or conclusions, and undercutters, which can attack inferential moves from premises to conclusions. We decided to use a different term because we consider counterarguments to be distinct argument components that play a unique role in our context. Specifically, unlike rebuttals and under-

cutters, which are typically advanced by the challenger of an argument, counterarguments are advanced by the proponent. While they can admittedly attack both argument components and inferential moves, which would potentially call for two distinct components, we believe that any differences can be adequately illustrated diagrammatically, and instead place emphasis on a different level of granularity, namely the possibility of a proponent employing components with a contesting function. Here it is important to note that unlike counteroffers, which are defined next, counterarguments have negative connotations. Lastly, similar to counterarguments, counteroffers have a contesting function. However, counteroffers bear positive connotations that are meant to offset counterarguments' attack on other argument components and inferential moves. As such, they are similar to Freeman's (2011) counter-defeaters and Peldszus and Stede's (2013) counter-attacks. Nevertheless, for reasons similar to counterarguments, we once again decided to use a different term. We examine these additional components through the following excerpt about Facebook's Social Ads from the firm's Q1 2013 ECC:

[...]

1. I think we're really early,
2. but what we really expected was to not be able to necessarily show everyone an ad every day
3. because we weren't sure that we had the quality upfront.
4. And that was some of the engagement metrics that I was talking about before.
5. So we've been positively surprised that the quality has been naturally high and there's been basically no engagement hit at all that's very meaningful.
6. So what that means is that now – previously, we thought we were going to have to spend 6 to 12 months just tuning in in order to be able to get it to a quality level and then incrementally roll out ads.
7. Whereas now we've had them rolled out

8. and now we can go straight into doing the same types of things to improve targeting and improve the quality of the ad format,
9. which obviously when they're fully deployed has much more leverage to those changes than if we had to kind of wait until we hit different quality thresholds to roll it out more.
10. So I think we're just pretty early.
11. I don't know –
12. it's not that it's going to go in a completely different direction.
13. I think it's mostly the two things that we've talked about so far, good targeting and good ad formats.
14. And I think there's just a lot of room to grow in both. [...]

In line 1, the executive attempts to establish that it is early to share information (*claim*). This claim is not explicitly or implicitly supported by any grounds. Then, in line 2, they use that claim in support of another. This claim has negative connotations, since the executive explains that the firm's expectations were low (*counterargument*). In further support of this counterargument, in line 3, they explain that they were not sure about the quality (*grounds*; convergent structure) and in line 4, they provide more information about it (*elaboration*). In line 5, the executive once again uses their initial claim in support of another, but this time it has positive connotations, since they explain that they have been positively surprised (*counteroffer*; divergent structure). Then, in line 6, they provide more information about their counterargument (*elaboration*), whereas in line 7, they provide more information about their counteroffer (*elaboration*). Moving on, in line 8, they make a claim about what the firm can achieve in the near future. While the counterargument attacks this claim, the counteroffer neutralizes its attack. Then, in lines 11–13, they elaborate further on this claim (*elaboration*). In line 9, they explain that since they do not have to wait, they have the leverage to achieve more (*grounds*). Lastly, the executive uses their claim in line 8, relevant elaboration in lines 11–13 and grounds in line 9 in support of their final and overarching claim in line 14, which is an optimistic prediction about the future (*key claim*; linked structure). Interestingly, before their final claim, the executive repeats their initial claim that it is early in line 10 (*reiteration*). The proximity between the initial and final claim this reiteration achieves, brings the argument full circle and reinforces the necessary connections between all the relevant argument components. Figure 3 presents a map of the components of the argument as discussed above.

Higher-order components

Having discussed the fundamental and additional argumentation components that can potentially be met in a

spoken strategic communication context such as ECCs, it is important to note that our analysis also resulted in two higher-order components: (i) *commitments*; and (ii) *refutational pre-emptions*.

As mentioned earlier in some of the arguments examined, executives would advance key claims. These key claims were essentially commitments about the future. This is consistent with the nature of new explorative activities, which represent investments with a long-term horizon. Flammer and Bansal (2017) have shown that such investments typically lead to a temporary decrease in measures of operating performance and take time to manifest into profits. Consequently, executives are called to commit that their new explorative activities will generate value in the future and persuade financial-market stakeholders by providing evidence in support of this commitment.

Counterarguments succeeded by counteroffers would form refutational pre-emptions, which can pre-emptively weaken any attacks on the argument. This is consistent with the synchronous–asynchronous nature of ECCs. Since executives do not have the opportunity to further defend their arguments against analyst challenges, they can only pre-emptively do so. Contrary to Walton and Reed (2003), who suggest that once a proponent has presented their premises, the burden of proof is discharged until a challenger raises a critical question, executives in this context have to assume both the proponent and the challenger roles. This finding is also in line with inoculation theory, a parallel for medical inoculation where a weakened virus motivates the production of antibodies to protect the host from the attack of a stronger virus (McGuire, 1964). In inoculation theory, the mechanism described above – where the source of a message raises counterarguments and then refutes them – is called refutational pre-emption, and can help maintain a positive image by pre-emptively weakening potential attacks (Compton, 2012; McGuire, 1964). We examine these higher-order components through the following excerpt about Splunk's Hadoop from the firm's Q3 2012 ECC:

1. [...]
2. I was just having breakfast about a month ago with the CIO of a multi-billion, tens of billions of dollar company,
3. and I asked him, I said, what – when you hear the term big data, what does that mean to you?
4. And he just started laughing
5. and he said our data was always big.
6. There was nothing that happened recently that caused it to become big.
7. So to me, the CIO, it's a total hype-cycle.
8. But he said, yeah, my guys are experimenting with Hadoop

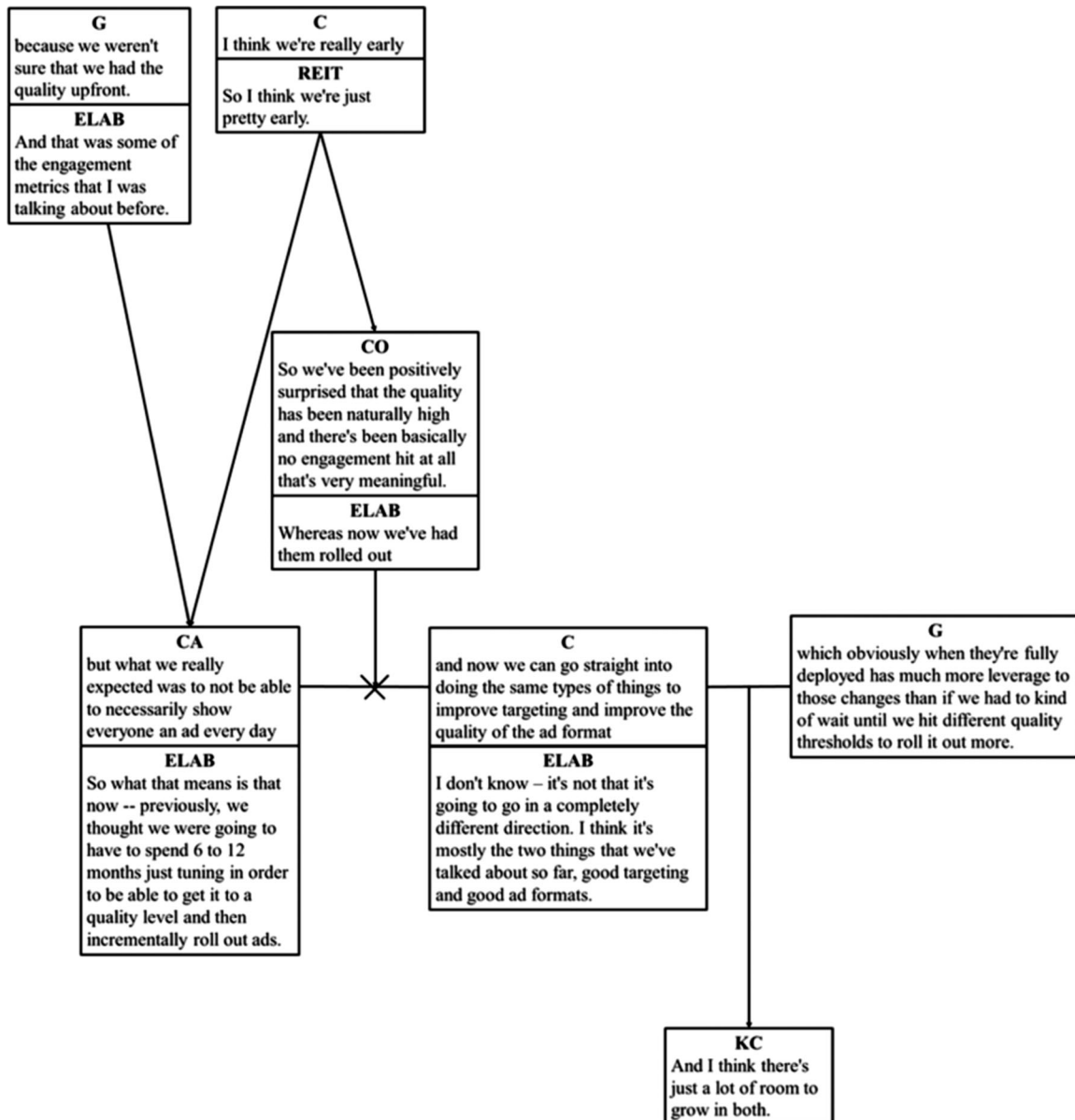


Figure 3. Example of the adapted argumentation framework applied to an argument in Facebook's Q1 2013 ECC

9. and we're trying to throw some data in there and see what happens and so forth.
10. But he said, the question I keep posing to them is, what question are you trying to solve?
11. What problem are you trying to solve?
12. And that's where I think our Connect app can really make a difference.
13. So many customers I talk to are frustrated because they throw a bunch of data in Hadoop and then they don't know exactly how to get it out.
14. It's kind of hard;
15. it's a whole stack of tools.
16. We're giving them a new way to do that, which is bring the data into Splunk and index it, and then you can use it live and then you can archive it into Hadoop.
17. And when you need to get it back, Splunk can pull it right back out and provide you easy search language analytics on that information.
18. So we're just sort of -- we view that as a great way for Hadoop, great cheap batch storage;
19. Splunk, it's easy-to-use, real-time analytics.
20. More and more of our customers are coming back to us and saying, yep, that makes perfect sense to me.
21. So I think both of our -- both our app for connecting to the -- to that environment, plus our app for monitoring that environment will help provide

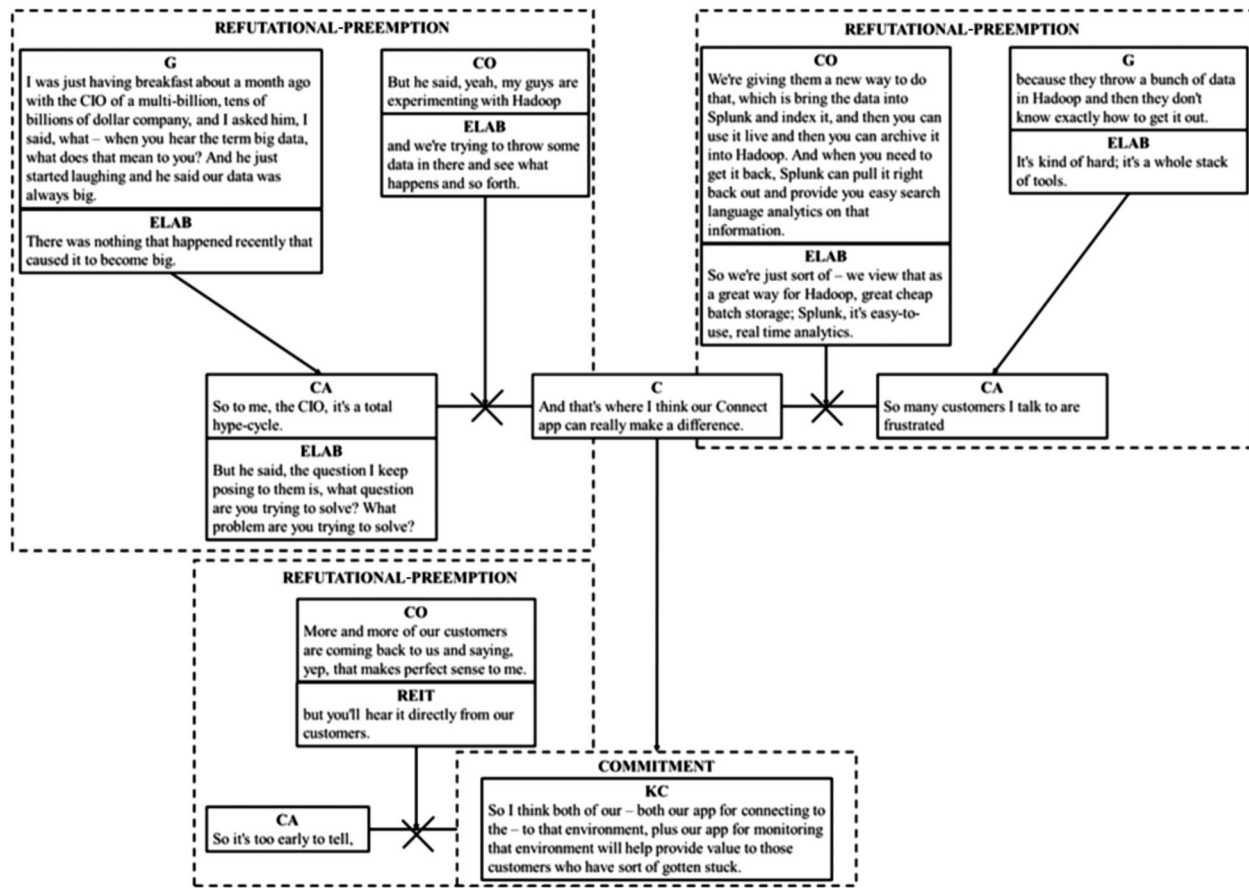


Figure 4. Example of the adapted argumentation framework applied to an argument in Splunk's Q3 2012 ECC

value to those customers who have sort of gotten stuck.

22. So it's too early to tell,
23. but you'll hear it directly from our customers.
24. [...]

In line 11, the executive attempts to establish the claim that the firm's new app can make a difference for customers. In support of this claim, they advance two refutational pre-emptions in lines 1–10 and 12–18, respectively. Specifically, in line 6, they advance a counterargument that questions the usefulness of the app, and in lines 9 and 10, they further elaborate on it. In lines 1–4, they explain that this counterargument is based on the grounds of an interaction they had with a customer, and in line 5, they further elaborate on it. Consistent with the mechanism of refutational pre-emptions described above, they attempt to neutralize this counterargument by advancing a counteroffer in line 7. In line 8, they elaborate further on it. In line 12, they advance another counterargument coming from customer feedback. In the same line, they offer the grounds for this feedback, and then in lines 13 and 14, they further elaborate on these grounds. To neutralize this counterargument, they advance another counteroffer in lines 15 and

16, explaining the relevant benefits the new app offers. In lines 17 and 18, they further elaborate on them. Having neutralized these two counterarguments, that could otherwise have arisen in the corresponding analyst report, they use their initial claim in line 11 in support of their key claim in line 20. This key claim represents an explicit commitment to offer customer value, and by extension an implicit commitment to offer shareholder value. To further inoculate this commitment from retrospective attacks (and potential litigation issues), they advance one last refutational pre-emption in lines 19–22. Specifically, in line 21, they advance a counterargument explaining that it is still early for any definitive conclusions. However, they neutralize the negative connotations of this statement by counteroffering positive customer feedback in line 19 and reiterating in line 22. Figure 4 presents a map of the components of the argument as discussed above.

Discussion

As explained in the introduction to this paper, a firm's ability to fulfil their strategic goals largely depends on how they communicate their strategies with their

stakeholders. In this study, we specifically focused on spoken strategic communication. Adapting previous work on argumentation, we propose a methodological framework, using ECCs as the specific spoken strategic communication context, to demonstrate the key elements of this framework. The proposed methodological framework offers a method to analyse the argumentation structure of this form of communication, in the absence of information feeds into the existing analytical frameworks. It draws on important existing frameworks such as those of Toulmin (1958), Fletcher and Huff (1990) and Freeman (2011), but includes adaptations that, we believe, considerably expand the ability of researchers to undertake the analysis of the macrostructure of arguments in a wide range of contexts where spoken strategic communication is the norm. By doing so, our paper contributes to the literature of strategic communication and, by extension, the broader literature on strategy and leadership, and financial communications and investor relations. These contributions are discussed in the following paragraphs.

Research on strategic communication, and the areas it is linked to, typically examines how businesses can achieve goals such as resource acquisition, legitimacy and/or stakeholder support/cooperation by using stories, discursive strategies, frames, metaphors and analogies, as well as signals. At the same time, relatively few studies in the broader area engage in analysing argument structure (e.g. Fletcher and Huff, 1990; Green, Li and Nohria, 2009; Harmon, Green and Goodnight, 2015; Mitroff and Mason, 1980; Palmieri and Musi, 2020; van Werven, Bouwmeester and Cornelissen, 2015; Werder, 1999). Furthermore, while we build on previous studies, we place emphasis on enabling the less experienced argumentation analyst to deal with the practical challenges of empirical work that analysing argument structure might entail. Additionally, extant empirical studies dealing with the analysis of argument structure within the area of strategic communication have not been applied to a spoken strategic communication context. Our paper adds to the aforementioned studies. By (i) removing some of the more criticized and/or less applicable components of argument macrostructure (see warrants, backings and qualifiers); (ii) introducing additional components that account for the elements that make spoken strategic communication and ECCs unique (see commitments and refutational pre-emptions); and (iii) explicating the functionalities of and interrelations between all components, our adapted argumentation framework not only brings further attention to the analysis of argument structure in the area of strategic communication, but also offers the necessary guidance to future researchers which makes it more applicable, especially in a spoken strategic communication context.

Our study also contributes to the literature on financial communications and investor relations. This area focuses on firms' communication with investors, analysts and other financial-market stakeholders, and is concerned with both operational and strategic goals. In a recent review of the literature in this area, Hoffmann, Tietz and Hammann (2018) find that most relevant studies are based on surveys, content analyses and sometimes even experiments, with relatively little conceptual and qualitative work. This is in line with our own understanding of the area. For example, studies on ECCs, which are the focal point of our paper, typically employ quantitative analyses of verbal (e.g. Jancenelle, Storrud-Barnes and Javalgi, 2017; Price *et al.*, 2012) and non-verbal questions (e.g. Hobson, Mayew and Venkatachalam, 2012; Mayew and Venkatachalam, 2012), with only a few of them taking a qualitative approach such as discourse analysis (Crawford Camiciottoli, 2010) and conversation analysis (de Oliveira and Pereira, 2018). Our study adds to this relatively small body of qualitative work in the area and highlights two key elements of the communication between firms and analysts, namely commitments and refutational pre-emptions. Specifically, when communicating about their new explorative activities, firm executives are called to persuade financial-market stakeholders that these activities will generate value in the future. Making relevant commitments and providing evidence in support of them appears to serve this purpose in our context. Furthermore, given the synchrono-asynchronous nature of ECCs, refutational pre-emptions appear to give executives the opportunity to pre-emptively defend their arguments against future analyst challenges.

Our study also makes a number of contributions to management practice. In particular, firm executives and their IR teams can use our framework to analyse the arguments in ECCs they have had in the past. While, in our paper, we have only discussed the analysis of argument macrostructure, and not addressed the evaluation, firms could compare the results of their analysis against analyst response in their corresponding reports to evaluate the acceptability of their arguments and identify any flaws or missed opportunities. In turn, they could use this knowledge in their preparation for future ECCs. Specifically, highlighting commitments and refutational pre-emptions, our adapted argumentation framework can help practitioners identify the grounds that are acceptable in support of commitments made in this context, and be cautious of potential analyst concerns that must be pre-emptively addressed.

Despite its contribution to knowledge, however, our study does not come free of limitations, which are important to acknowledge. Specifically, it is important to note that the analysis performed is valid in the

particular context studied. As such, a larger number of cases is needed to evaluate their applicability and generalizability. Additionally, future research could evaluate the effectiveness of the presence (or absence) of the different argumentation components uncovered by our study. For example, utilizing analyst reports, researchers could evaluate whether the presence (or absence) of support components and/or refutational pre-emptions results in executives' communication efforts being received more positively (or negatively). Furthermore, future research could use the typology developed by Palmieri, Rocci and Kudrautsava (2015) and our framework in a manner complementary to one another, to evaluate argument macrostructure by comparing and contrasting the effectiveness of different types of arguments in the presence or absence of different argument components.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section at the end of the article.

Analysing the macrostructure of spoken strategic communication: an application of argumentation analysis on high-technology newly-public firms' earnings conference calls

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