

**DIALOGICAL ENGAGEMENT IN OIL AND GAS  
COMPANIES VIA COMMUNICATION IN  
FACEBOOK**

*(Full Paper)*

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**Abstrak**

*Penelitian ini memfokuskan pada topik akuntansi sosial dan lingkungan terutama dalam keterbukaan komunikasi berbasis web atau internet. Artikel ini mencoba untuk menjawab pertanyaan-pertanyaan antara lain sampai sejauh mana komunikasi perusahaan minyak dan gas melalui Facebook menggambarkan keterlibatan dialogis dari para pemangku kepentingan mereka dan bagaimana perusahaan minyak dan gas memanfaatkan Facebook sebagai media untuk melibatkan para pemangku kepentingan dalam dialog. Oleh karena itu, tujuan dari penelitian ini adalah untuk menguji sejauh mana komunikasi perusahaan minyak dan gas bumi melalui media sosial (dalam hal ini, Facebook) dan menjelaskan keterlibatan dialogis seperti yang ditunjukkan menggunakan pendekatan 'agonistik'. Penelitian di bidang ini adalah studi lebih lanjut tentang pendekatan 'agonistic', mengingat pendekatan ini sebelumnya belum pernah diterapkan dalam kasus nyata / praktik. Oleh karena itu artikel ini bertujuan untuk mengisi kesenjangan dan menerapkan kerangka demokrasi agonistik dalam praktek, memberikan konsep untuk mengeksplorasi bagaimana media sosial dapat memfasilitasi keterlibatan dialogis. Untuk mencapai tujuan penelitian ini, analisis konten dari 1.623 'posting' Facebook dari empat perusahaan minyak dan gas dilakukan dengan menggunakan 'Sustainability Assessment Model' (SAM), mengingat potensi yang dimiliki model ini untuk dapat meningkatkan dialog (Brown, 2009). Hasil dari analisis konten dan diskusi lebih lanjut menunjukkan bahwa komunikasi melalui media sosial memiliki potensi strategis untuk melibatkan para pemangku kepentingan untuk bergabung dalam dialog diskursif. Selanjutnya, makalah ini diharapkan dapat memberikan wawasan bagi perusahaan tentang bagaimana mereka harus memanfaatkan media komunikasi (dalam hal ini media sosial) agar dapat meningkatkan keterlibatan pemangku kepentingan dalam dialog diskursif.*

**Kata Kunci:** *keterlibatan pemangku kepentingan, dialogis keterlibatan, SAM, demokrasi agonistik*

## **1. INTRODUCTION**

Sustainability disclosure has become an emerging issue of the sustainability area in recent decades (Rowbottom and Lymer, 2009). Companies mostly disclose sustainability information as a means of communication of their environment and social performance to their stakeholders. Despite sustainability disclosure remaining a voluntary practice, it has gained wide attention and become current practice for many companies (Adams, 2004; Deegan et al., 2002; Eljido-Ten et al., 2010; Gray et al., 1995; and KPMG, 2011). To provide the standardized sustainability disclosure particularly in the form of report, the Global Reporting Initiative (GRI) was established and introduced in 1997 with the hope of it encouraging stakeholders' dialogue and engagement (Global Reporting Initiative, 2002). However, as sustainability reporting has matured and its practice has developed into "a sophisticated stage, the importance of communication issues in particular stakeholder dialogue and its core features like interactivity and target group tailoring are of increasing relevance" (noted by Isenmann et al., 2011, pg. 1). This calls for an opportunity to use internet or web-based media as a communication tool, for it facilitates stakeholders' dialogue and engagement (Adams and Frost, 2004; Isenmann et al, 2011).

Other than the above reason, there is more evidence supporting the notion that research in social and environmental accounting (SEA) particularly in the focus of disclosure via web-based media or the internet is worth further study. For example, a survey carried out by ERM (2000) suggests that despite the availability and applicability of various "stakeholder engagement mechanism", most companies did not take full advantage of the use of internet or web-based communication media to engage their stakeholders in discursive communication or dialogue. This is regrettable given the fact that internet or web-based technologies would be excellent mediums in order to facilitate engagement with stakeholders (Shepherd et al., 2001).

Other than opportunities found from the above findings, there is a research gap which also motivates this study. That is, the previous literature assessing the dialogical participation and engagement have not yet applied an agonistic approach into the research framework, especially into real case/ practice (see for example Brown, 2009; Brown and Dillard, 2013; Brown and Dillard, 2015; Rowbottom and

Lymer, 2009). While it encourages critically reflective dialogue, an agonistic approach is arguably considered as having “a transformative potential in areas such as sustainable development” (Brown, 2009, pg.337).

Given the aforementioned evidence, this study is therefore purported to examine the extent to which companies’ communication via internet or web-based media (which in this case is social media) describes dialogical engagement as demonstrated using an agonistic approach. In addition, this study is applied in the context of oil and gas companies due to several reasons. Firstly, oil and gas companies represent the industry who pollute the most (European Pollutant Release and Transfer Register (EPRTR), Regulation 2006/166/EC). In addition, the dynamics of global crude oil price which occurred in 2014 has triggered the period of study in 2014 because it can examine how firms engage their stakeholders in dialogue and discussion in that particular year or period. Furthermore, to optimize the ability of social media in engaging stakeholders into discursive communication, Facebook is used to examine this relation. It coincides with Bonson and Ratkai (2013) who suggest that the best solution to create an open condition for dialogue is through corporate Facebook. Accordingly, this study examines how social media, particularly Facebook, describes dialogical engagement in the oil and gas companies.

Meanwhile, this paper tries to answer the questions of to what extent does oil and gas company communication via Facebook describe dialogic engagement from their stakeholders; and how do the oil and gas companies make use of Facebook as a medium for engaging stakeholders in dialogue?

In addition, the aim of this study is to examine the dialogic engagement process between companies and their stakeholders in regard to sustainability. It extends the study by Brown (2009) in the real business practice. This study is expected to provide useful insights into the practice of dialogic engagement for firms and stakeholders in general, in order to achieve accountability. Meanwhile, the objective is to examine the extent to which oil and gas companies’ communication via social media (in this case, Facebook) describes dialogical engagement as demonstrated using an agonistic approach.

## **2. THEORETICAL FRAMEWORK**

### *2.1. SUSTAINABILITY DISCLOSURE AND REPORT*

Sustainability disclosure and reporting have become a fast growing practice amongst companies with evidence of over 98% sustainability reporting growth from 1992 to 2007 (Frame et al., 2010). In addition, based on a KPMG survey in 2013, sustainability disclosure has been reported to become a worldwide practice by over 71% of the 4,100 companies surveyed (KPMG, 2013).

Companies aim to disclose sustainability information in the form of report, in order to communicate and enhance their relationship with stakeholders, which in turn can “advance business objectives” (Frame et al., 2010, pg.93). Furthermore, based on the most widely implemented sustainability guideline, GRI, “a primary goal of reporting is to contribute to an ongoing stakeholder dialogue” (GRI, 2002, pg.9). To establish a good quality dialogue, companies are supposed to engage their stakeholders in various forms of effective and “active communication” (Frame et al., 2010, pg.172).

In practice, even though the notion of stakeholder and dialogue has been noted as having a pivotal role in the context of sustainability reporting (Capriotti&Moreno, 2007; Clarkson, 1995), companies often fail to establish an active communication through reporting with their stakeholders (Fieseler et al, 2010), due to the inability of “formal reports to form a dialogical process” (Thomson&Bebbington, 2005, pg.523). Consequently, companies seek other communication options to disseminate their sustainability information while at the same time engage their stakeholders in the sustainability discussion, one of which is through online or electronic based media (Adams and Frost, 2004).

### *2.2. ONLINE SUSTAINABILITY DISCLOSURE*

To engage stakeholders into active communication and dialogue about sustainability, a two-way communication strategy is needed. With regards to this idea, Morsing and Schultz (2006) define stakeholder engagement strategy as a “two-way, symmetric and interactive communication where stakeholders are involved, participate and suggest corporate actions in frequent, systematic and pro-active dialogue” (pg.326). Accordingly, the best communication medium to implement this strategy is through online/internet media or web-sites, due to its ability to “persuade, inform, and educate stakeholders as well as to interact with them” (Stuart&Jones, 2004, pg.85).

The discussion about the use of web-site or online/internet media to communicate sustainability information has been documented by plenty of studies (see for example ACCA, 2001; Campbell, 2004; GRI, 2006; Lymer, 1997). Corporate web-sites have become a favourite form of media to disclose environmental performance as suggested by Environmental Resources Management (ERM, 2000). However in practice, instead of presenting balanced information regarding the aspects of sustainability, corporate web-sites report heavily on financial information (74%) (SustainAbility/UNEP, 1999). The inability of corporate web-sites in providing potential dialogue-base communication might be caused by the nature of corporate web-site in which asymmetric response occurred, “allowing for web-sites visitors to leave comments, but without overturning the dominance of the host’s voice” (Lyon and Montgomery, 2013, pg. 751). The drawbacks from using corporate web-sites in sustainability disclosure have opened up an opportunity for the use of social media.

### *2.3. SOCIAL MEDIA AND DIALOGICAL ENGAGEMENT*

Overcoming the drawbacks from corporate web-sites, social media allows two-way communication with symmetric dissemination of information (Lyon and Montgomery, 2013). Consequently, it changes communication from monologue to dialogue between users (stakeholders) and companies (Fieseler et al, 2010).

Social media has been regarded as the “next milestone” in companies’ online disclosure strategy (Bonson&Flores, 2011, pg.34). This is due to their public features, such as “share” and “comments” which as a consequence can also facilitate a strong platform of empirical research (Bonson&Ratkai, 2013). The use of social media by Fortune Global 100 Companies has significantly increased and typically involves companies taking to various online sites such as Facebook, Twitter, and LinkedIn, YouTube, Flickr, My-Space and Picasa (Kesavan et al, 2013; Morsing&Schultz, 2006; Nwagbara&Reid, 2013).

There are several reasons which have contributed to this increase, one of which is due to the relatively inexpensive maintenance cost, easy use and coordination (Colleoni, 2013; Nie et al. 2010). Furthermore, it promotes interaction and discursive communication (Andriof et al. 2002; Lyon&Montgomery, 2013); allows stakeholders with similar interests to network, share content and

participate in conversations (Lyon and Montgomery, 2013; Tapscott and Williams 2006); and facilitates co-creation and collaboration between companies and their stakeholders through comments and online feedback, therefore enabling a dialogue-based relationship (Fieseler et al, 2010; Tapscott and Williams 2006).

Social media is also suggested to empower companies in disseminating their sustainability information and also in “effectively communicating CSR and sustainability activities” (Kesavan et al, 2013, pg.58). As a result, this facilitates the creation of an “effective stakeholder engagement” through dialogues (Nwagbara and Reid, 2013, pg. 400). Accordingly, social media can become a sustainability communication tool for companies to enhance dialogical engagement with stakeholders (participants). Participation from stakeholders is then believed to promote knowledge, reduce deadlocks in sustainability and to help improve accountability (Wulansari, 2015). An example of this practice is British Petroleum (BP plc) who uses the internet and social media to enhance stakeholder engagement (Nwagbara, 2013). Another example is Toyota Motor who has created a CSR program known as ‘Cars for Good’ using a Facebook social media platform. This program aims to engage societies in the US into participation to decide one hundred NGO who will be awarded free Toyota cars (Kesavan et al, 2013).

However, the idea of conducting sustainability communication via social media with regards to dialogic engagement is not without contestation. For instance, this kind of communication can be seen only as a tool for building corporate image (Adams and Frost, 2004; Kim et al, 2010) due to positive messages (postings, tweets) posted by most companies. As a consequence, the ability of the discursive and dialogic communication via social media to promote accountability is doubted (Owen et al., 2001).

Nevertheless, the notion of dialogic engagement for sustainability communication via social media is still worth further discussion and analysis, particularly due to the framework which will be applied in this study, namely agonistic democracy theory. Previous studies in the field of SEA regarding agonistic democracy theory provide the discussion and development of a theoretical framework in designing, implementing, and evaluating a dialogical approach. However, to date, there has been no study implementing this framework in practice. This study therefore aims to fill the gap and apply the

agonistic democracy framework in practice, providing concepts to explore how social media facilitates dialogical engagement. The study supports Brown and Dillard's (2013) argument that "there is significant potential for the Social Environmental Accounting community to join with academics and groups developing agonistic practices in communicative planning, development studies and political theory" (pg.15). Accordingly, the notion of agonistic democracy theory with its dialogic role will be discussed next.

#### *2.4. INTRODUCTION TO AGONISTIC MODEL OF DEMOCRACY AND DIALOGICAL ENGAGEMENT*

The agonistic model of democracy is considered to be part of democratic theory which works under a socio-political context and "provides a basis for conceptualizing and sustaining diversity within a pluralistic and democratic context" (Dillard and Yuthas, 2013, pg.114). It was developed in light of the perspective of valuing different voices and viewpoints (Fraser, 1986) and of treating those with multiple perspectives as legitimate adversaries (Mouffe, 2013). In addition, agonistic democracy theory "looks for new forms of social organization that enable currently marginalized and vulnerable groups to participate more effectively in the (re)construction of social reality" (Blackburn et al, 2014, pg.90), one of which is through dialogue (Roberts, 2003). Therefore, this theory is expected to shed light about ways of encouraging stakeholders (including marginalized groups) to engage in effective dialogical participation (Brown, 2009), which in this study is applied in a social media context.

Drawing the context in social media platform, the agonistic democracy approach is deemed to fit this study best for several reasons, as mentioned by Brown (2009): the agonistic democracy approach "allows a fuller expression of the plural nature of contemporary democracies, enables accounting to engage with a wider range of (conflicting and consensual) perspectives, recognizes all perspectives and lastly it offers a more promising avenue for pursuing progressive social change" (pg.190). These features would be helpful in assessing the process of dialogical engagement based on a critical accounting background due to its ability to incorporate a diversity of ideological views (Blackburn et al, 2014). Further, it is suggested that the notion of agonism and pluralism in accounting can provide a platform for discursive communication and dialogue, contributing to particularly the field of SEA (Dillard&Brown, 2015).



Emphasizing the ability of SEA to promote critical dialogues, Brown (2009) thereby developed eight general dialogic principles in regard to sustainability, which become a valuable framework in this study because it can assess multi perspectives and pluralistic dialogues between companies and stakeholders.

## *2.5. CRITICAL DIALOGICAL FRAMEWORK*

The first principle focuses on recognizing multiple ideological perspectives by providing the basis for stakeholder analysis (Dillard&Brown, 2015). It recognises stakeholders' "multiple assumptions, values, and perspectives" (Dillard&Brown, 2012, pg.8) and takes these differences into account (Dillard&Brown, 2014). As for the second principle, it accentuates how "dialogic accounting should provide a range of quantitative and qualitative data" (Brown, 2009, pg.325), such as photographs and video (Blackburn et al, 2014), to provide "transparent and understandable representations of the economic entity's actions" (Dillard&Brown, 2014, pg.86). Meanwhile, the third principle emphasizes how agonistic democracy theory provides an open and transparent dialogue given the contestable nature of quantitative measure and calculations (Brown, 2009; Dillard&Brown, 2012; Dillard&Brown, 2015). The fourth principle points to the importance of how information which is contained in a form of communication should be understandable to all stakeholders (Dillard&Yuthas, 2013), including the use of language that is comprehensible and accessible by participants (Blackburn et al., 2014).

Next, the fifth principle pertains to the process of participation to guarantee all participants' freedom of speech and to be heard during the discursive communication (Dillard&Brown, 2012; Dillard&Brown, 2014; Dillard&Brown, 2015). Whilst the sixth principle ensures every stakeholder's voice (including those of vulnerable and marginalised stakeholders) is taken into consideration in the process of participatory dialogue (Brown, 2009; Dillard&Brown, 2014). The seventh principle accentuates how interactions, sharing and ongoing conversations amongst stakeholders can be used as enactments to ensure agonistic discourse, thus describing the transformative potential of dialogue (Brown, 2009; Dillard&Brown, 2012; Dillard&Yuthas, 2013). As for the last principle, it opposes the guidance to "pre-identified answer and preferred' outcomes" in order to achieve accountability (Dillard&Brown, 2012, pg.11).

With regards to the above framework, the area of SEA for example, has been using the agonistic dialogic approach because it can facilitate a more interactive, open and transparent dialogue. It is consistent with the objective of this study as to how agonistic democracy theory facilitates dialogical engagement through communication via social media (Brown&Dillard, 2015). To obtain the evidence for the attainment of this objective, a set of methodological steps were done and further discussed in the next section.

### **3. RESEARCH METHOD**

#### *3.1. INTRODUCTION TO METHODOLOGY*

To assess the dialogic engagement via Facebook as outlined in the research questions, a theoretical framework proposed by Brown (2009) was applied in this study. In accordance with this, a quantitative research fits this study best because it tests the framework or theories based on a deductive approach (Walliman, 2006). Even though a quantitative method usually consists of numerical data, this study assessed texts instead. However, the assessed texts were then transformed into numerical data by conducting content analysis, which is discussed in detail in the data collection section. Accordingly, this study combined mixed of qualitative data (with some quantitative) and quantitative research analysis.

#### *3.2. SAMPLING*

As a part of social research, this study employed convenience sampling because it was “frequently used and was more prominent than the samples based on probability sampling” (Bryman, 1989, pg.14). A set of criteria was established in order to choose the appropriate sample, which is explained as follows:

1. Oil and Gas Company.

Oil and gas companies were selected because they represent the industry who pollute the most (EPRTR, Regulation 2006/166/EC). In addition, the dynamics of global crude oil price in 2014 has triggered the chosen period of 2014 because it examined how companies engage their stakeholders in dialogues.

2. Listed in the FTSE4Good Global Index 2014.

This index was designed to objectively measure the performance of companies that meet globally recognized corporate responsibility standards. In accordance with the objective of this study, the companies listed in this index were expected to depict more stakeholders’ dialogic engagement given their label of “socially and ethically responsible or environmental

champions” (Bebbington et al, 2007, pg.370). Out of 782 listed companies per 31/12/2014, 18 oil and gas companies were identified.

3. Maintain Corporate Official Facebook Account.

To determine whether the 18 oil and gas companies listed in FTSE4Good Index 2014 had a Facebook account, the companies’ official web-sites were examined to check the link to their official Facebook page. Out of 18 listed companies, 8 companies managed official Facebook page.

The samples fulfilling the above requirements are as follows:

<b>No.</b>	<b>NAME</b>	<b>COUNTRY</b>
1	Cenovus Energy	Canada
2	Enbridge	North America
3	Hess Corp.	US
4	Royal Dutch Shell A	UK-NL
5	Statoil ASA	Norway
6	Suncor Energy	Canada
7	Total	France
8	Vestas Wind Systems	Denmark

*Table 3.1 List of Sampled Companies 1*

3.3. DATA COLLECTION

3.3.1. TYPE OF DATA

This study utilized mixed of secondary data where qualitative and quantitative data were used simultaneously (Creswell, 2014). For example, qualitative data were mainly utilized as represented by the Facebook postings. Accordingly, the main unit of analysis were the postings. These postings despite remaining qualitative data, were coded or quantified into numerical data by creating codes using content analysis. In addition, quantitative data were also used as represented by the Facebook likes. Facebook has become a fast growing online media with over 900 million users worldwide in the first quarter of 2012, making it the largest existing social media network (Kesavan et al, 2013; Krombholz et al, 2012). Based on a survey conducted by Kesavan et al. (2013), Facebook was found to be the most effective social media platform in delivering Corporate Social Responsibility activities

and at the same time engaging stakeholders. These findings make perfect reasons as to why Facebook data were used, given the objectives of this study.

### *3.3.2. DATA COLLECTION TOOL*

The secondary data was imported from a corporate official Facebook page to Microsoft excel using NodeXL. NodeXL is a plugin for Microsoft Excel 2007/2010 widely used in social network analysis research (e.g.Hansen et al, 2010; Himelboim et al., 2014). In addition, it allows importing social media network data, including Facebook, into the “computation of network statistics and refinement of network visualization through sorting, filtering, and clustering functions in excel” (Smith et al., 2009, pg.1). With this function, Facebook data including postings, comments, likes and shares, also stakeholders names were able to be imported into an excel worksheet.

Facebook data from each company was imported from 1/12/2014 until 31/12/2014 into excel. Several difficulties were noted during this process, which in turn associate numerous limitations with this study. For example, after trying to import the data on a monthly basis, errors occurred resulting in a failed importing process. In an attempt to avoid the same failure, data were imported daily. Nonetheless, this was still not successful. Other attempts involved importing the data using 4 different computers with notably high memory (above 4GB), still on a daily basis. However, these attempts were unsuccessful which might be caused by huge amount of posts and comments. Consequently, out of the eight samples, the unsuccessfully downloaded data came from four companies, namely Royal Dutch Shell, Suncor Energy, Total SA and Vestas Wind Systems. These companies had incomplete data thus were excluded from further analysis.

Out of four final companies, 1623 postings were successfully imported using NodeXL. These postings served as the unit of analysis of this study, which comprised of 953 postings from Cenovus, 210 postings from Enbridge, 43 postings from Hess and 417 postings from Statoil. These postings were then coded based on the content analysis criteria. However, there were 146 non-English postings which were consequently excluded from the coding process. Therefore, 1477 postings were finally eligible to be coded in this study (953 postings from Cenovus, 210 postings from Enbridge, 43 postings from Hess and 271 postings from Statoil).

**3.4. DATA ANALYSIS**

The dialogic process in corporate Facebook pages aims to engage stakeholders in discussion which is expected to provide insights or inputs for companies’ decision making. In light of this matter, “there is one method in particular that appears decidedly suitable for the attainment of new insights into the notion of Corporate Social Responsibility discourse, namely content analysis” (Lock and Seele, 2015, pg.25). Having been extensively applied in analyzing corporate social and environmental discourse, content analysis was documented in many studies (Gray, Kouhy, & Lavers, 1995; Hackston&Milne, 1996; Unerman, 2000).

**3.4.1. CONTENT ANALYSIS**

It is a quantitative method employed in different academic areas including social science (Lock and Seele, 2015). It involves codifying qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information (Guthrie&Abeysekera, 2006). Therefore, this study can be categorized as applying quantitative content analysis due to the reasons of its “strict handling of reliability and partly theory or concept driven” (Schreier, 2012, pg.16). Accordingly, to check the reliability of the data, it was inter-coded by second coder. Furthermore, this study is categorized as quantitative content analysis because it was driven by

Brown’s (2009) eight dialogic frameworks and applied the concept of Sustainability Assessment Model (SAM) developed by Baxter et al. (2003) as the content frame (table 3.1. – Bebbington et al, 2007, pg. 229).

**3.4.2. SUSTAINABILITY ASSESSMENT MODEL (SAM)**

SAM was developed by the “British Petroleum (UK) in conjunction with the University of Aberdeen and Genesis Oil and Gas Consultants” (Bebbington, Brown and Frame, 2007, pg.229).

*Table 3.2. Baxter et al. Elements of SAM 1*

Resource capitals	Elements used in project
Economic impact	Money to contractors Social investment Reinvestment Dividends Taxes
Environmental impact	Emissions to atmosphere and sea (\$/tonne) Nuisance value (noise, odour, value etc.) Footprint (\$/unit area) Waste (disposal and from production)
Resource impact	Oil and gas Water Energy Raw materials Intellectual property Physical infrastructure
Social impact	Jobs Health and safety—benefit arising from taxation Tackling poverty and social exclusion Equip people with skills to fulfil their potential Reduce the proportion of unfit housing stock Reduce both crime and fear of crime Social impact of products

It was designed to help companies to assess their sustainability performance which includes economic, environmental, social and resource impact (Brown, 2009). This dialogical decision support tool has been proved in several cases to be able to build consensus (Bebbington et al., 2007), thereby “fostering agonistic interaction among a multiplicity of differently situated social actors” (Brown, 2009, pg.328). Therefore, since the SAM can effectively assess dialogical potential, as strongly suggested by Brown (2009), it was used to content analyze the data in this study.

### *3.4.3. CODING PROCESS*

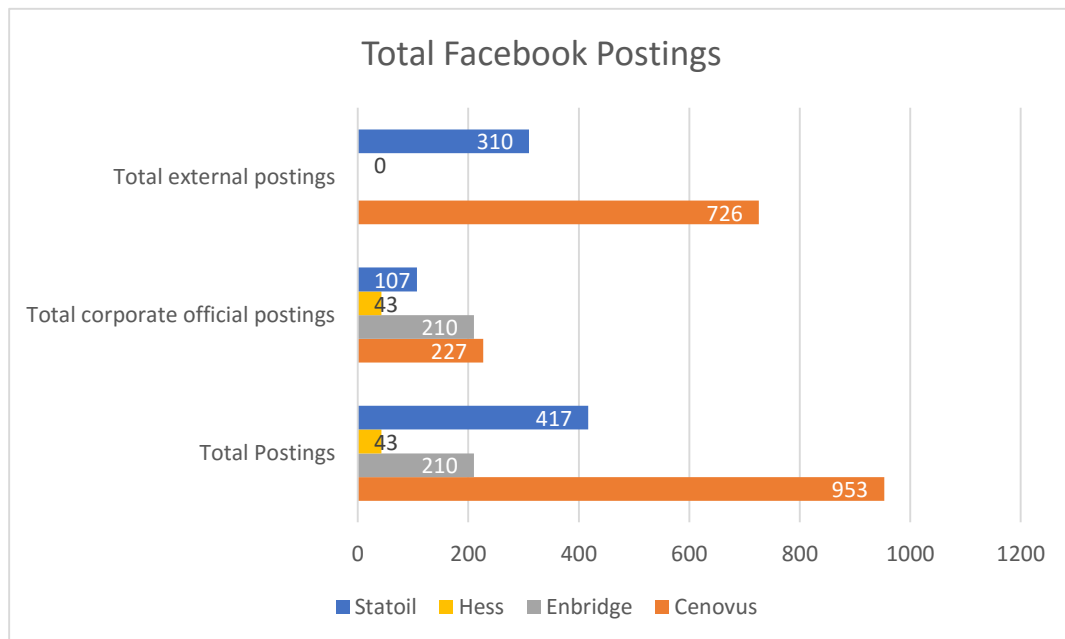
The coding process was conducted according to Baxter et al.’s (2003) SAM elements which were categorized into four main categories namely economic, environmental, resource and social impact. SAM was chosen as the coding frame because it is “a model that has been proposed to be having dialogic potential”, as suggested by Brown’s (2009) dialogical engagement framework (pg.330). After obtaining completed imported excel data (as explained in the previous section), the next step was to code each posting, made both officially by companies and external parties against each of the SAM elements. The scoring system was to assign one score for the existence of each content and zero for the non-existence.

Regarding the inter-coding process, the second coder was briefed for approximately 60 minutes to familiarize themselves with Baxter et al.’s (2003) SAM Elements and the Facebook postings before starting the coding process. Both the author (first coder) and second coder individually and independently coded the full set of 1,623 postings from the examined companies. Each posting needed approximately one minute to analyze, and therefore resulted in a total of 27 hours spent performing content analysis. After both coders finished the coding process, the next steps were reconciliation and merging (Hruschka et al., 2004). At this stage, the two coders were merging and comparing each other results (in Excel worksheets). After comparing the worksheets, the two coders were connected via phone calls to discuss discrepancies which occurred in 8.9% of cases. These differences could be traced to the scores detailed in the Ms Excel worksheets. Accordingly, this process triggered a discussion amongst the two coders and rendered the reconciliation process manageable, as each difference was discussed in detail. Upon completion of the reconciliation process, a final content analysis score was produced.

## 4. RESULTS

### 4.1. FINDINGS

To begin with, as presented in Figure 4.1, from the total of four companies analysed, it indicates there were 1,623 postings during 2014. From this total number, Cenovus dominated with 953 postings (58.7%), whilst 210 postings (12.9%) from Enbridge, 43 postings (2.7%) from Hess Corporation and 417 postings (25.7%) from Statoil. Nonetheless, these postings were not all posted officially by the companies but partly done by external stakeholders. For example, since Cenovus and Statoil allow their external stakeholders to post their message into the corporate official Facebook page, these external stakeholders' posts were part of the content analysis unit. However, Enbridge and Hess Corporation do not allow external postings at their official Facebook page, allowing only comments, likes and shares.



*Figure 4.1. Total Facebook Postings*

In the meantime, it can be seen from Figure 4.2 there were 1,815 comments made by both companies and external stakeholders. Statoil attracted the highest number of comments, dominating with 42.4%.



However if analysed further, instead of Statoil, it was Enbridge who obtained the highest average number of comments per post with almost two average comments per post.

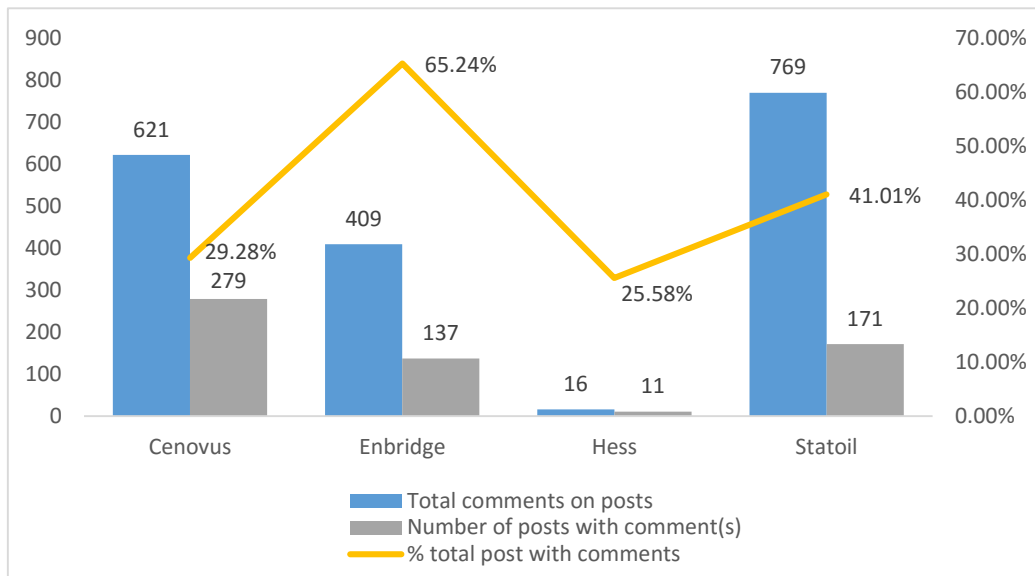


Figure 4.2. Total Facebook Comments 1

As for Facebook likes, 23,245 likes were given to the 1,623 postings (refer to Figure 4.3). To analyse the average number of likes per post, the total number of likes was divided by the total number of postings. Subsequently, over 14 average numbers of likes per posting was obtained.

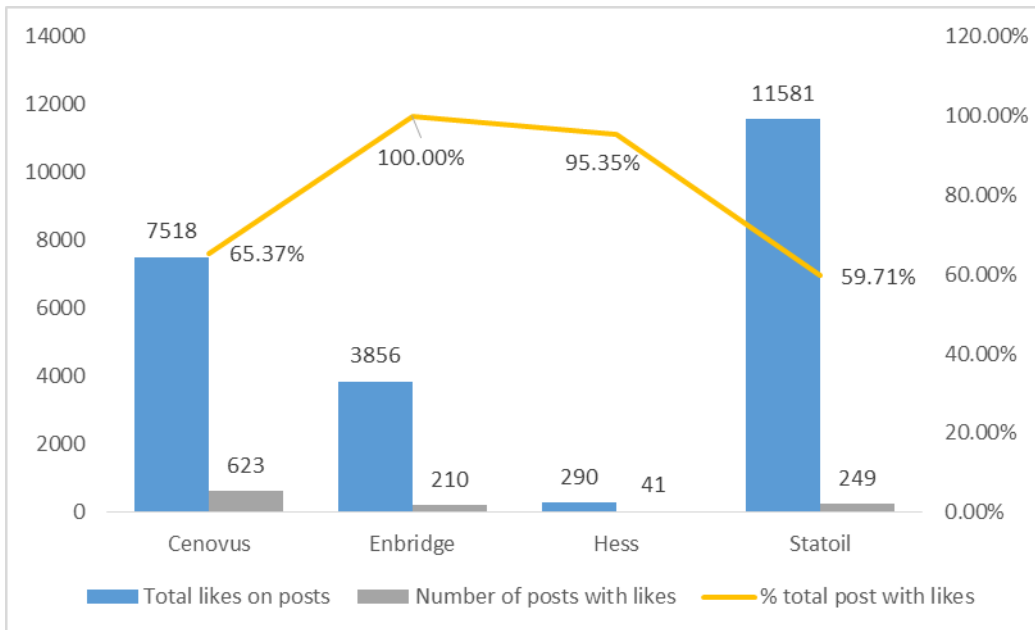
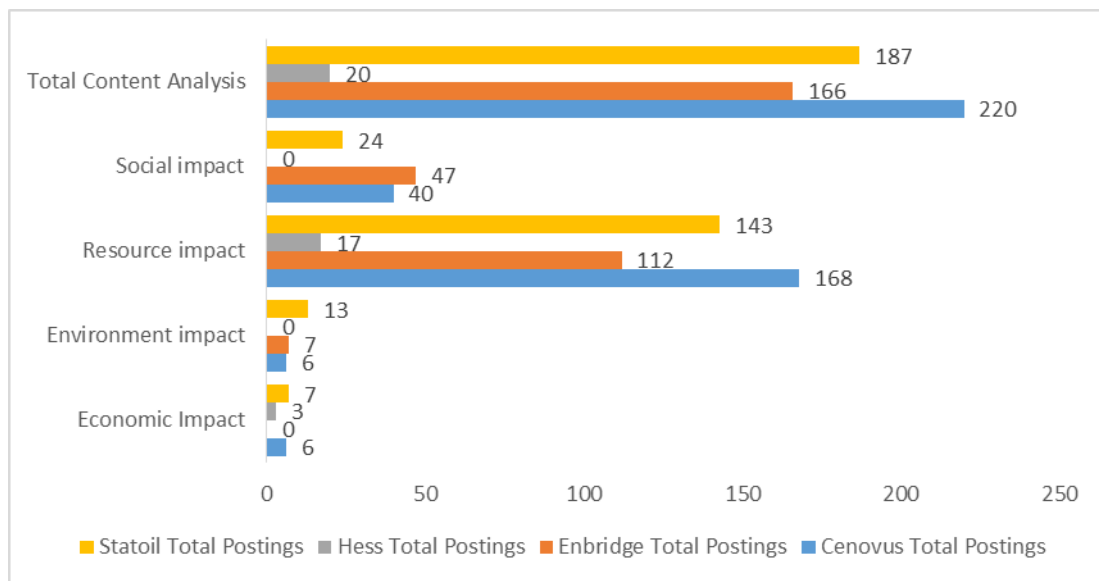


Figure 4.3. Total Facebook Likes 1

The content analysis as showed in Table 4.1 indicates that 593 (36.54%) of total postings (both official and external postings) were related to the issue of resource (440 postings or 74.2%), social (111 postings or 18.72%), environment (26 postings or 4.38%), and economic impact (16 postings or 2.7%). In addition, both corporate postings and external stakeholder postings contributed to this finding, scoring with 323 and 117 postings respectively related to the issue of resource impact. These content analysed postings were accompanied by 1,122 (61.82%) comments and 14,312 likes (61.57%). It means that 61.82% of the total comments and 61.57% of the total likes given to the postings related to the issue of economic impact, environment impact, resource impact and social impact. Results for each company are depicted in Figure 4.4.

Findings in this section show that communication via Facebook provides dialogic potentials. However, analysis and discussion need to be looked further whether communication via social media could facilitate stakeholders' dialogical engagement.



*Figure 4.4. Content Analysis-SAM category 1*

Table 4.1. Content Analysis of Oil and Gas Companies' Facebook Page based on SAM

<b>SAM Resource Capitals</b>	<b>Total Postings</b>	<b>Total Official Postings</b>	<b>Total External Stakeholders Postings</b>	<b>Total Likes</b>	<b>%</b>	<b>Total Comments</b>	<b>%</b>
Economic Impact	16 (2.70%)	11	5	202	1.41%	10	0.89%
Environment impact	26 (4.38%)	18	8	913	6.38%	59	5.26%
Resource impact	440 (74.2%)	323	117	11,346	79.28%	804	71.66%
Social impact	111 (18.72%)	78	33	1,851	12.93%	249	22.19%
<b>Total Content Analysis Score</b>	<b>593 (100%)</b>	<b>430</b>	<b>163</b>	<b>14,312</b>	<b>100%</b>	<b>1,122</b>	<b>100%</b>
<b>Percentage of Content Analysis/Total Postings</b>	<b>36.54%</b>			<b>61.57%</b>		<b>61.82%</b>	

#### 4.2. DISCUSSIONS

This section explores dialogic role based on each of Brown's (2009) eight critical dialogic framework as following:

1. Recognize multiple ideological orientations

Out of 592 postings, resource impact has achieved the highest score of 440 postings (74.2%). Of the SAM elements of social impact, health and safety has proved to be the most discussed theme with 64 out of 111 postings. One of the example is displayed in the following posting:

*"Everyone, including contractors and consultants, has an important role to play in the overall safety performance of our organization"* (Cenovus, 2014-07-28).

It can be further analysed from the above posting that company has recognised the broad stakeholder base and multiple stakeholders which not only consist of stockholders and creditors but also workers, contractors and consultants (Blackburn et al, 2014; Dillard&Brown, 2014). However, the ability to recognise stakeholders' multiple perspectives may be altered by the companies' policy in disabling external stakeholder postings at their corporate Facebook page, such as that which occurred with Enbridge and Hess.

2. Avoid monetary reductionism

Despite being the second lowest discussed issue (4.4%), environmental impact remains an area of concern for companies. Companies such as Cenovus for example, has showed their operational activities' environmental impacts through different form of media like photographs and videos (Blackburn et al., 2014) as mentioned in the following posting:

*"These are above-ground pipelines at our #FosterCreek #sagd #oilsands operation. They're built high enough to allow wildlife to travel underneath them, and we monitor this activity extensively."* (Cenovus, 2014-10-27).

Based on this principle, quantitative and monetary data as characterized in traditional accounting served as barriers in this framework (Dillard&Brown, 2014). It implies that in order to build a critical dialogue with stakeholders, both quantitative and qualitative forms of communication should be

implemented. Communication via social media has enhanced the use of not only quantitative monetary data but also qualitative information which represents non-monetary visual data (Blackburn et al., 2014; Brown, 2009). By using non-monetary visual representations like photographs and video, companies are therefore acknowledged to “move beyond the reductionism of accounting’s instrumentally rational technologies” (Dillard&Brown, 2015, pg.255).

3. Be open about the subjective and contestable nature of calculations

This principle emphasizes transparent and open discussions for external stakeholders, embracing the contestability of calculations and quantitative data (Brown, 2009; Brown&Dillard, 2013). This contestability was voiced by one of Statoil’s external stakeholders in the following posting:

*“It seems profits are more important than human lives to Statoil. I hope that all those deals with Russian Lukoil will result in huge losses!”* (Bogdan Pabian, 2014-08-19).

It is found that companies are not completely open to engaging in transparent contested dialogue regarding monetary or quantitative data. This is evident from the above findings which showed very low attainment of economic issues (2.7% of total content analysed postings). If this condition continues, the overall attempt to build a dialogue-based relationship may be altered.

4. Enable accessibility for non-experts

Out of the four companies examined in this study, Statoil is the only company that originates from a non-English speaking country. It is however operating in many different countries, making it a multinational company. Nonetheless, findings show that Statoil made non-English official postings and received as many as 146 postings (35% of their total postings) from their external stakeholders.

Given the above finding, non-English language postings would however hinder the discursive communication between companies and stakeholders or amongst different-background stakeholders themselves. This might be caused by the inability of various background Facebook participants to enter the ongoing dialogue. The company who should ideally provide “understandable information” (Dillard&Brown, 2015, pg.255) to their participants in Facebook, in this case could not recognize the nature of their various background stakeholders (Dillard&Brown, 2012).

Nevertheless, an interesting fact about the aforementioned finding suggests that despite non-English language postings, Statoil received the highest total comments of posts with 769 postings. This implies that although the accessibility of non-experts (stakeholders) to communicate is impaired, the level of stakeholders' engagement to participate in dialog is still high.

5. Ensure effective participatory processes

From 593 total postings, 430 were posted officially by the companies whilst 163 postings were made by external stakeholders. From these findings, it seems that communication via Facebook has attracted external stakeholders into participation. Through direct postings and comments, stakeholders are welcomed to interact, join conversations with company and other stakeholders, enabling a dialogue-based relationship as accentuated in the fifth principle (Dillard&Brown, 2014; Fieseler et al, 2010). However as argued by Dillard and Yuthas (2013), the process of participation should be emphasized to guarantee the freedom of speech from across groups and within companies, through “an uncensored forum which enable any participant to present or question any assertion freely” (Unerman&Bennett, 2004, pg.700). The fact is, despite allowing stakeholders to interact with both companies and other individuals via direct posting and comment, there is a case which occurred in Cenovus whereby stakeholders' freedom of speech might be jeopardized by the censorship system such as follows:

*“Any inappropriate or offensive comments will be removed, as outlined in our House Rules”*  
(Cenovus, 25 January 2014).

Although the censorship may impair the ability of Facebook to facilitate an effective participatory process, companies were still responding back to external stakeholders' concerns through comments thus form a dialogue-based relationship. Therefore, one can state that Facebook has “facilitated more direct engagement between companies and their external stakeholders” (Fieseler et al., 2010, pg.610), encouraging an active and effective participatory process.

6. Be attentive to power relations

Despite the high number of stakeholders participating in dialogues with companies (63.83% postings from stakeholders), the next challenge is whether companies are able to recognize and create power balance (Brown&Dillard, 2013). As highlighted in the third principle, balanced power relations means recognizing and involving both dominant and marginalized groups into the dialogic process (Blackburn et al., 2014; Dillard&Brown, 2014); including owners, workers, environmental, community, customers, suppliers, civil society (Dillard&Yuthas, 2013). Statoil for example have successfully engaged stakeholders, at local community level to join the participatory process. This is emphasised as follows:

*“I am from New Zealand where Statoil is hoping to find fossil fuels in our waters. Please know that our government DOES NOT have the backing of our indigenous people, te tangata whenua in this matter”* (Statoil external stakeholders, 2014-12-10).

If the company were to recognise and take their stakeholder’s view into account, it would mean that they are attentive to different level of powers amongst their stakeholders (Dillard&Brown, 2014).

7. Recognize the transformative potential of dialogic accounting

Findings show that 1,122 comments (62% of total comments) were given to postings related to economic, environment, social and resource issues. Among these comments are feedback officially posted by companies, in an attempt to build a dialogic-based interaction with their stakeholders. This kind of attempt portrays the application of the seventh principle, as it illustrates how discursive communication has the potential to construct a learning process which can facilitate agonistic democracy (Dillard&Yuthas, 2013). However, it must be noted that agonistic democracy can arise only if the companies take these comments seriously into the decision making process. This case seems to be apparent in Cenovus and Statoil where dialogical communication provide a transformative potential in companies’ practices (Dillard&Brown, 2012), as depicted in the following postings:

*“We have received a number of comments and posts from people expressing concern about our involvement with Alberta Education’s curriculum redesign. We plan to address those concerns with a more detailed explanation in the redesign process. Please stay tuned“* (Cenovus, 26 May 2014).

This example shows that postings can provide multiple perspectives and result in the occurrence of overlapping dialogical practices. Therefore, companies have taken into account their stakeholders' multi perspectives and incorporated it into the learning process

8. Resist new forms of monologism

The content analysis has resulted in 266 postings (along with 7490 likes and 533 comments) discussing about an element of resource impact which is oil and gas. This number accounts for almost half of the overall content analysed postings, not surprising given the nature of the industry. Nevertheless, the further analysis regarding the content of these postings have showed that companies may lead their stakeholders to "pre-identified right answer" (Brown, 2009, pg.327), going against the dialogism principle as highlighted in the eight principle. Consequently, stakeholders were unable to question and critique upon the statement and decision agreed (Dillard&Brown, 2014), portrayed as follows:

*"The fact is there's enough oil in Canada and in the world to last for generations to come...Oil is and will continue to be the world's primary source of transportation fuel until at least 2040"* (Cenovus responding back to external stakeholder, 2014-02-04).

While Dillard and Brown (2012) have argued that discursive dialogical communication means "defending against new forms of monologism by resisting the temptation to impose pre-identified 'new right answers' and 'preferred' outcomes" (pg.11), the above posting seems to guide stakeholders to agree to company's principle or ideology.

#### *4.3. SUMMARY OF KEY FINDINGS*

The results revealed that companies' communication via Facebook has a potential to engage stakeholders into dialogue but it has not yet been optimally employed due to several reasons. For example, companies could have enabled direct postings from external stakeholders to allow insights from multiple-ideological stakeholders. Secondly, they could have been more transparent in disclosing and discussing issues related to monetary or quantitative data, use a widely used language (in this case is English) in an attempt to provide accessibility for non-experts (stakeholders) to communicate and to get involved in dialogue or conversation. Thirdly, they could have emphasized



that censorship would not be applied unless the postings contain offensive words which are not related to constructive dialogical process. Finally, they could have created postings that were not supposed to guide any of their stakeholders' ideological viewpoints thus allowing interaction and the sharing of multiple perspectives to enrich the dialogical process. On the other hand, companies can maximize several dialogic potentials they have achieved such as the enormous numbers of participation through direct postings, comments and likes (1,036 external postings, 1,815 comments and 23,245 likes). In addition to this, analysing the dialogical engagement potential based on social media communication requires more than content analysing the postings. This is because dialogical engagement emphasizes the process which cannot be captured very well by analysing the content only. That is why further posting evidences were given to provide better understanding at the dialogical process between companies and their stakeholders. Critically analysing the discourse may therefore offer provide a better understanding because it focuses more on the dialogical process.

## **5. CONCLUSIONS, IMPLICATIONS AND LIMITATIONS**

### *5.1. CONCLUSIONS*

This study has purported to examine the extent to which companies' communication via social media (Facebook) describes dialogical engagement as demonstrated using an agonistic approach. Based on the findings and discussion provided in the previous sections, it can be concluded that communication via social media has strategic potentials to engage stakeholders to join in the discursive dialogue. In this regards, social media has successfully provided stakeholders a platform to share, participate, co-create and interact within the multi-perspectives context amongst themselves or with the companies. However to date, the potentials to an open and interactive dialogue have not been optimized yet due to several barriers such as the censorship in social media, language barrier and third-party direct posting restriction. In addition, it is important to note that the attempts at engaging stakeholders into an open and transparent dialogue wouldn't be fruitful if the companies did not account their stakeholders' multi-viewpoints (Fieseler et al, 2010). Moreover, it would not be meaningful unless the attempts made can influence the decision making process within the companies (Cooper&Owen, 2007).

### *5.2. IMPLICATIONS*

From the findings and discussion presented in this study, several implications can be drawn accordingly. Firstly, this study attempts to fill the gap in the SEA study by applying the agonistic democracy framework in practice, providing concepts to explore how social media facilitates dialogical engagement. Secondly, this study illustrates how dialogic engagement was applied in the oil and gas company through communication in social media. Therefore, it may provide insights for companies about how they should be making use of their communication medium (in this case social media) to engage their stakeholders into discursive dialogue.

### *5.3. LIMITATIONS*

Language and technology barriers are of limitations in this study particularly in related to methodology. These two barriers didn't allow full data collection and analysis. Furthermore,

Facebook users may account for a small fraction of stakeholders if compared to the existing stakeholders. Therefore, the voices raised in the dialogical communication may not represent the majority of stakeholders' voices including those of marginalized groups. Finally, this study was conducted based on a single year of data, which may not be a complete representation of companies' sustainability performance.

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