The Role of Twitter in Legitimating the Energy East Pipeline, Canada

MSc Thesis

by

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Signature: ....

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To my Family

ACKNOWLEDGEMENTS

ABSTRACT

This thesis explores the value of social media in contemporary democratic practices; more precisely, on the use of social media in Canadian tar-sands pipeline infrastructure debate through the lens of public sphere theory. The study aims to contribute to improved understanding of Twitter's shaping the course of the proposed Energy East pipeline, its legitimacy and formation of public debate around it. It is based on a mixed-methods approach employing both qualitative and quantitative research methodology. Data was collected from a topic-specific content stream on Twitter, followed by a series of semi-structured interviews with some of the most influential users within a sample of collected tweets. The study identified the users, the content and socio-political context of tweets that are posted in connection with the pipeline as well as users' perceptions of Twitter as a tool for online deliberative democratic practices.

Findings indicate Twitter is praised for offering an enabling environment for citizen journalism on real-time events, its swiftness of information dissemination, enabling contact with individuals outside of users' established social circles and the power to influence public opinion. However, the medium is not without limitations which diminish its role as an optimal tool for democratic online public deliberation. My study suggests the main hindrance for this is the absence of constructive debate due to Twitter's character-limitation of posts and predominantly one-sided communicative processes that take place within this medium. Its role in Energy East debate remains constrained within informative and reactive aspects of its service on current developments on the pipeline polemics and has as such a limited influence on legitimation processes surrounding the project. I therefore conclude that Twitter represents only a fragment of what can be considered the new public sphere and definitely not one-size-fits-all solution to the contemporary legitimation crisis of proposed large-scale industrial projects such as Energy East pipeline.

Key words: social media, Twitter, public opinion, deliberative democracy, legitimation, tar-sands, Energy East pipeline**,** Canada

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List of Abbreviations

EA   Environmental Assessment

EE   Energy East pipeline

CAPP   Canadian Association of Petroleum Producers

CEPA   Canadian Energy Pipeline Association

CoC   Council of Canadians – Manitoba Chapter

GDP   Gross domestic product

ED   Environmental Defence Canada

ENGO   Environmental non-governmental organization

NEB   National Energy Board

NGO   Non-governmental organization

NPA   Navigation Protection Act

NWPA   Navigable Waters Protection Act

RT   Re-tweet

RQ   Research question

SNS   Social Network sites

TIK   Transition Initiative Kenora

T350   Toronto 350.org

URL   Uniform Resource Locator

1. INTRODUCTION

"Democracy means government by discussion, but it is only effective if you can stop people talking."
- Clement Atlee, UK Prime Minister (Quirk 2011: 91)

The following thesis explores how Twitter is used to form public opinion in connection with environmentally controversial projects in Canada. The thesis focuses in particular on the case of the Energy East pipeline (EE). During the time of the conservative federal government of Canada between 2006 and 2015, its oil industry had boomed due to the vast deposits of bituminous sands in the North-Eastern Alberta. Known as the world's second largest reserves of oil, the tar-sands are of great importance for the future of Canadian economy. However, this resource differs from conventional oil as it requires high costs of production and entails significant environmental risks (Dobson et al. 2013). As global oil prices climbed during the first decade of the new millennium, the costly production of tar-sands oil became economically viable for an alliance of powerful oil corporations and the government. With the recent decline in the global oil prices, the profits from these plans have been drastically cut but the exploitation of tar-sand resources remain in place (Austen 2015).

As a part of the planned expansion, a network of major pipeline projects was proposed to assist the transport to key markets in North America i.e. Northern Gateway, Keystone XL, Trans Mountain and EE pipeline. Their purpose is to connect landlocked tar-sands with refineries or ports of export on the Pacific and Atlantic Coasts of Canada and the U.S. (Hoberg et al. 2012). Environmental and indigenous groups operating on both local and national scale oppose these plans. They are concerned with the environmental and human-health hazards of tar-sands extraction and potential terrestrial oil spills, as well as with a significant contribution to climate change these projects would entail at a global level (Nikiforuk 2010). The public debate on these projects takes place through various communication channels, with social media as one of the new forms of communication services facilitating public discourse.

The proposed tar-sands pipelines were extensively covered in media, especially the Keystone XL pipeline, which gained international attention as it is planned to connect tar-sands to the refineries in the Gulf Coast of Texas in US. Also the pipelines planned by the government to reach the

West and East Coasts of Canada have been met with the stiff resistance by environmental groups, local populations as well as indigenous peoples (Davison 2014; Walker 2014). In all cases, social media has been an integral part of the public debate on the legitimacy of these projects (Coyne 2015). With EE being the longest and the most recent of the proposed pipelines, it is important to consider its legitimacy and formation of public debate around it. My work focuses on the use of Twitter in this debate with an aim to contribute to improved understanding of the role social media play in shaping the course of controversial industrial projects such as EE.

1.1 Motivation and Objective

My research is motivated by the interest in the role of social media as a tool for informing and connecting people in the debate on EE. I identify the different groups of stakeholders tweeting about EE, observe how they are taking advantage of the same tool and how the polarity of opinions is expressed. I also aim to identify the central foci of tweets about EE and most frequent sources of information on EE. Lastly, I explore which topics are predominantly mentioned in the postings on the EE, with a view to gaining insight how the public perceives the pipeline.

The main objective of this thesis is then to explore the role of social media as a tool for informing and connecting people with the intent to influence public debate on environmentally contested project by analyzing Energy East pipeline related tweets on Twitter. The principal research question (RQ) of this thesis explores the value of social media in contemporary democratic practices. And more precisely, it aims to answer: How is Twitter used to express public opinion on the construction of the Energy East pipeline?

In order to answer this question, four sub-questions and objectives were developed to guide my research:

RQ1: Who is using #EnergyEast?
Objective 1: Identifying the most active users tweeting on EE as well as establishing which users are central in the network of EE hashtags with the intent to identify leading influencers in the EE pipeline polemics on Twitter (distinguishing between individuals, organizations, business entities etc.).

RQ2: What is the content of tweets which include #EnergyEast?

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Objective 2: Observe the purpose of tweets, type of links (URLs) included in tweets, position on EE expressed in tweets and language used in order to identify predominant uses of Twitter in EE polemics.

RQ3: In connection to which other # does #EE appear?
Objective 3: Establish if users perceive EE in close relation to any other specific agenda. This will help understand the way EE controversy is perceived in a wider socio-political context.

RQ4: How do users perceive their use of Twitter in EE debate?
Objective 4: Develop an understanding of the users' personal motivations, gaining insight into their perception of advantages and disadvantages of Twitter in helping to form a democratic debate on EE.

1.2 Literature review

In answering the main research question and reaching the objectives of the study, this research draws upon literature on the theory of the public sphere and a fairly recently emerging theory of social media. The sources include references to seminal works, recent studies as well as other secondary sources such as news articles and op-eds published in the traditional media. The two main fields of study are presented and discussed in relation to each other within the overarching theme of contemporary democratic practices and legitimation crisis in an increasingly globalized society. Researching the role of social media and in particular the role of Twitter within these processes is approached through a comparative view with traditional forms of media.

Although relatively recent, scholarly literature on the role of new types of media in democratic practices is by all means not scarce (Denning 2000; Bennett & Entman 2001; Dahlberg 2001; Cozier & Witmer 2004; Papacharissi 2004; Dalgreen 2005; Habermas 2006; Bohman 2007; Jansen et al. 2009; Leung 2009; Sunstein 2009; Delli Carpini 2010, Shirky 2011; Obar et al. 2012; Halpern & Gibbs 2013; Trottier & Fuchs 2013; Epstein et al. 2014; Mukhortova 2014, Nitins & Burges 2014; Thimm et al. 2014) and the body of work on this issue continues to grow with the increasing popularity and spread of social media across the world. As global environmental issues are intensifying, accompanied by the crisis of legitimacy of newly proposed industrial projects, studies of how social media affects the outcome of such conflicting situations

are relevant to our understanding of the potentials and limitations for contemporary democratic practices (Muralidharan et al. 2011; Segerberg & Bennett 2011; Thomson et al. 2012; Hemmi & Crowther 2013; Merry 2013; Cottle 2013; White 2013; Coyne 2015). In the following paragraphs, I will present the key literature that has served as a theoretical guideline to my work and highlight how it relates to the foundations of this thesis.

In examining social media in the light of a public sphere it was necessary to draw upon the seminal work of Jürgen Habermas, *The transformation of the public sphere* (1989), in which he elaborates on the concept as an intermediary element between the state and civil society through which, depending on the level of quality of the discourse and quantity of civic participation combined, democratic processes are shaped. His work has been highly contested. Many authors have now considered the potential advantages (Shirky 2011; Sparks 2001) and disadvantages (Dahlberg 2001, Dahlgren 2005; Castells 2014, Mukhortova 2014) of social media as a facilitator of improved democratic deliberation. Following Habermas (2006), they have explored the ability of social media to become a new public sphere.

My research studies the limitations and advantages of social media in general as well as specifically the case of Twitter as the new public sphere. In order to do this, it was necessary to examine their emergence within the increasingly globalized society (Castells 2008; Mukhortova 2014), the deepening crisis of political legitimacy (Fuchs 2008; Rahaman, Lawrence & Roper 2004; Habermas 1976), as well as to compare them to the main communication channels that defined the traditional understanding of the public sphere (McChesney 2007; Hjarvard 2008; Lundby 2009; Castells 2007, 2008, 2014; Trottier & Fuchs 2013). The main defenders of social media as an enforcement of civic engagement and collective action are Shirky (2011), Auger (2013), Cozier & Witmer (2004) and Denning (2000). The latter highlights the main advantage of social media in decreasing the inequality between different actors to engage in a political debate due to the increased accessibility of social media platforms for the previously excluded. This is viewed by them as one of the main obstacles in Habermasian understanding of a well-functioning public sphere. On the other hand, the role of social media as the new public sphere is met with a significant amount of criticism referring to enforced polarization of public opinion, increased opportunities for manipulation (Sunstein 1999, 2009; Dahlberg 2001; Delli Carpini 2010) to

depersonalization of deliberative practices (Papacharissi 2004; Gladwell 2010) and lack of sincerity in online deliberation (Castillo et al. 2011; Morris et al. 2012).

Besides examining scholarly work, I have also drawn upon opinions on the topic presented by an influential thought-leader, Malcom Gladwell (2010) and his well-supported essay published in The New Yorker. His views and argumentation against seeing social media, in particular Twitter, as significant contributors to improved civic engagement, especially mobilization and activism to influence change, is in stark contrast to Spark's (2001) and Shirky's (2011) supportive views on role of social media as means to improve citizen engagement in public affairs.

A similar study to my own was conducted by White (2013). White explored the Canadian tar-sands polemics in connection with Twitter on the case of Northern Gateway Pipeline, researching the potentials of Twitter as a green public sphere. As studies on the use of social media in cases of environmental activism remain relatively scarce, I chose to focus on the polemics of the most recently proposed and the most extensive cross-continental project in Canada, EE pipeline and explore the advantages and disadvantages of using Twitter in the deliberative process surrounding the contested project. My work contrasts that of White in that she focused her research on environmentalists and searching for an online community of tar sands and pipeline opponents, while mine looked into both its opponents' and proponents' use of Twitter as a medium of expression on the topic. The aim of my research is to add to the existing research and contribute to filling the gap in the understanding of the role of Twitter as a public sphere in a contemporary political discussion such as the Canadian tar-sands pipeline infrastructure polemics.

This review has examined the main perspectives that led my research on how Twitter is being used as a tool for public deliberation on the case of EE pipeline. It helped framing my methodological approach as well as interpreting the findings of my research. By examining both the advantages and disadvantages of Twitter as a tool for improving democratic processes from scholarly sources I acknowledge the complexity of social media.

1.3 Structure of the thesis

The thesis consists of 6 chapters. **Chapter 1** provides an introduction with a brief description of the topic, motivation behind the research, an outline of the research objectives and research

questions, followed by a literature review and thesis structure. This chapter ends with a summary of main findings and conclusions. **Chapter 2** is a background description of the case study, highlighting the Canadian tar-sands development and proposed pipeline infrastructure, with a focus on EE pipeline controversy. I conclude this chapter by discussing the online as well as offline activities of pipeline opponents as well as its proponents. **Chapter 3** presents theoretical positioning used in my study. In exploring the theoretical framework I discuss key works of reference on the formation of the public sphere, the crisis of political legitimacy and social media with the intention to place Twitter in a wider social context and help understand the role it might play in democratic process. This chapter also explores the advantages and disadvantages of Twitter as a tool for shaping public opinion and aids to avoid potential pitfalls in my research. **Chapter 4** on methodology explains my research design, and how I collected and analyzed data as well as ethical considerations and limitations of my research. **Chapter 5** represents the findings of the analysis of collected data. This chapter is organized in two main sub-sections. In the first part, I present the findings from the analysis of collected tweets on the users, the content and socio-political context. In the second part, I present the findings from the interviews on respondents' engagement with Twitter, their perceptions of it as a tool for public deliberation, their experience in tweeting on EE and their views on the significance of Twitter for social interactions on EE. Each of the two sub-sections is accompanied by the discussion at the end. **Chapter 6** outlines the conclusions of my study, its potential implications, and offer remarks on the capacity of Twitter to serve as a tool in shaping public opinion.

1.4 Summary of findings and conclusions

This subsection summarizes the findings and main conclusions of my research in order to help the reader maintain an overview of my work within the introduction chapter. The research firstly focused on identifying the users engaging in EE pipeline discourse on Twitter; more specifically, to establish whether the communicative space of the platform is more saturated with EE proponents or its opponents. The data indicated that Twitter is used both by EE proponents and opponents; however, the latter seem to have a stronger presence, especially in a form of environmental organizations as well as social and indigenous movements. Particularly unified resistance against the pipeline was observed in the case of French-speaking population, residing in areas where the majority of EE would have to be newly constructed. On the side of EE

supporters, both qualitative and quantitative methodologies indicated some potential astroturfing activities. However, since there was a general unwillingness of EE supporters to participate in the interview phase of my research, a more in-depth inspection of their perceptions of the use of Twitter to advocate in favor of EE was not possible.

Next focus of inquiry was the content of tweets on EE. Deductively derived categorization of a sample of tweets revealed they are predominantly informative in a form of re-posting news or other users' informative material. The second most prominent category by content was reactive tweets in a form of expressing either support or frustrations with current EE-related developments. To a much lesser extent tweets were promotional by nature and even a smaller portion was inciting - calling for users to partake in some form of organized action on EE. This shows that in case of EE, Twitter is not used for organizing collective action and increase citizen participation as much as supporters of Twitter as a public sphere like to suggest.

Third focus of inquiry was the socio-political context of posts on EE. It revealed that the pipeline debate is strongly embedded in Canadian national and provincial politics, this could be due to the fact that during the time of data collection the national pre-election campaigns were about to commence and the future of EE was one of the central topics of competing parties' repertoire. Surprisingly, environmental and indigenous topics were much less represented in direct relation to EE as my initial expectations, based on my research of secondary sources.

Lastly, the users' perceptions revealed their views on the main advantages and disadvantages of Twitter in contributing to a democratic debate on the pipeline, their motivation and importance of Twitter for their social interactions with the EE-related community. Findings indicate Twitter seems to play an important role as a tool for reactive posts, quick distribution and collection of information, and reaching out to users outside of one's established social circles. Findings revealed Twitter has a major competitor in Facebook when it comes to engaging in online deliberation on EE; however, overall emphasized advantages of Twitter over Facebook were: enabling of real-time reporting from topic-specific events for ordinary citizens and its freedom of expression and transparency of online discussions. The positive aspects of Twitter as a new public sphere were partially overshadowed by its main disadvantages: predominant one-way communication, absence of constructive debate, and abbreviated short-lived nature of posts. As a

result, these disadvantages promote extreme opinions which are damaging to a democratic deliberative process.

Concluding remarks acknowledge Twitter as an important social media platform where public discourse on EE is taking place and is as such to some extent influencing public opinion. However, Twitter should be recognized as only one of many manifestations of the new public sphere and while assessing its impact on legitimation of contested industrial projects both its advantages and disadvantages should be taken into consideration.

2. BACKGROUND OF THE CASE STUDY

2.1 The controversy of tar-sands development

Albertan tar-sands deposits represent a vast resource of unconventional petroleum (CAPP 2015). On a global scale, its proven oil reserves are listed right after Saudi Arabia and Venezuela (BP 2015). Despite the vastness of the reserves, only 844 km^2 out of prospective 4.802 km^2 are currently being mined (CAPP 2015).
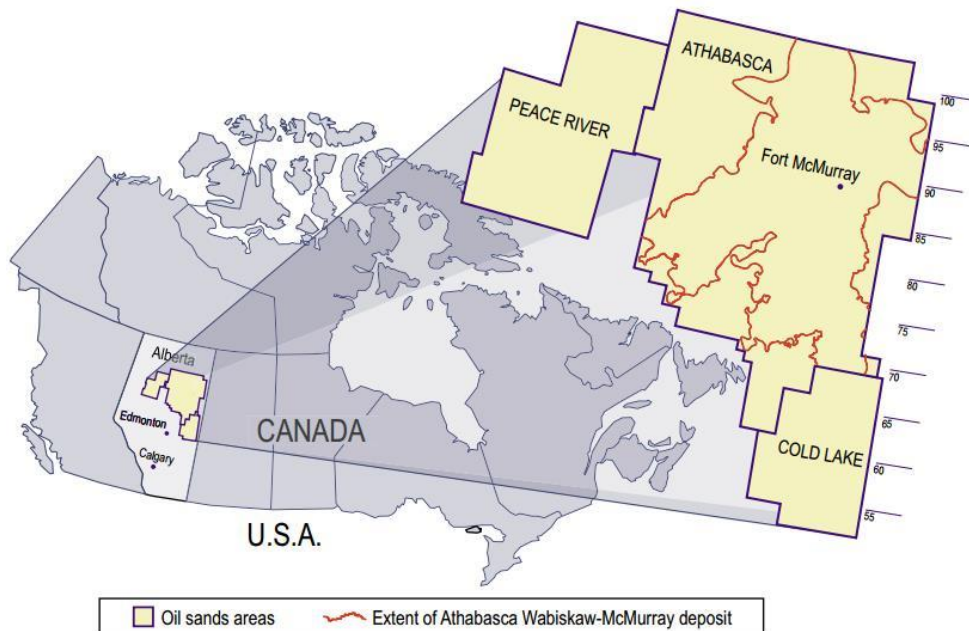
Figure 1. Alberta's tar-sands deposits (Source: Alberta Energy and Utilities Board 2005 in Woynillowitz, Severson-Baker & Raynolds 2005:1)

In contrast to conventional sources of oil, tar-sands are a mix of silt, clay, water and bitumen which makes them much more costly to extract and process (CAPP 2015). The first steps made towards extracting oil from tar-sands started in the 1920s; however, it took nearly half a century before technological progress and increased global demand for oil enabled Canada to start tapping into its abundant tar-sands deposits (Chastko 2007). Joint interests of the government and transnational oil companies in making tar-sands economically viable have tailored its development without much regard to environmental and social impacts. With time, the Canadian infatuation with oil revenues deepened without assuring any long-term strategies on a more sustainable approach towards managing its natural resources (Nikiforuk 2011).

The first decade of this century was marked by an increased demand for tar-sands oil that resulted in increased production. The recent drop in oil prices brought great economic losses for the industry and the oil-producing provinces, yet this does not mean the tar-sands extraction has halted. While some of the investments in tar-sands expansion have been cancelled, the corporations are now intensifying extraction at the existing sites in order to minimize their expenses while waiting for oil prices to increase (Carrington 2015). This shows the tar-sand industry's resilience and determination to maximize the exploitation of the vast tar-sands deposits. Despite the instability of the oil market, the Canadian Association of Petroleum Producers (CAPP) is estimating an increase in tar-sands production from 3.7 million barrels per day to 5.3 million barrels of oil per day by 2030 (CAPP 2015). Promoted as a source of domestic energy security and economic growth, the development plans are being presented by the industry as well as the governing structures as the only option, while implementation of the environmentally more sustainable alternatives is absent from their agenda (Nikiforuk 2011).

Canadians belief in the abundant, yet finite and costly source of hydrocarbons is problematic from political, socio-economic and environmental perspectives. Environmental impacts of tar-sands exploitation materialize on local, national, international as well as on a global level. Following the estimated rates of production, the majority of tar-sand reserves are expected to be depleted within the next couple of decades (Nikiforuk 2010). At that time, it is highly unlikely that there will be enough funds and interest available to remediate the environmental impacts, especially as there are no concrete remediation plans in place already at the height of its abundance and profitability (Grant et al. 2009).

2.1.1 Environmental impacts on a local level

The tar-sand deposits are located in north-west Alberta, a land covered by boreal forests. The latter take up a bit less than one third of Canada's land area, providing opportunity for a wide range of biodiversity and key ecological services. The boreal forests are known to contain 35% of the world's wetlands and represent around 80% of Canada's freshwater resources (Woynillowicz, Severson-Baker & Raynolds 2005). Mining for tar-sands removes the boreal forest cover, destroys its diverse habitats and contaminates potable water sources. Freshwater is a key component for the extraction and processing of tar-sands into crude bitumen. In this energy- and water-intensive process, the bitumen is separated from the sand by treating it with large amounts

of hot water and steam (Lemphers et al. 2010). The Athabasca River, a part of the second largest North American watershed, the Mackenzie River, is flowing right through the hub of the main extraction activities in Fort McMurray, enabling the development of the industry. Research by Kelly (2010) found that the tar-sands industry releases toxic pollutants into the Athabasca watershed. Moreover, the mining companies have been licensed to divert 445 million cubic meters of its water per year, which corresponds to the needs of a city of approx. 3 million people. This resulted in statistically significant reductions in the river's flow downstream from Fort McMurray, endangering the health of aquatic fauna essential for aboriginal people's sustenance (Grant et al 2009).

1`5 barrels of toxic tailings are created as a byproduct for each barrel of bitumen produced. This is deposited in large tailing basins, collectively covering an area of over 170 km^2 (Lemphers, Dyer & Grant 2010). The bottoms of these basins are not impermeable and are estimated to seep around 11 million liters of the toxic mix of water, heavy metals and complex hydrocarbons into the surrounding environment per day (Grant et al. 2010). They are irreversibly damaging the health of aquatic and boreal ecosystems, compromising the surface freshwater sources, aquifers and the quality of the soil, which inevitably affects the quality of life for communities living in the area (Woynillowicz, Severson-Baker & Raynolds 2005).

2.1.2 Environmental impacts beyond the local level

The negative environmental impacts are also spread along the existing and proposed tar-sands oil pipeline infrastructure, which stretches throughout the continent. The risk lies in potential pipeline defects and resulting oil spills (Woynillowicz et al. 2005). As a result, every single kilometer of the pipeline network is a potential source of an environmental disaster. Driven by petro-capitalist aspirations, both provincial and federal levels of the government are failing to acknowledge these long-term detrimental consequences for their country and beyond. In pursuit for tar-sands profits, they also ignore and break the Canadian First Nations treaty rights and their entitlement to prior and informed consent in tar-sands development (Droitsch & Simieritsch 2012).

From a global perspective, the most contentious issue regarding tar-sands development is the increase of greenhouse gas (GHG) emissions, known as the leading cause of climate change. The

emissions from tar-sands industry are much greater than in case of conventional oil production due to its energy-intensive extraction and processing techniques (Skinner & Sweeney 2010). Canada is already ranking as the world's biggest carbon emitter per capita and is considered ninth in total GHG emissions (Ge et al. 2014). Due to its energy policy, it is expected to fail in meeting its international climate commitments under the Copenhagen Accord to reduce its GHG emissions by 17% from 2005 levels by the end of this decade (Environment Canada 2014). As such, tar-sands development is becoming a highly contested, multi-faceted issue resonating throughout the communicative space of both social as well as traditional media.

2.2 Canadian petro-capitalist setting

Petro-capitalism is a common phenomenon to oil exporting countries (Karl 1999). These countries tend to rely on a single commodity and prioritize the oil sector, whereby neglecting other sectors and negatively affecting the economy. The exposure to the abundant oil reserves creates a symbiotic relationship between the governing structures and the oil industry and as a result, the industry's interests are given priority over the interests of the public. Along the way, the state becomes over-centralized and its institutions rigid and unresponsive to the needs of the citizens (Karl 1999). Whether or not Canada has become a petro-state is a highly contested issue. While some argue the signs for this to be true are obvious (Haluza-Delay 2012; Homer-Dixon 2013), others suggest that tar-sand industry's mere 2% contribution to the country's GDP cannot have such devastating effects on its economy (Leach 2013) and that Canadian economic struggles resemble those of other OECD countries suffering from the global economic restructuring (Krzepkowski & Mintz 2013).

Homer-Dixon (2013) recognizes the petro-capitalist behavior in Canadian politics as well as in its economy. He warns of destabilization of the economy via the boom-and-bust cycles of tar-sands profitability and of the decrease in the already low levels of technological innovation in Canada. While up until recently the global oil prices were rising, tar-sands oil export became more and more lucrative which increased the value Canadian dollar. During this time, the majority of investments were aiming at enhancing the tar-sands industry in Alberta, while the rest of the manufacturing sector depending on export, located primarily in Ontario, suffered from lack of investments and development. These symptoms are commonly referred to as the "Dutch disease", a term coined on the case of the discovery of vast reserves of natural gas and its impacts on the

economy in the Netherlands in the 60s (Ebrahim-zadeh 2003). In autumn 2014, Bank of America issued a report in which they diagnosed Canada with Dutch Disease. Their claims were supported by the Bank of Montreal (Tencer 2014).

In Canada, lobbying and political advertising by corporations and trade associations strongly influence the decision-making processes of the governing structures on both federal as well as provincial levels of governance. This by itself does not fall outside of the democratic practices, yet there are certain risks involved when the corporate sector begins to dominate over the interests of Canadian citizens. The consequences can harm a democratic system, especially when corporate pressure erodes public participation, hastens the decision-making processes and weakens the environmental legislation on the account of one of the most environmentally destructive industrial projects of our time (Cayley-Daoust & Girard 2012). According to Homer-Dixon (2013) the alliance between the former conservative federal government and oil industry is the main reason for the absence of public debate on tar-sands development. This alliance is not surprising given that the Conservative government's main base and source of funding was in Alberta. Throughout the nine years of government it was in their common interest to ignore the tar-sands industry's climate change implications and to portray it as an environmentally benign nation-building project.

2.2.1 Legislative changes

The oil sector's influence on Canadian decision-making processes is portrayed in case of two notorious budget bills of 2012, Bill C-45 and Bill C-38. The legislative changes these two bills imposed enabled more permissive circumstances for all tar-sands development projects. Bill C-45 transformed one of the oldest pieces of Canadian legislation, the Navigable Waters Protection Act (NWPA). NWPA formed the foundation of the federal role in environmental governance in Canada, defining the rights of its citizens to navigate Canada's waterways without interference or economic damage from all forms of industrial development. It established a clear, mutually beneficial link between navigation and environment, providing a frequently used tool by the federal government in protecting the environment. There were many amendments attempting to reduce the environmental protection aspect of NWPA in the past, but it wasn't until the conservative government introduced Bill 45-C which renamed the act to Navigation Protection Act (NPA) that the link between navigation and environment was severely weakened. This

created a regulatory environment clearly favoring industrial development and large-scale infrastructure projects such as tar-sands production and its supporting pipeline infrastructure (Ecojustice 2012). The Jobs, Growth and Long-term Prosperity Act, known also as Bill C-38, brought equally alarming modifications to the environmental legislature, all very clearly designed to benefit the corporate sector (David Suzuki Foundation 2012).

Besides the fore mentioned modifications to environmental legislature, the conservative government's efforts to minimize resistance to tar-sands projects have taken a rather intimidating dimension with the introduction of the 2015 Anti-terrorism Act. Known also as Bill C-51, this act was originally intended to minimize the threat of terrorist attacks in Canada, yet it is written in a form which could potentially criminalize also all legitimate forms of citizen dissent against the government such as anti-tar-sands and anti-pipeline protests (Barber 2015).

2.2.2 Tar-sands legitimation attempts

The government and the oil industry have used considerable resources to legitimize tar-sand development. This includes several greenwashing campaigns to promote tar-sands as an ethical source of oil and as such a core of domestic energy security (Nikiforuk 2010). In addition, they created carefully planned narratives portraying pro-tar-sands sentiment as patriotic, whilst labeling environmental advocates as anti-Canadian (Linnitt & Gutstein 2015). A recent disclosure of governmental documents revealed the Conservative government's budget plans for 2013-2015 and allocated 30 million Canadian dollars to the promotion of tar-sands expansion on both national and international level. Leaked documents from a high-profile marketing strategy proposed for tar-sands infrastructure company in charge of EE pipeline, TransCanada Corporation, by one of the world's biggest public relations company, Edelman, revealed how meticulously the oil corporations are planning their promotional campaigns as well as developing manipulative tactics to undermine the growing tar-sands opposition. One of the many proposed measures was "astroturfing", an idea that Edelman describes in the following way:

> In order to add layers of difficulty for opponents, we will work with third parties and arm
> them with the information they need to pressure opponents and distract them from their
> mission […] Third-party voices must be identified, recruited and heard to build an echo
> chamber of aligned voices. Edelman will work with TransCanada's Community Relations

team to develop a list of thirdparty [sic] experts and credible community voices with whom we can form strategic relationships and possibly enlist to author op-ed pieces, blog posts or letters to the editor. In coordination with Community Relations staff, we will identify and vet potential allies to determine their viability and level of interest. Then we will share this information with the Digital and Grassroots Advocacy team in order to best leverage these advocates online and offline. We will arm them with the materials they need to combat opposition messaging (Louwe 2014: 3).

In addition, the Canadian government made use of even more drastic measures to secure the future of tar-sands development. Firstly, it limited public access to government-funded scientific expertise by preventing its scientists from freely communicating with the media (Frozen out 2012); secondly, it also cut down on funding for governmentally sponsored research, which has resulted in the shortage of the peer-reviewed scientific publications on environmental impacts of tar-sands production (Schindler 2010); thirdly, the government has been continuously compromising the transparency of remediation plans and liability of tar-sands extraction by limiting public access to relevant information (Grant, Dyer & Woynillowicz 2008). Such actions create an atmosphere of distrust in the government and corporate entities to which some groups of citizens have started to openly oppose.

2.2.3 Public perceptions of tar-sands development

The results of the poll by a Canadian public opinion and research company, Nanos Research, show the Canadian public is divided in half when it comes to supporting tar-sands development. Supporters are in favor of tar-sands mostly due to their economic and job-related benefits, followed by reduced dependency on foreign oil. Almost three quarters of the opponents base their stance on the environmental issues. The findings of the poll also show that the majority of support for these projects comes from the Prairie Provinces and from men (Nanos 2014). Assumingly, the reasons behind it are the economic and job-creating aspects of tar-sands development, which would directly benefit its proponents. However, a comparative study of all the national polls conducted in the first half of this decade revealed a decline in the support of these projects (Nanos 2014). One of the reasons for the declining support of the tar-sands could be the increasing environmental awareness campaigns spread by the network of tar-sands opponents.

2.3 Cross-continental pipeline projects

Canada has been relying on pipeline infrastructure network for oil and gas transport for over a century and a half (CEPA 2015). Comparing to rail and road transport, this infrastructure represents a relatively low-cost and low-risk alternative to energy access that is favored by the corporations and governments (Carlson & Mendelsohn 2013). Virtually all of current Canadian oil export runs through the existing pipeline network to the U.S. However, the recent discovery of shale oil and gas reserves in U.S. has raised concerns over the potential decrease in future demand for Canadian oil from their southern neighbor (Cheadle 2015). As a solution, the Canadian Association of Petroleum Producers (CAPP) is calling for the diversification of the market in support of tar-sands expansion (Flanagan & Demerse 2014). However, for Canada to take full advantage of its oil export potential to other markets, such as Europe and the fast-growing economies of Asia, it has to first ensure a way of reaching them.

The existing pipeline, rail and road infrastructure is insufficient to support the enhancement of oil transport from land-locked Albertan deposits to ports of export on the Atlantic and the Pacific coasts. This represents a major obstacle for the Canadian response to the rising global demand for oil (Hoberg, Rivers & Salomons, 2012). As a solution, six large-scale, export-orientated crude oil pipeline projects have been proposed: Alberta Clipper to U.S., Keystone XL to U.S., Northern Gateway to the Pacific coast, Trans Mountain to the Pacific coast, the reversal of Line 9B from Ontario to Montreal and Energy East to the Atlantic coast. Each is currently at a different stage of approval and will be separately developed by one of three main energy infrastructure corporations: Enbridge, Kinder Morgan and TransCanada Corporation (Carlson & Mendelsohn 2013).

In general, the pipeline network enjoys support by the public as an enabler of economic growth. However, increasing problems such as the expropriation of land, restrictions of community access, disregard of the First Nations' rights, inequality of risk and benefit sharing as well as a number of serious environmental implications challenge the legitimacy of the newly planned pipeline infrastructure (Carlsohn & Mendelson 2013). If these pipelines become operational, they will enable a full expansion of tar-sands development and deepen the controversy of tar-sands on every level. Since tar-sands deposits are located out of sight of the most populated parts of the country, it was relatively easy for the oil corporations to develop the environmentally harmful tar-

sands industry without much opposition by Canadian citizens. However, since the planned pipelines are designed to cross the entire continent, virtually no province will be unaffected by either the construction activities or the consequences of a potential oil spill.

2.3.1 Pipeline defects

One of the main problems with pipelines intended for tar-sands oil transport is the relatively high incidence of defects. In the past decade there have been over a 1.000 reported cases of ruptured pipelines in Canada, with the overall rate doubling since 2000 (Hildebrandt 2013). Oil deriving from the tar-sands is said to contain much higher levels of acidity, viscosity, sulfur and abrasive particles than conventional crude oil. This increases the likelihood of internal pipeline corrosion, causing defects in the infrastructure and resulting in oil spills (Swift et al. 2011). Terrestrial oil spills pollute the soil and seep into waterways and aquifers, causing contamination with numerous carcinogenic compounds, such as polycyclic hydrocarbons and benzene (Skinner & Sweeney 2012). As such, potential pipeline defects are directly endangering the ecosystems, wildlife and human lives along the pipeline infrastructure. The most vulnerable groups are the already marginalized communities, such as Canadian First Nations, especially as their livelihoods are strongly tied to the land (Walkem 2007).

2.3.2 Pipeline alternatives

Pipeline proponents continuously portray pipelines as the safest means of transport comparing to transport by road, rail or by boat (Green & Jackson 2015). While defects, accidents and spills occur in all four, it is the low-cost and high-capacity aspect of pipeline infrastructure that wins the hearts of its supporters. In the case of Albertan tar-sands oil, transport to refineries and ports of export by waterways is not possible, new pipeline projects are being delayed and road transport is less viable, more oil is being transported through rail. The main problem with rail transport is that they have a six times higher incidence of accidents than pipelines; however, it is estimated that pipeline spills release three times as much oil at comparable distances and are much more difficult to detect (Tencer 2014). Rail transport opponents argue that trains carrying oil put more human lives in danger than pipelines, because railways are built in close proximity to densely populated areas and are more likely to explode in case of an incident (Nader 2015). The statistics of derailment accidents involving oil transport in North America show an alarming

increase over the course of the past few years (Martell 2015). This is not a big surprise knowing that rail transport of crude-oil in Canada alone has increased from 500 carloads per year in 2009 to 140.000 carloads per year in 2013 (Brewster & Shingler 2013).

Since the earlier proposed pipeline projects - especially Keystone XL to the Gulf Coast of U.S. and Western Gateway to the Pacific coast - were faced with strong opposition resulting in delays and extended regulatory processes, the pressure to secure alternative transportation routes for the expanding tar-sands production has increased (The Council of Canadians 2015). From an environmental perspective, tar-sands oil transport has no optimal solution, especially as all forms of moving the oil from Alberta contribute to the expansion of the tar-sands industry and further deepen its environmental impacts.

2.4 Energy East Pipeline

Plans for building EE pipeline, the longest North American oil transport pipeline, were first announced in the summer of 2013. The project is developed by TransCanada Corporation and designed to cross 6 provinces: from Hardistry in Alberta, across Saskatchewan, Manitoba, Ontario, Québec and to New Brunswick's Atlantic coast. On its route, the pipeline is planned to cross approximately 75 settlements, 52 independent First Nations communities, 90 watersheds and 961 waterways (The Council of Canadians 2015). Numerous waterways on EE route are on First Nations' lands and are as such under distinct rights given by Canadian Charter of Rights and Freedoms, Treaty Rights as well as the UN Declaration of the Rights of Indigenous Peoples which must be respected by all levels of governance (The Council of Canadians 2014).

The EE pipeline's total length is 4.460 km, from which 3.000 km consists of Canadian Mainline pipeline, a 50-year old natural gas pipeline that will be repurposed into tar-sands oil pipeline. Gas-to-oil pipeline conversions have become more common recently as both oil production and demand exceed available transportation capacity (Lewis 2013). The existing part will be combined with an additional 1.460 km of new pipeline construction through a part of Ontario, Québec and New Brunswick. The entire length of the pipeline is planned to become fully operational by 2018, with a capacity of 1.1 million barrels of oil per day (Walden & Dalzell 2014). This is estimated to be a roughly one-third increase in capacity of the existing tar-sands pipeline infrastructure. Excluding emissions from oil refinement and consumption downstream of

the pipeline, the upstream GHG impact of EE is expected to range from 30 to 32 million tons per year, which can be compared to emissions of more than 7 million vehicles in the same amount of time (Flanagan & Demerse 2014).
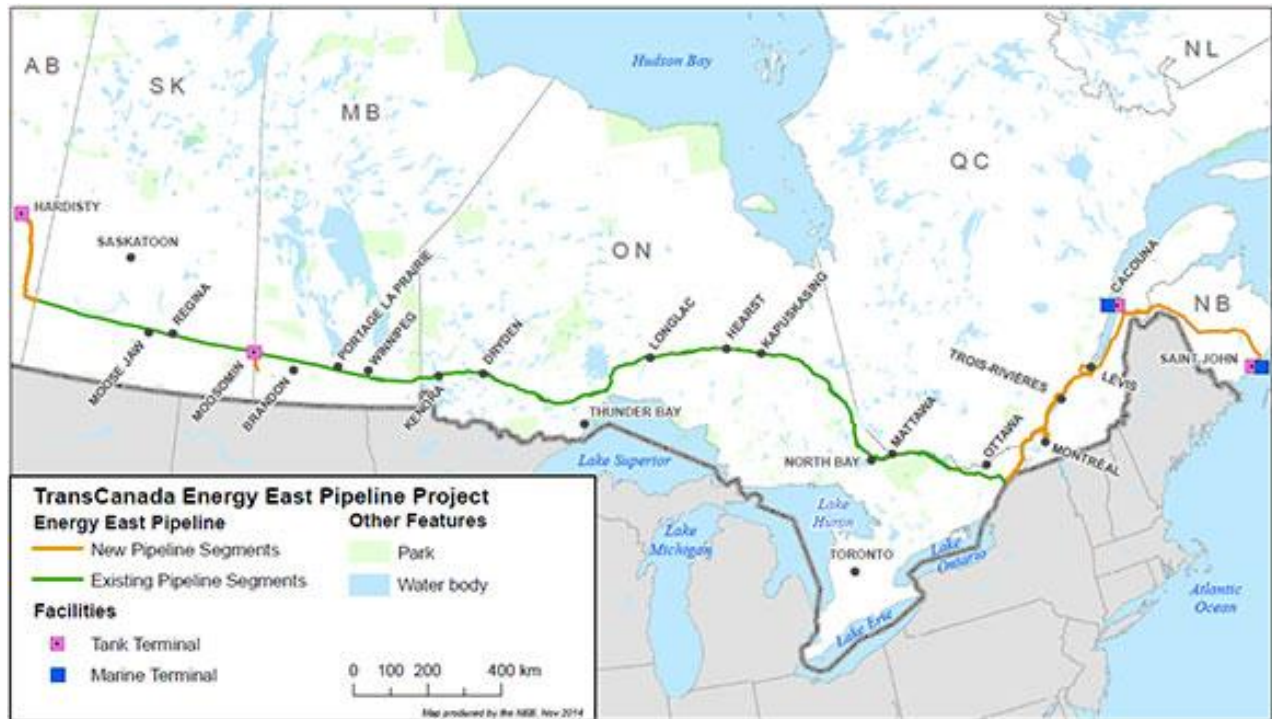
Figure 2. The map of Energy East Pipeline Project (Source: NEB 2014)

2.4.1 Provincial endorsement of Energy East

The debate around pipeline projects among the provinces across Canada is concentrated mainly on unbalanced benefit- and risk-sharing (Mason 2016). While Alberta directly benefits from tar-sands oil through royalties, the provinces that are crossed by the pipelines do not enjoy any of the economic benefits apart from property taxes, a limited number of jobs in construction and maintenance of pipelines and increased capacity in refineries; however they will be taking on the environmental and social-economical risks of pipeline defects and oil spills (Carlson & Mendelsohn 2013). As a consequence, the level of support for EE amongst the provinces varies greatly. In case of the country's most populous province, Ontario, the position on the pipeline is positive, yet not without certain reservations. With the national economical hub located in

Toronto and existing established refineries, Ontario is expected to benefit from EE the most, right after Alberta (Hussain 2015). However, there are reasons why EE approval is not as straightforward and it is not only due to potential oil spills. Firstly, the conversion of the existing part of the pipeline from gas to oil would compromise natural gas supply for the province (Carlson & Mendelsohn 2013). Secondly, Ontario has been successfully lowering its climate impact by shutting down all of its coal-based power plants in 2014 (Ontario Ministry of Energy 2015), by approving EE, the province would help expand tar-sands production, elevating GHG emissions to the amount equal to that of the closed coal plants (Flanagan & Demerse 2014).

In Québec, EE is generally supported by the provincial government; but, as in Ontario, not unconditionally. In Québec, the pipeline conversion will also affect the existing natural gas supply, raising concerns over potentially more expensive supply (Marowitz 2014). At the same time, the general economic benefits of EE in Québec are significantly smaller than in Ontario, even though the majority of the construction for the new part of the pipeline will cross its territory (Carlson & Mendelsohn 2013). Furthermore, the proposed supertanker terminal near Cacouna on the St. Lawrence River as a part of the EE project caused a lot of controversy due to its planned location in the midst of the endangered beluga whale habitat. The terminal faced enforced opposition by environmental organizations and Québecans, who organized petitions and a protest march against the project (Patterson, 2014). Due to public pressure, the plans for the terminal were finally dismissed in 2015 and a search for an alternative location has begun (Poszadki 2015). Due to this incident, TransCanada Corporation was forced to postpone the expected date of EE completion for a period of 2 years, from 2018 to 2020 (The Canadian Press 2015).

In late 2014, the liberal governments of Québec and Ontario signed an agreement of collaboration on various issues signaling a transition to a greener economy. They also compiled a list of seven conditions that need to be met by TransCanada Corporation before the EE pipeline will be approved in both provinces. The most contentious of the seven conditions was including GHG emissions in a full EA of the project, which the NEB so far excluded from consideration. Moreover, the conditions also called for compliance with the highest available technological standards, developing contingency plans, securing emergency response programmes and assuring consultations with communities and aboriginal people along the pipeline route (Hussain 2014).

Since Ontario and Québec together represent around 60% of the nation's population and contribute over half of its GDP, their alliance is important from both political and economic perspective. Both provinces expect to be able to attend the NEB hearings on EE and influence the final decision on the project (Hopper 2015). Soon after their conditions were made public, the main two proponents of the pipeline, Alberta and Saskatchewan, responded with harsh critique aimed at pushing for the inclusion of the total tar-sands GHG emissions in the EA of the pipeline (Morgan 2014). New Brunswick's premier supports the EE pipeline as the provinces' location on the Atlantic coast promises substantial economic benefits as the main point of export for tar-sands oil (Morgan 2015). He has, however, also endorsed conditions published by Ontario and Québec and is convinced the pipeline will meet their demands (Venderville 2014). Meanwhile, Manitoba's government is the only province on the path of EE which has not joined the ongoing debate on the pipeline and has left its citizens without a clear stance on the issue (Leahy 2015).

As far as public perceptions on EE, a recent poll conducted by the Climate Action Network Canada (2015) revealed that whilst 80% of Canadian population is familiar with the proposed project; 47% oppose it, 36% support it and 18% are undecided. In terms of climate effects, 61% of the population prioritizes climate protection over EE and tar-sands development. On a provincial level, the leading support for the climate protection was expressed in Québec (71%), followed by Ontario (67%) and New Brunswick (60%). Since the first two combined account for more than half of Canada's population, we can expect the process of the pipeline's approval will not be met without substantial opposition from the concerned public.

2.4.2 National Energy Board Hearing Process

NEB is an independent economic regulatory agency responsible, amongst other tasks, for administering the entire life cycle of oil and gas pipelines as well as power lines on an international and interprovincial level in Canada (GC 2015). Besides providing EAs for each proposed energy infrastructure project, it also has to schedule a public hearing during the review process in which only the directly affected stakeholders of a given project can participate. The changes to NEB introduced under Bill C-38 compromised its public image and were labelled by environmental groups as undemocratic and designed to further limit public participation (Paris 2013). Moreover, Bill C-38 reduced the role of NEB to that of an informative body of the government as final decisions about each project are now made by the federal government (Paris

2012). NEB has gained additional negative traction after its critics revealed to the public that the majority of NEB members have strong ties to the oil industry (Farell 2013).

NEB is currently reviewing the EE project application submitted by TransCanada Corporation in October 2014 and is in a pre-EA phase (CEAA 2015). The review process became very controversial after NEB proceeded with opening the 30-day online application process to participate in the hearings in January 2015, despite an incomplete project application. The application was not complete because of the cancelation of the Cacouna tanker terminal in Québec without any clear alternative in place. This would make it impossible for any of the directly affected individuals of the alternative option to take part in the hearings (Environmental Defence 2015). Additional cause of concern for the pipeline opponents was NEB's decision to exclude EE pipeline's climate implications from its considerations (Patterson 2015).

2.4.3 Energy East opposition

Due to the growing discontent with NEB and its ongoing EE review process, the pipeline opposition challenged its legitimacy as an independent review body in several inter-provincial campaigns. In February 2015, a petition with more than 100.000 signatures was delivered to the NEB headquarters in Alberta, demanding the impacts of EE on the climate to be included in the review process (Sproule 2015). After the application process to participate in the hearings opened in January 2015, environmental groups such as Greenpeace and 350.org organized a nation-wide campaign named *The People's Climate Intervention* in which they called for as many individuals as possible to apply to participate for the NEB hearing process and include climate implications as a primary reason for being granted standing in the hearing (Toronto 350.org 2015).

Around the same time, the NEB review process was also met with strong opposition by the Ontario First Nations due to the insufficient consultation, restricted access to information and lack of transparency. In their opinion, the need to secure safe water sources and share the benefits from the project had not been properly addressed by the NEB (McCarthy 2015). In May 2015, several hundred aboriginal and non-aboriginal groups of people across New Brunswick gathered in Red Head to march against EE, which is planned to cross the area and end with an export terminal to the Atlantic coast in the Bay of Bundy (CBC News 2015a). A 125 km Anishinaabe Water Walk organized by a group of First Nations activists from the NW Ontario was organized

in the summer of 2015 with the intention to protest against EE pipeline and raise awareness of the potential threats to water resources along its route (CBC News 2015b).

In May 2015, more than 60 organizations appealed to NEB with a request for suspension of EE project, due to the lack of consultations with the public, failure to address First Nations' concerns as well as reluctance to consider climate impacts of EE. A general concern regarding EE project expressed in this appeal was its contribution to the further expansion of tar-sands production and environmental consequences of potential pipeline defects, out of which the most alarming is polluting the freshwater supply (Canadian Press 2015). One of Canadian biggest natural gas distributing companies, Gaz Métro, has also raised concerns regarding the expected loss of the existing natural gas pipeline capacity. They are expected to openly oppose the project during NEB hearings (McCarthy 2014).

3. THEORETICAL FRAMEWORK

The following chapter of the thesis presents the main concepts used in this study and will elaborate on the theoretical foundations upon which the research was carried out. According to Fuchs (2008), Internet research exceeds the traditional boundaries between the social and engineering sciences. Within this field of research, there are three views of the relationship between technology and society: technological determinist, social shaping and the dialectical view. The first view is based upon the understanding of technology as autonomous from society but significantly influencing its systems; the second view is that of social constructivists and sees technology as a product of society; the latter view perceives the relationship between technology and society as dynamic process of mutual interaction, a so-called "self-referential loop" (Fuchs 2008: 4). According to him, research on social media and its effects on society cannot be studied separately from the larger context in which they are situated (Fuchs 2008); therefore, this chapter lays out three main fields of study which are presented and discussed in relation to each other i.e. the theory of public sphere, legitimacy theory and theory on social media.

3.1. The public sphere in a modern democracy

3.1.1. Traditional perception of the public sphere

In his book *The Models of Democracy,* Held (2006) defends democracy as the best choice among all forms of governing, because it ensures legitimacy through public consent. According to him, democracy has been on the rise in the past fifty years and is now a predominant form of governance around the world in a number of different variations. However, this does not imply that the concept of democracy in the political arena is flawless, especially nowadays as the challenges of national democratic systems are being accelerated by the ongoing process of globalization on economic, social and environmental levels. In these transformative circumstances, with increasingly complex societies and emerging information and communication technologies, the role of public sphere as one of the key concepts of deliberative democracy is less clear (Rousiley 2007).

For more than a decade now, social scientists have been researching social media as a newly emerging form of a public sphere with the main focus on exploring the potentials and limitations of social media's contribution to democratic processes within the modern society (Bennett &

Entman 2001; Dahlgren 2005; Sparks 2001; Trottier & Fuchs 2013). The shifts in observed patterns of public participation within these processes have emerged hand-in-hand with the recently formed, Internet-based types of communication (Bennett & Entman 2001). To better understand the influences of social media on modern democracy, we first have to explore the basic role of the public sphere within a democratic context.

The public sphere can be explained as being:

> Areas of informal life […] where citizens can go to explore social interests and conflicts. In this sphere, individuals have the freedom to judge the quality of their governmental decisions independently of censorship. The public sphere is comprised of any and all locations, physical or virtual, where ideas and feelings relevant to politics are transmitted or exchanged openly (Bennett & Entman 2001: 3).

Habermas (2006), the founder of the concept of the public sphere, states that in modern democratic systems this sphere is independent from the state and civil society and acts as an intermediate structure between them. It is through the public sphere that various forms of civil society engage in a public debate and influence the decisions made by the state. As such, it contributes to democratic processes within a political system by amassing relevant information on a certain issue, processing this information within an organized debate and, as a result, providing a diversity of public opinions on the issue in question. This then influences the decision-making process. Mukhortova (2014) views public opinion as one of the key elements of the public sphere and its influence on policymaking is not to be underestimated. Public opinion entails a dual capacity to both generate discussion as well as derive from it. It stimulates people to engage in a political discourse and leads to legitimacy.

Alongside public opinion, it is necessary to mention an important attribute of the public sphere - its reflexivity, which enables individuals to reconsider perceived public opinions based on formal and informal communication and shape their views accordingly (Habermas 2006). Dahlberg (2001) sees reflexivity as an internal process crucial to transforming individuals' orientation from private to public. According to Calhoun (1992: 2) "A public sphere adequate to a democratic polity depends upon both the quality of the discourse and quantity of participation."

In relation to this, Habermas (2006) reflects on the inequalities between different actors' ability to intervene in the public sphere in order to influence the process of forming public opinion and proposes two conditions to overcome these inequalities: an independent, self-regulating media system and empowerment of citizens to participate in the public discourse. He sees the latter as especially challenging because the ability and willingness of the individuals to participate in the public debate depends on various factors and has been widely discussed by researchers in this field.

The process of communication between citizens, civil society and the state through the public sphere ensures the balance between stability and social change (Castells 2008). As such, communication is seen as one of the most important measures of power and equality within democratic systems. However, communication can have both positive and negative impacts on the democratic processes, depending on how much it promotes active citizen participation in the decision-making processes (Bennett & Entman 2001). The main channel of communication between the actors within the public sphere is the mass media system (Castells 2007), defined as: "structures that enable and constrain human information processes of cognition, communication and cooperation, which are practices that produce and reproduce informational structures" (Trottier & Fuchs 2013: 13).

Habermas (2006) identifies media power as one of the four types of power – besides political, social and economic – within the public sphere. He implies that the imbalance between these forms of power distorts the dynamics of the flow of communication within the public sphere and results in erosion of legitimacy. According to him, media power derives from the technology of mass communication and is set in the hands of people who have the control over which content gets published in order to influence public opinion. Castells (2008) argues that the power as such is not in the hands of media itself, because it is highly influenced by powerful social actors, so media represents merely the arena where power relations are determined. Bohman's (2007) view differs from Castell's and claims that in order to prevent tensions in democratic legitimacy deriving from excess media power, efforts have to be made towards establishing a relationship between the media and the civil society which is based on feedback and fostering of citizen empowerment as well as their reflexivity.

3.1.2 Globalization and the new public sphere

Beck (2000: 11) sees globalization as "a processes through which sovereign national states are criss-crossed and undermined by transnational actors with varying prospects of power, orientations, identities and networks." This process is comprised of technological, institutional and organizational dimensions, which jointly create a global network that affects everyone independently of their level of globalization, because it encompasses the main economic, communicative and cultural activities in today's world (Castells 2008). The question which arises is what is the nature and role of a public sphere in the light of globalization and how can it contribute to the decision-making processes within it?

Habermas laid the foundations of our understanding of public sphere; however, his views are obsolete within the context of contemporary globalized world (Castells 2008; Fraser 1992; Mukhortova 2014). The very potential of public sphere's contribution to democratic processes as portrayed by Habermas is put in question when recognizing his traditional view of the public sphere is built on idealized premises by which the access to information by citizens is equal to that of the political elite and that the state plays by the same rules as its citizens. Despite its idealistic background, the concept of a public sphere remains relevant to our understanding of contemporary democratic processes due to its inseparability from the state and society (Castells 2008). In light of these arguments the concept of *the new public sphere* emerges as a result of the rapid globalization processes of the recent few decades (Mukhortova 2014). In this context, the new public sphere has shifted from the national to the global level. As the power of national political systems to address the world's pending issues is weakened, a global civil society has evolved out of a growing need for cooperation between national governments and citizens (Mukhortova 2014). Castells (2008) argues that the newly emerged public sphere and its role in globalized society is not yet well understood, yet it is clear that deliberative practices in this new setting increasingly rely on global communication technologies and networks.

The new public sphere, also referred to as the transnational or global public sphere, is no longer influenced by the sovereign powers of an individual state, but is subjected to influences deriving from interactions between different states and various non-state entities – a process which demands more transparency and an ability of each state to reach an agreement on common issues which need addressing (Mukhortova 2014). The idea of a global public sphere has not been met

without critique; reservations towards this concept are mostly connected to difficulties in finding agreement on the perception of common problems on a global level (Fraser 1992), as well as to the absence of media system which would effectively cover global concerns (Sparks 2001).

3.2 Legitimation and media in a globalized world

3.2.1 Legitimacy crisis

Legitimacy can be understood from two different perspectives:

> From a normative perspective it refers to the validity of political decisions and political orders and their claim to legitimacy. From a descriptive perspective, in contrast, the focus is on the societal acceptance of political decisions and political orders as well as the belief of the subjects of rule in legitimacy (Zürn 2004: 260).

According to Habermas (1976), political institutions define the rules by which the public debate is carried out within the public sphere in order to insure order and productivity. If the citizens, civil society or the state do not abide by these rules while participating in the public debate, the system of representation and decision-making is destabilized. This results in a legitimation deficit and the lack of citizens' identification with the established institutions of society. Furthermore, he explains the legitimation crisis in connection to the advanced capitalist setting in which the political sphere lost its autonomous role and became interdependent with the economic sphere. The political sphere is thus torn between the demands of the economic sphere and those of the socio-cultural system. In this context, the decision-makers seem to lack rationality in the eyes of the socio-cultural system when they make decisions in favor of the economic sphere which, especially in the absence of compensation, leads to loss of trust and lack of legitimation.

Rahaman, Lawrence and Roper (2004) consider Habermas' views on interdependence of political and economic spheres as outdated. They claim that the economic spheres are no longer nationally based, but have expanded to trans-national levels. Despite this expansion, the interdependence between the two spheres remains and is resulting in increasing power of transnational corporations on the account of the socio-cultural sector. This increases complexities and poses a challenge for national-states to maintain legitimacy. As Fuchs (2008) sees it, at the core of

legitimation problems in the modern society lays individuals' aversion towards the increasing complexity, dynamics and alienation of global governance structures.

Quirk (2011) outlines three main challenges contemporary democracies are faced with: fiscal, political and social. While the first is connected to national deficits impacted by 2008 financial crisis and the second to the declining trust in government decision-making, the latter is in large part due to the progressive expansion of Internet-based communicative networks that enable connecting of people across all societies. Castells (2007) stresses the importance of these interactive and horizontally formed networks for opening up a space for insurgent politics to enter and participate in this expanded communication arena.

3.2.2 The role of mass media systems

Media as means of communication play a pivotal role in assuring legitimacy in contemporary society, but their influence stretches well beyond this limited scope. Technological progress in information and communication channels has shaped human history in unprecedented ways; ever since the invention of the printing press almost 500 years ago and throughout all the subsequent technological innovations and additions to the mass media system, the importance of media has been increasing and became an integral part of transformative processes which shaped and modernized our society (Hjarvard 2008). Castells (2008) even sees the role of media as the new central political arena; however, in the rapidly-changing times also media itself are undergoing a rapid transformation through new technologies which re-define conventional communication practices (Vaara 2013).

According to Lundby (2009), we are in the process of shifting from a dualistic system of communication to various forms of digitally-based communication defined by multimodality, interactivity and networks. The term *mediatization* has been introduced as one of the four historical socio-cultural processes that have shaped the contemporary communication environment – the other three being *globalization*, *individualization* and *commercialization*. The newly introduced term refers to "the meta processes by which everyday practices and social relations are historically shaped by mediating technologies and media organizations" (Lundby 2009: x).

Mediatization signifies the omnipresence of media in the contemporary world that affects almost all aspects of social and cultural life and influences the processes of communication within society. This has progressed to a point where media can no longer be considered separate from other cultural and social institutions because they have become an integral part of these institutions' operations (Hjarvard, 2008). Mediatization means other organizations and institutions have to adapt to practices and processes under the pressure asserted by the media (Lundby 2009), especially as nowadays power relations within society are being increasingly determined within the communication field (Castells 2007).

3.3 The Internet – a contribution to democracy?

3.3.1 The Internet Revolution

The term *Internet* represents a global network of computer networks and is a specific type of information and communication technology (ICT) which stands for "technologies of cognition, communication and cooperation that are computerized and networked" (Fuchs 2008: 5).

Fuchs (2008) further elaborates on the term Internet as:

> A global techno-social system that is based on a global, decentralized technological structure of networked computer networks that store objectified human knowledge. Human actors permanently re-create this global knowledge storage mechanism by producing new content, communicating, and consuming existing informational content in the system (p. 96).

ICT represents a technology which was first developed in a military context by the U.S. government in the late 60s (Fuchs 2008); however, it was not until the development of the new wireless communication technology in the middle of the 90s that it became increasingly used (Castells 2013), with the first billion of users reached in 2005 and the third billion in 2014 (Internet Live Stats 2015). The Internet revolutionized the computer and communications world in unprecedented ways. It enabled the development of interactive and horizontal networks of communication and transformed the traditional forms of mass communication into "mass self-communication", which is defined as "self-generated in content, self-directed in emission and self-selected in reception by many that communicate with many" (Castells 2007: 248).

This process resulted in relocation of the public sphere from institutional confines to the newly formed communication space (Castells 2007). Poynter (2010) emphasizes the revolutionary powers of Internet as this increasingly accessible tool enables a rapid collection, dissemination and transmission of information independently of the users' social status, age, gender or geographical location. Internet gradually evolved to be more user-friendly for technically inexpert individuals and has therefore become an important medium for self-expression, for connecting and interacting between people in innovative ways (Ibidem.)

According to Fuchs (2008), in today's "network society", the Internet is being utilized as an instrument of global coordination and communication and has as such enabled restructuring of economic, political and cultural spheres into more fluid and dynamic forms, operating on a transnational level. According to him, this has helped reshape capitalism into "global network capitalism" in which domination and competitiveness overshadow cooperation (p. 94). On the other hand, Castells (2007) argues that the expansion of Internet and its technologies, in conjunction with the globalization processes and the growing crisis of political legitimation, enabled the growth of insurgent politics and social movements as forms of resistance to domination and competitiveness of the established power relations in the globalized network of today's society.

3.3.2 From social networks to social media

Fuchs (2014) portrays certain web technologies as "social" due to their purpose to store and transmit human knowledge that is rooted in social relations of society. He argues that we can identify three social information processes within ICT that correspond to either one or all of the three forms of sociality: *cognition*, *communication* and *cooperation*. The complexity of a communication process encompassed by a particular social media system is portrayed in Figure 1. It shows how various forms of sociality are integrated within a social media system, producing countless possible social functions it can serve. It enables individuals to interact with different spheres of society in a variety of social roles. It also enables the assertion of control over social media by the state and supports the business interests of corporate bodies.
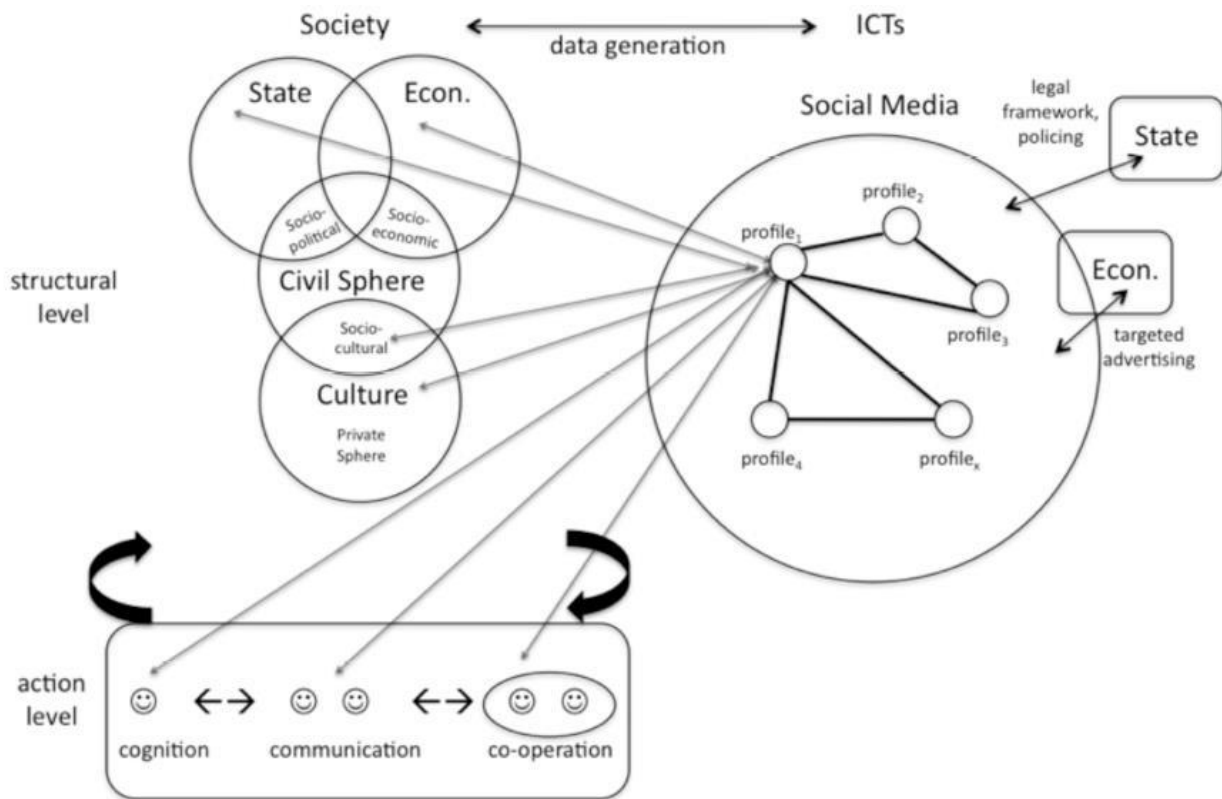
Figure 3. The process of social media communication (Trottier & Fuchs 2013: 16)

Veerasamy (2013) sees the difference between "social network" and "social media" in that social network sites (SNS) were first established with a person-centric objective, primarily concerned with building a network of interconnected individuals through which they could communicate effectively. He adds that as soon as SNS evolved to enable distribution and publication of information, it transformed itself into social media, posing a challenge for the traditional news media as it became increasingly event-centric.

Various social media platforms such as Twitter, Instagram, Facebook, LinkedIn, YouTube, Wikipedia, Flickr and many others are bringing together people with shared interests. Together they create user-generated content in form of diaries, blogs, personal websites, forums, videos, photos, reviews, opinions and ratings which get published instantaneously, free of charge and independently of the corporate media, bypassing its control. As such, social media gave rise to the so-called citizen journalism. In practice, this new type of journalism has the potential to report on the events quicker and much more up-close than the corporate news organizations (Leung

2009). These new opportunities have raised questions if and how the new communication environment can be used to improve decision-making processes (Willard 2009).

3.3.3 Opportunities for online civic engagement and collective action

The two political processes linked to democratization which are expected to benefit from social media the most are civic engagement and collective action (Obar et al. 2012). Social media enabled a more complex and participatory communications environment for the networked society. As a result, citizens who are a part of this network gained better access to information, more opportunities to engage in public speech and organize collective action in their demand for change. From this perspective, social media can be perceived as instruments which contribute towards strengthening of the civil society and the public sphere (Shirky 2011).

According to Auger (2013), the social media provided a new arena for the democratization of interests and ideas by dramatically expanding the opportunity for expression of competing and controversial ideas in society. They enabled individuals and organizations to communicate via various online platforms, with the limitless potential to reach anyone with Internet access. An important aspect of the social media is in its potential for inclusion of segments of the public that were previously disconnected and disengaged from active participation in the public life by the former channels of political communication. As a relatively inexpensive and ubiquitous tool, it is the most beneficial to groups with limited resources, those who need to connect and coordinate beyond a local scale as well as to those who need to evade censoring of repressive regimes (Denning 2000).

There is a number of attributes of social media which sets them apart from traditional forms of media and can improve citizen engagement, mobilization of collective action and other democratic processes (Delli Carpini 2010: 346):

a) [It] increases the speed with which information can be gathered and transmitted,
b) increases the volume of information that is easily accessible,
c) creates greater flexibility in terms of when information is accessed,
d) provides greater opportunity and mixes of interactivity (one to one, one to many, many to one, and many to many),
e) shifts the nature of community from geographic to interest based,

f) blurs distinctions between types of media (print, visual, and audio),

g) challenges traditional definitions of information gatekeepers and authoritative voices,

h) and challenges traditional definitions of producers and consumers of information.

Social media is believed to improve transparency and accountability of the governing structures due to the ease-of-access to information used in decision-making processes (Schacter 2009); in this way actions of the decision-makers are now more closely observed by the public than ever before. Social media have proved useful also in supporting the newly-emerging interest groups as well as helping the already established ones to carry out their advocacy strategies, fundraising activities, connecting with other groups and mobilizing their supporters (Chadwick 2007). As such, social media offer a great potential towards contributing to improved democratic practices, yet their promising attributes do not come without limitations that need to be taken into consideration.

3.3.4 Limitations of social media within democratic practices

Despite the opportunities of social media to increase civic engagement in democratic practices, this new medium is met with a substantial amount of critique (Sunstein 1999; 2009; Dahlberg 2001; Papacharissi 2004; Gladwell 2010; Cornelissen & Karelaia 2013). The limitations of Internet and social media to improve democratic practices are rooted in information overload, fragmentation, polarization, manipulation, reinforced domination of consumerism and entertainment over public affairs and many other (Delli Carpini 2010). While Dahlberg (2001) recognizes the diversity of communicative practices across various social media and acknowledges their potential to contribute to deliberative democratic processes, he also points out an important downside of this new type of media. The problem is that a vast portion of social media users are connecting with like-minded groups within which their interests, values and prejudices do not get challenged, but are instead reinforced. Sunstein (2009) sees this as a threat to deliberative democracy, because it leads to a deficit of competing ideas and unnoticed problems which does not contribute to a broadly informed public necessary for a well-balanced deliberation. The consequences of such "personalization" are increased fragmentation of online discourse and creation of mutually exclusive and ideologically homogenous online communities (Dahlberg 2001).

Another hindrance of online deliberation in contrast to offline deliberation lays in its impersonal nature. Because it enables anonymity and lacks visual and audio cues people are exposed to in face-to-face communication, it tends to lead more towards uninhibited forms of discourse characterized by fragmented, vulgar and hostile communicative practices (Papacharissi 2004). Different forms of social media apply different degrees of anonymity and impersonality of their users' profiles, so the expression of the above mentioned effects varies accordingly. This implies social media services which allow more personalized user profiles are perhaps better suited for online deliberation, because this helps to develop communication on a more cultivated level leading to increased participation (Halpern & Gibbs 2013).

Gladwell (2010) argues that the social ties between people on social media are weaker than those in real life. While there are specific benefits of weak ties, such as fostering innovation and interdisciplinary collaboration, the downside is that it is less likely to lead to high-risk activism. According to him, online activism is a form of organizing based on networks and access to information; as such it enables self-expression, promotes resilience and adaptability, but it fails to provide any tangible impact on the society. Research by Cornelissen and Karelaia (2013) adds to these observations; their results show that when individuals get the chance to declare their support towards a positive cause on a symbolic level, the actual real-life support towards the same cause is less likely to materialize. They refer to this type of online activism as *clicktivism* and warn of its negative consequences for online activist practices. They conclude that in many cases signing online petitions and supporting causes on social media serves individuals whose self-image depends on other people's perception of them as highly moral people, while the solutions for the specific cause become of secondary importance.

In order to determine to what extent Web-based interactions are promoting the rational-critical discourse and public sphere through the Internet, a set of six requirements was developed (Dahlberg 2001: 623):

- Exchange and critique of reasoned moral-practical validity claims
- Reflexivity
- Ideal role taking
- Sincerity
- Discursive inclusion and equality

- Autonomy from state and economic power

The first requirement is based on reciprocity of critique which is supported by argumentation and is usually met in daily online interactions; however, this is not the case for other five requirements. Individuals' reflexivity to critically asses their own set of values and interests is not commonly found in online deliberations; the same goes for making an effort to listen and understand the position of the other person involved in the discourse (Dahlberg 2001).

Lack of sincerity is closely related to the anonymity issues which damages the credibility of user-generated content. Since social media can gather and propagate information very swiftly, separating true information from fabricated material can be challenging (Castillo et al. 2011; Morris et al. 2012). The issues of discursive inclusion and equality are more closely examined within the concept known as the *digital divide*. It refers to the disparities in access and ability of individuals to use the Internet. This term encompasses technical as well as non-technical reasons for the absence of participation in digital media such as lack of physical access, lack of skills, knowledge, motivation etc. (Epstein et al. 2014). According to Selwyn (2004), this divide is an empirical manifestation of the overarching theme of social inclusion.

The last of the six requirements is difficult to fulfill. Despite the seeming freedom of social interactions on the Internet, this medium has never been entirely free from regulation by the state and profit-oriented corporate interests (Dahlberg 2001). According to Fuchs (2014), social media are dominated by the corporate and state power. Their control over social media is based on cooperation between Internet and social media corporations, private security corporations as well as secret services. At the same time, the social media offer a platform in which this dominion is challenged through the emergence of new social movements and political parties. He adds that social media became spaces within which existing power relations are being contested and influenced by resource asymmetry equal to that of the offline political struggles.

3.4 Twitter: Micro-blogging with a macro-effect?

3.4.1 Twitter basics

Twitter is a micro-blogging social media service by Twitter, Inc., established in 2006 (Arthur 2010). The company's mission statement is "*To give everyone the power to create and share*

ideas and information instantly, without barriers" (Twitter 2015). According to the company co-founder Biz Stone (2009), Twitter was originally designed to be a mobile personal status update service asking its users "*What are you doing?*"; however, with time this SNS transformed into a social media by developing infrastructure to enable alternative uses such as publishing. This transformation from a person-centered to event-centered service can be seen in the way Tweeter shifted from asking its users "*What are you doing?*" to "*What's happening?*" (Veerasamy 2013). In less than a decade since its inception, Twitter attracted 302 million monthly active users (Twitter 2015) which makes it the second most important social media platform, after Facebook (Bruns 2012).

One of the main advantages of micro-blogging, compared to regular form of blogging is the restriction of the length of the message which requires a quicker thought process and less time spent on generating content. This allows a faster communication flow and more frequent updates than those of conventional blogs (Java et al. 2007).
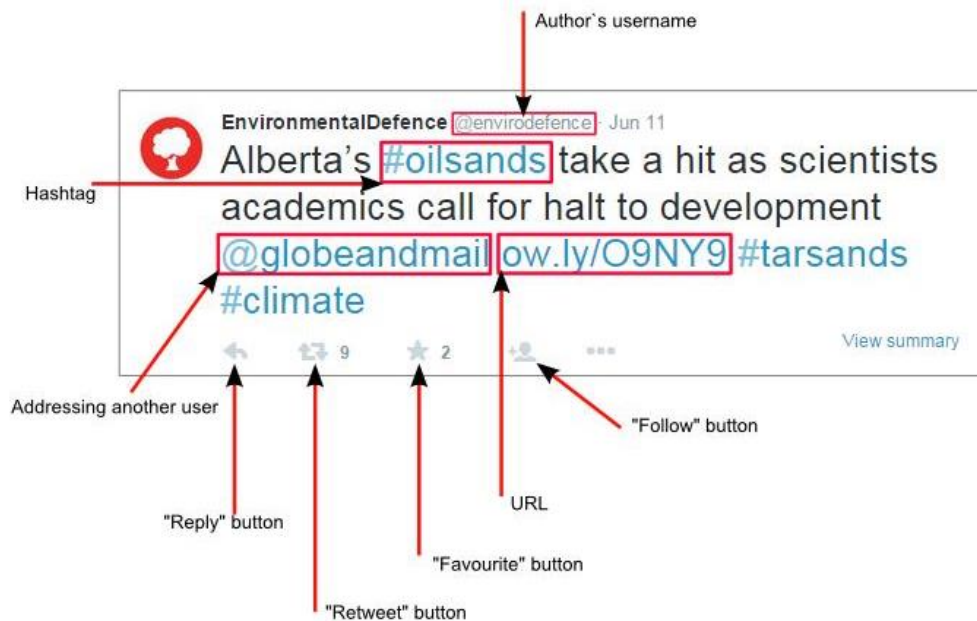
Figure 4. Example of a tweet with communicative elements (Environmental Defence 2015)

In the case of Twitter, users are limited by 140-characters for every individual message or *tweet* within which they can express their views on a certain topic prefixed with a hashtag character (#), share someone else's tweet using a *retweet* (RT) option, directly address or reply to someone by preceding their username with a an @ sign, adding links to external digitalized content by pasting a *uniform resource locator* (URL), and posting a photo or video content directly from their electronic devices. According to Bruns (2012), these well-defined markup conventions or operators were developed by users themselves with the intention to overcome the limitations of Twitter's relatively simple network structure. An example of a Tweet with its communicative features is presented in Figure 4.

The above presented communicative functions of *addressing, linking, tagging* and *republishing* enable citizens to actively participate in the political discourse via Twitter. Each individual tweet has a contextualized communicative function embedded within an overarching discourse network which derives from communicative elements used within a single tweet: *intertextuality* stands or cross-referencing between tweets using @; *transmediality* stands for a single topic being discussed in different media using URLs; *intermediality* stands for posting information on a specific topic through various modes such as photos, videos, audio recordings etc. (Thimm et al. 2011). Figure 3 shows how Twitter-specific communicative elements or *operators* are being used in tweets to fulfill a multitude of functions whereby giving tweets strategic value in contributing to an improved online deliberative process (Thimm et al. 2014).

Each Twitter user is given an option to create either a public or a private profile. In case of private profile, only permitted individuals can see the user's posting activities and in case of a public profile, all posts are available to be seen publically, including people without Twitter accounts. Users can establish networks by subscribing to other users' posting activities which is referred to as *following*, so each tweet gets broadcasted to the individual's followers in real-time. All tweets of users followed by a single user are received as one feed, known also as an *information stream*. However, this act of following a user on Twitter is not reciprocal; meaning the relationship between the two users can be only one-sided and does not directly imply there is a "friendship" or mutual interest in each other's posts, in contrast to other SNS such as Facebook (Chen et al. 2010).

Operators	Text	Function
@ (addressing, mentioning)	Name of account, locational reference, emoticons, part of e-mail address	Personal reference, creating attention, dialogicity/interaction, contacting, responsivity, intertextuality, coherence
# (indexing)	Lexeme, key word, occasionalism, abbreviation, acronym, cumulated phrases	Contextualization (cue), discourse organization, topical referencing, tagging, creating ad hoc publics, rhetorical branding
http:// (hyperlinking)	Other websites: internal and external links, pictures/photos (e.g. Twitpics), videos (e.g. YouTube)	Information diffusion, argumentation, illustration, quasi evidencing
RT (Retweet) (redistributing)	Citation, comment	Diffusion, reference, citation, creating attention

Figure 5. Functional operator model of Twitter (Thimm et al. 2014: 259)

A Twitter-specific feature of including hashtags in tweets enables a type of communication where users can interact within a topically homogeneous community. Without hashtags, users' tweets are mostly visible to their established network of followers, despite the public nature of tweets. However, the visibility of a tweet can be improved if it gets disseminated by a large number of other users, or if popular hashtags are included within the tweet. The latter leads to an individual user's contribution to the stream of discussion on a certain topic and provides a chance to interact with other users outside of their immediate circle of followers who share the interest in a common topic (Conover et al. 2013). This does not necessarily imply that topically homogeneous communities are unified in their perception of the topic, yet the dangers of potential group polarization should be taken into consideration.

3.4.2 Multiple uses of Twitter

The wide-spread use of Twitter and its high-speed information stream make Twitter of central importance for individuals, diverse groups of citizens as well as business corporations and governments (Aladwani 2014). Besides entertainment (Highfield et al. 2013) and social networking purposes (Morris 2009), Twitter gained relevance in marketing (Thomases 2010), humanitarian activities (Twiplomacy 2015a), education (Dhir et al. 2013) religious purposes

(B.C. 2015) as well as political communication (Lichtenstein 2010), (Parmelee & Bichard 2013), (Twiplomacy 2015b) and online activism (Gladwell 2010; Segerberg & Bennett 2011). Twitter has been successfully used for drawing attention to events resulting from failures of both governments as well as corporations; in this regard, it contributes to citizen empowerment in calling for a greater governmental and corporate accountability and transparency (Merry 2013).

Due to the focus of my research, corporate, political and activist uses of Twitter are further discussed in the following three sub-sections, as they represent the three main actors in shaping the public debate on Energy East pipeline.

Twitter and corporations

Nitins and Burgess (2014) argue that the corporate interests in Twitter are in direct connection to public relations and advertising. However, despite the advantages of instant and free access to vast numbers of consumers, the rules of interaction on Twitter differ from those of traditional media: the traditional one-sided or *one-to-many* stream of communication gave way to two-sided or *many-to-many* mode of communication which demands a well-developed dialogic approach and can be challenging to corporations used to the top down approach to marketing. With the advent of Twitter and other social media, consumers are empowered to provide public and uncensored feedback to companies completely effortless and free of charge (Nitins & Burgess 2014). This can result in loss of control over the reputation of the company, especially as negative publicity posted on Twitter is rapidly disseminated and exposed to public outrage or ridicule also through other more traditional media outlets (Singer 2012). Despite the risks of inappropriately engaging in Twitter-based communication, corporations cannot afford to distance themselves from it. Disengagement from the increasingly popular social media leads to alienation from consumers, especially as they continue to generate bad or good publicity independently of corporate presence in the debate (Nitins & Burgess 2014).

Twitter and politics

Parmelee and Bichard (2013) see Twitter as an important part of political communication, which is of value to all the stakeholders. It is increasingly perceived as a tool to predict online political participation and is gaining popularity among politicians who are utilizing it to promote their

agendas and self-image, as well as to interact with followers within a less restrictive environment than that of traditional media. However, political use of Twitter stretches far beyond this limited scope; terms such as *Twitter diplomacy* or *hashtag diplomacy* have been coined to refer to the growing importance of Twitter as a tool of amplification of traditional diplomatic activities on a global scale (Lichtenstein 2010). While most of the governments support the use of Twitter and use it in their communication practices, some limit or completely disable access to its services for their citizens (Yepsen 2012).

As a tool to empower individuals to document, observe, comment and criticize, Twitter has a great potential to influence political discourse (Thimm et al. 2014), which is why some countries with repressive regimes have banned it (Bennett 2014) and why some democratic countries are increasingly trying to limit it (Shirky 2011). The reason for such restrictive practices can be found in Twitter's enabling environment for the previously excluded, resource-poor actors to initiate and organize various protest activities, with the potential to lead to revolutionary movements (Eltantawy & Wiest 2011).

Twitter and the environment

When it comes to environmental issues and Twitter, the connection reaches far back as one of the earliest uses of a hashtag in a tweet *#sandiegofire* was used to track the progression of wildfires in southern California in 2007 (Clark 2009). The use of Twitter in the so-called *disaster tweeting* became widely spread and proved as a great source of real-time and on-the-spot information during as well as in the aftermath of human-induced and natural environmental disasters. Not only is Twitter useful for coordinating crisis responses, it also helps framing our understanding of crisis events (Marry 2013).

A more proactive use of Twitter in environment-related issues is embodied in the environmental movement targeting numerous environmental problems worldwide: climate change, fossil fuel consumption, resource extraction, deforestation, pollution, ecocide, endangered species protection etc. Consisting of individual advocates, grassroots organizations as well as large-scale non-governmental organizations (NGOs), this movement is increasingly relying on Twitter as one of their online communication channels, which proved its efficiency in cases of above mentioned environmental disasters (Merry 2013). Twitter offers an opportunity for them to raise

awareness on their agenda, to gain new supporters, to raise funds and to call for action by reaching out to a wider public (Hemmi & Crowther 2013). Perhaps the most visible is the climate change movement with many examples of online activities throughout the recent years (Cottle 2013).

3.4.3 A critique of Twitter as a public sphere

Skeptics argue that digital campaigning will not bring revolutionary societal changes due to Twitter's weak bonds (Gladwell 2010; White 2013; Fuchs 2014). Online activism is said to lead to offline action only for people who are already sufficiently motivated, but lacked either the knowledge about an issue or information on how to engage in offline activities regarding a certain issue (White 2013). According to Fuchs (2014), social media are too embedded in the contradictions and power relations of society to be the cause of revolutionary action. Despite this, he acknowledges their importance in situations of protest, as their role in such situations can be perceived as complementary to offline forms of expressing dissent.

Fuchs (2014) goes even further with his critique of Twitter and calls it a "pseudo-public" or "manufactured" public sphere. His claims are based on the fact that with time Twitter Inc. developed his marketing strategy in a way that it became too profit-centered on the account of its everyday users. This change in the way Twitter operates, favors the already powerful actors who can afford to promote their tweets, while the ones produced by the non-powerful actors remain less visible. This clearly opposes the Habermasian ideal of the public sphere as a space of open exchange of information among individuals presented in the beginning of this chapter.

Last but not least, an important downside of Twitter is the growing occurrence of astroturfing that is clouding the communicative space of social media as a whole. The term is used to describe an increasingly popular phenomenon in which fake grassroots organizations and online personas are formed and sponsored by corporations in order to add confusion to the public debate by creating a false impression of a strong body of support on a contested issue. Such campaigns can have serious societal and ethical implications as they create aversion towards participation and prevent organized action against the corporate agenda (Cho et al. 2011). Although this phenomenon precedes the Internet era and is considered illegal by many countries, such deviant online

behavior is on the rise and has long-term damaging effects on public trust in social media (Bradbury 2013).

Twitter entails a number of advantages as well as limitations for civic engagement in an online public discourse. Opponents as well as proponents of the idea that social media are the new public sphere represent their arguments equally convincingly. This leads to the conclusion that there is no simple affirmative or negative answer to the question if Twitter is fulfilling this role successfully; instead, the complexity of findings and raised issues on the topic by scholars and researchers shows these new types of media cannot be confined to oversimplified definitions, nor can they be applied as a one-size-fits-all remedy to the ongoing legitimization crisis of the increasingly globalized world. In my understanding, their complexity is only a mere reflection of the increasing complexity of our society. And Twitter represents only a small fraction of contemporary communicative channels, and as such cannot offer holistic solutions; however, its influence on deliberative practices should not be ignored. In the following chapter, I present my methodological approach of conducting the study on how Twitter is being used as a tool for public deliberation in the case of EE pipeline that this chapter helped to guide and inform.

4. METHODOLOGY

4.1 Research approach

In my research for this thesis I have aimed at adopting a *spiraling research approach*, which enables the researcher to continuously reconsider, refine and re-examine the research process, independently of the phase of research. Berg & Lune (2012) suggest this approach as a non-linear alternative to the linear *theory-before-research* and *research-before-theory* methods. Its main advantage is the fluidity and openness to changes and readjustments of ideas, design, data collection, analysis and dissemination during the whole course of the research process. The study was based on a mixed methods approach employing both qualitative and quantitative research methodology. It is important to understand and give equal credit to both qualitative and quantitative schools of thought in scientific research as both contribute towards a more holistic understanding of the world and the dynamics of our own interactions with it. The nature of qualitative research is in addressing the quality of things through visual depictions and descriptions and is as such a part of the *constructivist paradigm*. It was often misconceived as inferior to quantitative, primarily number reliant research in the domain of the *positivist paradigm* (Berg & Lune 2012). The debate over which approach was more scientific resonated throughout a big part of the past century in what is known as *paradigm wars* within he research community. However, contemporary response to these tensions was found in *paradigm relativism* in which a more pragmatic approach to research allowed mixing of both philosophical and methodological approaches to addressing given research objectives (Tashakori & Teddlie 2003).

The benefit of using mixed methodology is that it combines the strengths of each separate approach and reduces their weaknesses, whereby enabling a more complete understanding of the subject of the study (Bryman 2008). Although the mixed methods approach is not new in social science research, it has only recently started gaining more recognition as a systematic research strategy (Scott 2013). While the aim of the qualitative approach is to explore the complexity of the addressed topic and develop an in-depth understanding of the topic that enables construction of theories (Berg & Lune 2012), the quantitative research approach relies on hypothesis testing and generalizing the findings to a large population. However, analyzing qualitative data can also be exploratory and contribute towards generation of theories. Applying qualitative methodology

can help discover the generalities of the phenomena studied in qualitative research (Bryman 2008).

In social network research, using only one research approach leads to an incomplete understanding of the dynamics of the social networks; therefore a mixed methods approach is advised (Edwards 2010). Mixing of the two approaches is supported by an argument that:

> Different research questions require different methods. In particular, research questions about the structure of social relations require quantitative (sociometric) methods, whereas research questions about the processes that produce networks, the perception and meaning of networks, or change over time, require qualitative methods (Edwards 2010: 21).

Quantitative methods are used to analyze large amounts of data with the aim of understanding how social media is used and by whom it is applied. They enable us to visualize and describe social networks. In addition, qualitative methods, such as interviews and other, are then applied in order to contribute to our understanding of the social network users' perceptions and motivations. Qualitative approach produces narrative, observational and visual data on social networks that are analyzed using content and thematic analysis, and by placing the data within a wider contextual frame (Edwards 2010).

I applied both qualitative and quantitative tools for data collection and analysis with an aim to pursue a more comprehensive understanding of the topic of my research and not to test any specific hypotheses per se. One of the benefits of mixing both methods in this case was that it added value to the study by providing both the "outsider's" view, through studying the structure of the network, as well as the "insider's view", by granting access to the content and meaning of the ties within the network (Edwards 2010).

4.2 Research design

Research was designed in three main phases in which I have drawn upon both primary and secondary sources. Each phase had its distinct tasks, which combined enabled me to have a more holistic overview of the topic of study. In the first phase I addressed the secondary sources with an in-depth review of the existing body of literature and research on social media in connection to public sphere and legitimation crisis, with the main focus on Twitter. I also reviewed reports,

news articles, scientific research, statistical data, legislature, social media content and video material on tar-sands and EE pipeline to gain a better understanding of the background of the subject of the study. In this phase, primary sources included attending two public events on EE and one board meeting of a local NGO. Upon completion of this phase I had a solid understanding of Canadian tar-sands and pipeline polemics, evolution of social media, its role in the globalized world and contemporary legitimation crisis. This helped me develop the following steps in my research; however, I continued following secondary sources and gaining more information on the topic throughout the next two phases of my research, which is in line with the spiraling approach to research described in the previous section. Primary sources were predominantly addressed in the second phase of my research with a prospective observational study of individual real-time tweets using social network and content analysis. In the third phase I conducted a series of post-hoc semi-structured interviews with some of the most influential users in the network of the studied topic.

4.3 Data sampling, collection and triangulation

4.3.1 Collecting tweets

There are two types of content streams on Twitter: those associated with individual accounts and those associated with topic-specific tokens or hashtags. The latter allows the content produced by many individuals to be aggregated into a public, topic-specific stream consisting of all the tweets containing a given hashtag (Conover et al. 2013). My sampling approach was to collect data from such a topic-specific stream through a 1-month period of tracking of Twitter traffic. The objective was to collect real-time individual tweets containing only hashtags directly related to the EE pipeline. In order not to exclude any of the existing variations of hashtags representing EE, I utilized Twitter's search bar which helped me find other frequently used hashtags for EE in both official federal languages of Canada, English and French: #EnergyEast, #NoEnergyEast, #StopEnergyEast, #ÉnergieEst, #PipelineÉnergieEst, #OléducÉnergieEst.

I chose to collect real-time tweets instead of collecting data retrospectively, because this approach enabled me to capture all of the targeted tweets in the context of the most current developments on the topic. Mining for tweets containing EE-related hashtags was conducted through applying open source software tools. For the purposes of this research, due to my lack of

knowledge and skills in computer programming, all of the programs required for data retrieval and processing were written in close cooperation with a computer scientist. In this regard, my research was multi-disciplinary and the computer scientist's role resembled that of a translator to and from a foreign language. Appropriate attribution to his contribution to this thesis is provided alongside the codes in the appendix. A program enabling streaming of targeted tweets was written in *Node.js*, a software platform suitable for data-intensive and real-time applications (Node.js Foundation 2015). The program was then deployed into a computer server where it ran for a period of one month, between 16th July and 16th August 2015. It streamed real-time tweets using Twitter's Streaming Application Programming Interface (API), which is a predesigned software enabling researchers to use their own code for retrieving data from Twitter. The data collection period ended with a sample frame of 6.303 tweets containing EE hashtags. The data collected from streaming was stored in a database within the server. From there the data was collected later, at the end of the one month period, for further processing.

In order to address each of the four research objectives, I applied further sampling steps. To answer RQ1, I applied a purposive sampling technique in which I identified the 50 users who tweeted on EE most frequently out of the sample frame. This type of sampling is not based on probability and relies on the researcher to decide who should be included in the sample. In my case, this decision was based on which users were most active in tweeting on EE within the timeframe of data collection. As such, the frequency of tweets can be understood as an indication of the individual user's engagement and dedication to the issues surrounding EE, be it for its promotion or opposition, as well as an indication of individual user's influence within the social network (Kafeza et al. 2014). In addressing RQ2, I applied a randomized sampling approach in which I analyzed every 10th tweet out of the sample frame in which they were sorted according to the date of publishing. The latter is important, because I wanted to get a sample which would capture tweets equally dispersed throughout the entire data collecting period. The sample includes 631 tweets for analysis. To answer RQ3, I took the whole sample frame to identify the most common topics appearing together with EE; this was possible because of the automatic analysis supported by computerized processing of the vast body of data in the sample frame. For RQ4, the sampling is described below.

4.3.2 Identification of users and approaching potential respondents

In order to select respondents for addressing the last research question, I identified the most influential users of EE hashtags within my database of 6.303 collected tweets. In this case, an influential user was defined by a combination of two factors: users with the highest frequency of tweets on EE and biggest group of followers also referred to as "Tweets per Follower" (Kafeza et al. 2014). This phase was based on purposive sampling that, due to the lack of positive responses from potential respondents, later had to be combined with snowballing sampling approach. I based my purposive sampling approach on my assumption that the most engaged users with the biggest audience of followers are the most influential within the sample frame and would therefore be most likely to contribute the most relevant information for my research. I selected the top 50 users and tried to find ways of contacting them with a request for interviews in order to further examine their perceptions on the role of Twitter in the EE discourse as well as on their motivation to tweet on EE. I aimed to have at least one representative of each group of users – individuals, organizations, corporations, political or governmental bodies and media – among the interviewees in order to get the most diverse insight into their perceptions. My aim was to collect 10-15 interviews, depending on the number of positive responses from the contacted users and until data saturation was reached, i.e. no new topics emerge within the conversations with respondents (Berg & Lune 2012).

The process of contacting potential respondents and conducting interviews spanned from 20th October to 5th December 2015. After the initial 2-week period of waiting for a response to my interview request, I have only had 2 positive answers. In the next 2 weeks I expanded my pool of users to include those which were outside of the initial top 50 most influential users on my list. Out of this group, I got 3 more interviews. Throughout the interviewing process, my respondents recommended and provided contacts of other users who are actively tweeting on EE, so I decided to include this snowball-sampling approach to my research in order to get sufficient number of interviews for a more in-depth insight into the topic. At the end of the interview phase, I collected 11 interviews out of which 5 were from the list of influential users and the other 6 were recommendations from the respondents.

I formed the interview schedule of 15 open-ended questions in which I strived to avoid the common mistakes, such as including ineffective wording, misleading questions, double-barreled

and overly complex questions (Berg & Lune 2012). I prepared separate interview schedules for individuals, organizations, media and corporations. Due to the lack of response, the schedule for the latter was not used. Prior to conducting the interviews, I tested one interview schedule on an individual who was frequently tweeting on environmental issues to check for any redundant questions, lack of clarity, to improve my skills as an interviewer and to test the recording device. The interviews were semi-structured and performed either in person, through the phone or Skype due to time restrictions and dispersed locations of the respondents. Conversations were recorded on a mobile device and later stored on a computer; each file labeled with a code to protect the respondents' identities. In the next stage the recordings were transcribed verbatim in to digital text format.

4.3.3 Data triangulation

The importance of data triangulation in social science research lies in its contribution to the researcher's comprehension of the subject of the study. It can also be understood as a tool for verification of theoretical and practical concepts (Berg & Lune 2012). For the purposes of this study, data triangulation was carried out throughout the research process by comparing and contrasting information I found while researching the theoretical background, learning about the case study, following traditional media outlets as well as other social media besides Twitter on the subject of my research. Following the Canadian as well as international news on EE, cross-checking whether EE related information resonates on Twitter and vice versa as well as talking to some representatives of the concerned public helped me gain a more complete picture of the events connected to the pipeline. An invaluable aid in strengthening my research was also drawing the information from attending two events on EE pipeline organized by local environmental groups. First was a public forum on February 9th, 2015 in Hamilton, titled *Tarsands: Who wins? Who loses?*, organized by Friends of the Red Hill Valley, Hamilton 350.org, Environment Hamilton and the Hamilton Chapter of the Council of Canadians. The forum focused on controversies around the distribution of risks and benefits of the tar-sands industry and the potential environmental implications of EE pipeline along its route. The second event I attended was titled *In Harm's Way: How the Energy East pipeline puts Canada's climate and water at risk*, hosted by University of Toronto and organized by Environmental Defence Canada in partnership with Toronto 350.org and Toronto Rejects Energy East, on July 22nd, 2015.

4.4 Data analysis

I approached the analysis of collected data in several steps in order to address each of the research questions with a suitable methodology. Firstly, I identified the most frequent users together with the size of their audience or number of followers (**RQ1**). Secondly, I applied manual qualitative (**RQ2**) and automatic quantitative content analysis (**RQ3**) of collected tweets. Thirdly, I applied content analysis to semi-structured interviews (**RQ4**).

4.4.1 Analyzing tweets

In answering the first research question on identifying the users of #Energy East, I first decided to limit the number of users for analysis. Of all 2.908 users who were represented in the sample frame of 6.303 collected tweets, I choose to analyze only the top 50 most frequent users with the highest number of followers. This is called "Tweets by Followers" and indicates both the level of interest in the topic by the user and also the user's influence in a social network (Kafeza et al. 2014). Individual user's influence or power within a social network can be understood as a position of the user within a social network which defines the individual's opportunities and constraints within the structure of the network. This means that increased opportunities to interact with other users and fewer obstacles to do so increase the individual user's overall influence within the social network (Hanneman & Riddle 2005). When addressing issues of power and influence within social networks, social network analysts apply the concept of *network centrality*. It can be defined in various ways, for example by looking at how many ties a user has with other users – *degree centrality*, or by observing the length of paths between the users – *closeness centrality*, or by observing how many other users are positioned between the two observed users – *betweenness centrality* (Ibid.). Examining influence, I could also look into the number of times each user's tweets have been retweeted (Kafeza et al. 2014).

In my case, however, the number of retweets would only show me how many times a given tweet was retweeted within the sample frame; i.e. only influence within the group of people who are already informed and active on EE issue. For the purposes of my research, I applied the concept of *out-degree centrality* by looking into how many ties with other users each user has, in other words, how many followers each of these 50 users has, in order to establish the size of the audience for their tweets (*in-degree centrality* would mean I was interested in how many other

users the individual user was following, but that was not the focus of my research). I chose to look at the number of followers of the most frequent EE users, because I am interested in potential Twitter users' exposure to a tweet on EE and thus becoming informed on the issue, without necessarily reacting to it with replies or retweets.

I ranked my sample of 50 most frequent users tweeting on EE according to the number of their followers, with the intention to establish whose tweets reached out to a bigger audience and were as such the most influential. After listing top 50 user names, I categorized them, identified the language in which they were tweeting and their attitude towards EE. Categorization began by identifying authors of each tweet by their user name and URL to their public profile. I manually sorted them into categories, which were not pre-determined, but emerged out of the data set during the analysis: individual user, organization, individual user affiliated with an organization, business entity.

The second stage of analyzing tweets was focused on their content. According to Berg and Lune (2012) content analysis is a good tool for assessing events or processes in social groups when public records exist and when conducting different types of exploratory or descriptive studies and is as such not applicable in experimental or causal research. In order to successfully perform a content analysis a researcher must specify the basic content elements and establish precise rules for their identification. The categories of content analysis were created in an interactive process between information gained from the background study of the research subject and those from empirical observations derived from immersing of the researcher in the collected data. First, a manual content analysis of tweets was performed on a sample of every 10th tweet from my sample frame, which produced a sample of 631 tweets. The coding categories were the following: purpose (informative, reactive, inciting and promotional), position on EE (supporting, opposing and neutral), language (French and English), elements (URL, double URL, RT, @) and type of URL (news, website, radio, photo, blog, video social media, crowdfunding).

The third research question was addressed with an automatic content analysis. Out of seven main components of written messages which can be observed in content analysis: words, themes, characters, paragraphs, items, concepts and semantics (Berg & Lune 2012), this stage of the research focused on themes in each individual tweet marked by a hashtag other than the one labelling EE. Establishing the frequency of these themes helped to identify to which other agenda

EE pipeline is closely related to in the users' perception of the subject. Since this was an automated process covering a separate research question, I searched for recurring themes within the whole sample frame of 6.303 tweets and focused my analysis on the top 50 most represented hashtags.

4.4.2 Analyzing user interviews

After data collection from the interview phase was completed, I transcribed the recordings for each of the interviews verbatim in a separate file on a computer. While individual respondents' identities are protected with an alpha-numerical code, organizations and other public bodies are openly disclosed, yet leaving their respondents anonymous. I performed a content analysis on the transcribed data. I began with the process of data reduction and coding by forming the coding frames according to emerging themes, making the data more available for recognition of occurring patterns and interpretation (Berg & Lune 2012). This process enabled me to create the link between bits of retrieved data and my research objectives which is required for a successful interpretation.

4.5 Ethical considerations and limitations

4.5.1 Twitter

Twitter is increasingly perceived as an invaluable data set for research on social and communicative processes. Due to its embeddedness in daily societal interactions in a globalized world, it has become a prominent channel of real-time communication on local, national, regional and international scale (Puschmann et al. 2014). As such, it can be considered as a unique window into societal trends and pressing issues, which, combined with studies of other media, contributes towards a better understanding of contemporary society (Puschmann et al. 2014). Use of Twitter to conducting social research has become widely spread, yet it is not free of limitations and errors which need to be closely examined.

Berg and Lune (2012) emphasize the importance of protecting the rights, privacy and welfare of respondents within social science research. The main ethical considerations surrounding Twitter-related research are revolving around the appropriateness of harvesting tweets from publicly available streams. Primary concerns regarding the use of these tweets in research are connected to

the misconceptions of the users on how their privacy on Twitter is protected. Since tweets can contain personally identifiable information about the users, such as contact, location, etc., their public availability can pose a threat to their privacy. This is especially problematic for users who are less aware of the public character of their posts and the potential availability for research purposes (Markham & Buchanan 2012). An even more serious problem regarding user privacy can appear in case of retweeting private tweets into a publicly accessible stream, which violates the initial users' privacy restrictions. Additional concerns are raised in relation to whether researchers should seek consent from the users to use their Twitter activities for research purposes and whether the users should be given an option to refrain from being included in research as a part of their user profile settings. Some argue that in case of Twitter, its users are not offered any privacy settings comparing to other social media such as Facebook. Thus, it should be clear to the users their post are public and researchers should not face any limitations when it comes to harvesting data from public Twitter streams (Bruns 2012). Due to the rapidly developing and increasingly multidisciplinary interest in Twitter data research, there is an absence of general consensus and lack of uninform solutions to the above presented considerations, which indicates a need for further efforts on finding common ground on these pressing issues (Zimmer & Proferes 2014).

My approach to these considerations was guided by a set of recommendations for Twitter-related research by Markham and Buchanan (2012) in which they:

> Emphasize that ethical concepts such as harm, vulnerability, respect for persons, and beneficence are not just regulatory hurdles to be jumped through at the beginning stages of research, but concepts that ground ethical inquiry. As such, they should be assessed and considered throughout each stage of the research. Multiple judgments are possible, and ambiguity and uncertainty are part of the process (p.5).

Furthermore, I applied ethical considerations inductively in relation to a specific context rather than following a universal ethical code. Research by Williams, Terras and Warwick (2013) examined all studies of Twitter published in the period from 2007 till 2011 and found that that the majority of Twitter research was focused on studying tweets and less on Twitter users or its technology. In my research, the focus is both on users and tweets. However, in studying users I created categories of users – individual user, non-governmental organization, media organization

and business entity – and did not further explore or expose the identities of individual users in any way which could cause them harm. In order to protect their privacy, I applied security measures to both data collection and data management phases of my research. I removed the personally identifiable data from my dataset and replaced the usernames with alpha-numerical codes. Only in case of user profiles managed by organizations, companies and other public bodies, their names were left intact, because their Twitter activities are a part of their carefully planned PR strategies, so the need to protect their privacy was non-applicable.

Twitter Terms of Service (ToS) represent a set of terms that regulate accessibility, utilization and storage of Twitter data for its users as well as for developers and researchers. ToS are continuously changing in response to the growing interest in Twitter research for academic and for marketing purposes. As Twitter represents an enterprise, their data have become a commodity which is not freely accessible, especially for the research on big volume of data, which can be very costly (Kinsley 2015). In my study, I abided by the limitations governing the access, utilization and storage of data, by carefully planning all three stages of data collection. I targeted topic-specific tweets in a limited time-frame; I made sure the privacy of individual users was protected by archiving collected tweets only in a form of unique ID codes assigned for each collected tweet instead of their actual contents. The latter is a practice commonly adopted in research communities to abide by ToS, which do not allow distribution of collected data (Kinsley 2015).

Further limitations of my research are connected to the time in which I was collecting data. Since mid-July to mid-August is the peak of the summer-vacation season in Canada it is more likely that Twitter users were less active on politically and environmentally charged topics like EE than they would have been outside this period. Another potential limitation is that I applied purposive sampling approach, which is a non-probability form of sampling; therefore my research cannot serve as a generalization for the whole population which is something that needs to be taken into the account in the interpretation stage of my research (Bryman 2008). However, in qualitative or mixed methods research, purposive sampling is often used aiming at in-depth understanding of complex social phenomena. In such cases, generalization and generating theory generation is not an issue, so purposive sampling is not seen as a weakness or limitation (Marshall 1996).

4.5.2 Interviews

Before any of the interviews were performed, I obtained informed consent from my respondents. Other ethical concerns such as the users' privacy, anonymity, confidentiality and potential harm were carefully addressed and included throughout my interaction with the respondents, as well as afterwards. My initial contact with the respondents was in written form, either through email or through a private message through their Twitter profile. I have sent them a message in which I introduced myself, my background, the purpose of my research and requested an interview. I assured the anonymity and confidentiality of our interaction, as well as their right not to answer particular questions or end the interview at any time of their volition. Due to the geographical and time restrictions, I gave them a choice of time and place for the interview, as well as the medium; either in person, via phone or internet-based communication tools, such as Skype or other. My goal was to interview 10-15 representatives of 5 specific groups of users and tried to get them to respond to my requests through various means (email, phone, Twitter, Facebook) throughout the span of 2 months; however I did not hear back from any of the representatives of business entities. TransCanada Corporation did initially respond to my email, but failed to follow through with the correspondence in each of the following attempts I have made to arrange for an interview. In this regard, my research also lacks the input from pipeline supporting organizations as well as indigenous organizations that did not respond to any of my requests for an interview.

Another obstacle in trying to reach out to respondents was establishing contact with individual users, those who were not publicly exposed or affiliated with an organization, was that the only way to contact them was through Twitter. As Twitter is designed to protect its users' privacy, I could not send them a private message unless they were following my own Twitter profile. The only strategy was to tweet directly at them using the @ sign and explain my request within 140-character limitation. I only heard back from a single user out of 20 such requests that were tweeted at potential respondents.

All of the ethical considerations and limitations of my research were taken into consideration when analyzing data and interpreting the findings.

5. FINDINGS

5.1 Tweets

5.1.1 Users

Categorization

Within my sample of 50 top users, the frequency of tweeting on EE was ranging from 105 to 13 tweets per user within the data-collection period. These users had an established following ranging from 29.564 to 17 followers. Categorization of users revealed the majority are individual users with 78%, organizations with 16% and business entities 6% (Figure 6). The category of business entity consists of TransCanada and two social media-related companies Live Events and BHIVE Social Media Labs. Within the group of individuals, 15% were openly affiliated with an organization – 3 individuals with 350.org, one individual with Environmental Defence Canada, one with Indigenous Environmental Network and one with the political party Bloc Québécois.

Influential users

■ Organization   ■ Individual   ■ Business entity
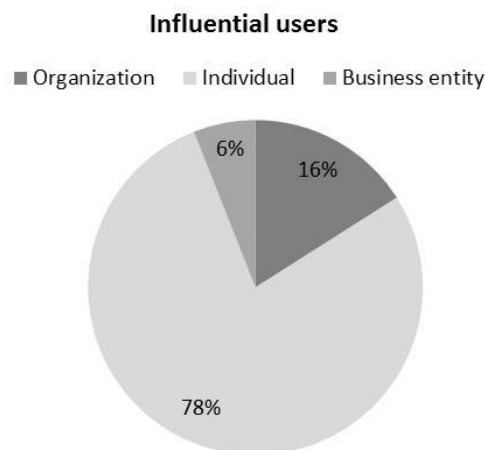
Figure 6. Categories of 50 most influential users tweeting on EE (%)

Table 1 shows the list of ten most influential users, out of which the top two are both anti-pipeline organizations: the indigenous grassroots movement Idle no More and environmental non-governmental organization Environmental Defence Canada. The first individual is affiliated with indigenous and climate justice movement as well as for representing 350.org. The second individual is a blogger on environmental issues and sustainability. The third individual is a French-speaking advocate for independent Québec, the fourth individual is a French-speaking journalist and blogger and the fifth individual is a French-speaking artist. User ID EnergyEast in

this case represents TransCanada Corporation. The NoTar Sands is a UK based organization opposing tar-sands in partnership with indigenous communities in Canada and Canada Action is a pro-pipeline grassroots organization.

Table 1. List of 10 most influential users of #Energy East

User ID	Followers	Nr. of tweets	Category
IdleNoMore4	29.564	15	Organization
envirodefence	17.796	16	Organization
Individual_01	7.962	14	Individual
Individual_02	6.625	44	Individual
EnergyEast	6.503	24	Business
Individual_03	5.096	20	Individual
NoTarSands	4.425	21	Organization
Individual_04	4.407	21	Individual
CanadaAction	4.386	14	Organization
Individual_05	4.285	15	Individual

Language

The majority (62%) of users within this sample tweeted in English language and 38% tweeted in French language (Figure 7). Not a single user tweeted in both languages.
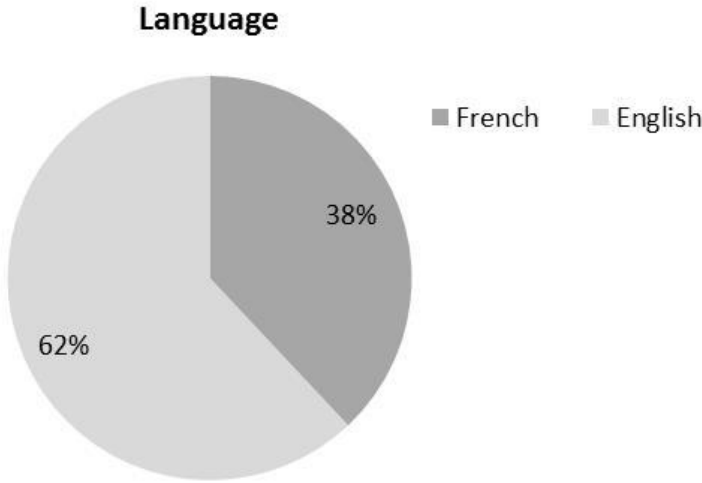
Figure 7. Representation of languages used by 50 most influential users (%)

Position on EE

The position on EE by 50 most influential users is 70% opposing the pipeline and 30% supporting it (Figure 8). Among the French speaking users, not a single one supports the pipeline. Among the English speaking users, a bit less than half (48%) are supporters and 52% are opponents of the pipeline. Within each category of users, the position on EE varies: 2 out of 3 corporations, 4 out of 8 organizations and 8 out of 38 individuals are supporting it.
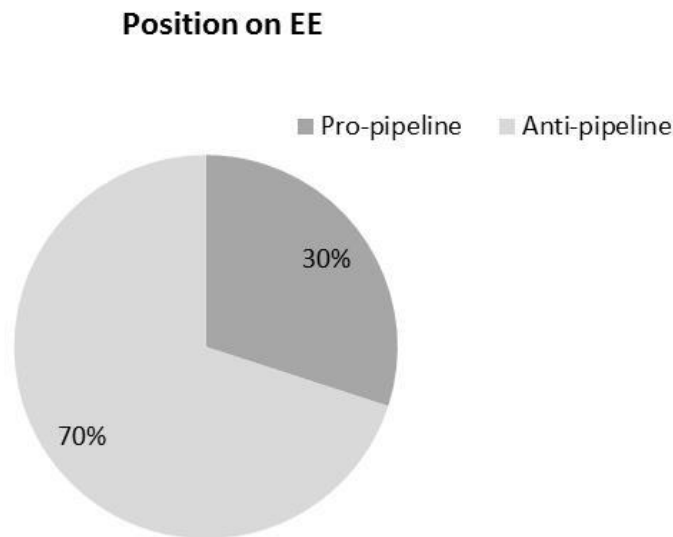
Position on EE

Figure 8. Representation of positions on EE by most influential 50 users (%)

5.1.2 Content

Purpose

Purpose of each tweet within the sample was assigned through a manual coding process. The categories were formed deductively and did not overlap. Figure 9 shows the percentage of each category within the sample.
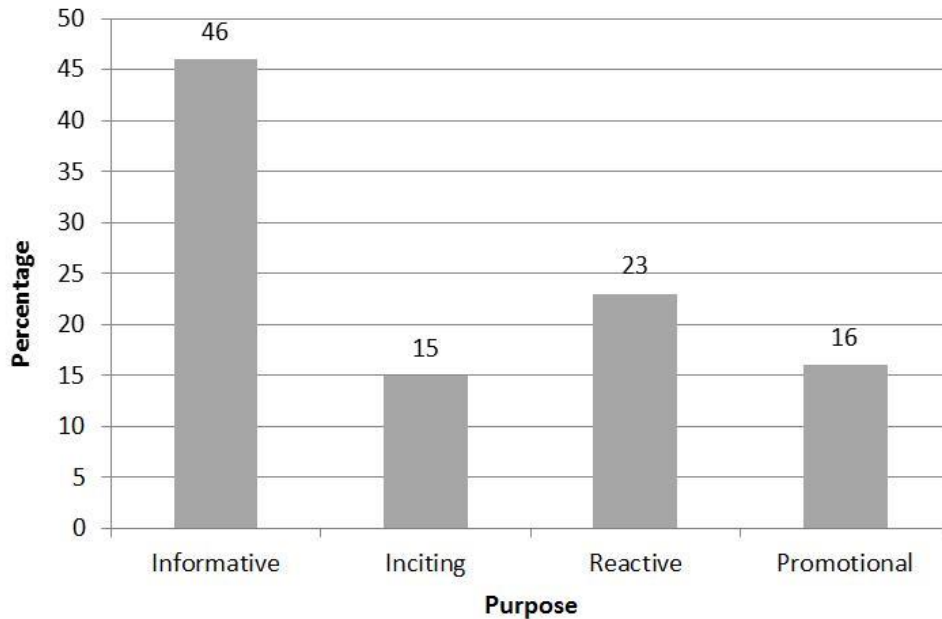
Figure 9. Distribution of tweets by purpose (%)

Informative tweets were considered all those who shared information on current affairs, usually in connection with URLs to news articles, published reports, press releases, blogs, explanatory photo and video material. This category was the most represented with nearly half (46%) of all tweets.

> **Example of informative tweet:** "Environmental Groups Ask Premiers To Go Back to the Drawing board on climate http://t.co/eYXrIZWrdZ via @CNWNews #energyeast #nopipelines"

The second category encompasses *reactive* tweets; those are tweets which emerge as a reaction to an event or someone's statement. The user comments on it by expressing one's opinion, emotions or questions about it. Sometimes the tweet includes also a URL to the event in question. The use of upper case letters, exclamation marks and question marks is common. This category is the second most represented, with 23% of all tweets in the sample. Within it, I found 7 uses of profane language and 3 uses of symbols (musical notes, a heart-shaped symbol).

> **Example of a reactive tweet:** "#EnergyEast #EnergieEst How stupid can Canada be? THAT stupid: http://t.co/uKwprMG7UU"

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The third category, *inciting* tweets, are those which were inducing activity by the audience such as urging to action, usually expressing demand for something to take place, signing pledges, donating, voting for a particular candidate, supporting pipelines etc. The use of one or more exclamation marks in tweets within this category is very common. 15% of tweets within the sample were within this category and were as such the least represented.

> **Example of an inciting tweet:** "RT @CanadaAction: Sign the pledge to support #EnergyEast Lets supply all of Canada with Canadian oil! http://t.co/0oBbiQe7K8"

The last category is *promotional* tweets, usually advertising for an event or promoting the pipeline and tar sands development or promoting anti-pipeline events and activities. Promotional tweets do not directly address the audience by urging them to take action such as inciting tweets and differ from the informative tweets by tweeting about an ongoing event or process which people can still somehow influence, take part in or change their views on it. Promotional tweets represent 16% of the sample and are most often accompanied by links to graphic and video material, such as pamphlets and videos demonstrating some action which is aimed at improving the audience's perception of the topic.

> **Example of a promotional tweet:** "RT @CanadaAction: #EnergyEast is a common sense, logical and made in Canada approach to create more jobs and prosperity for our country https://pbs.twimg.com/media/CKNn3v6VAAAbnvi.jpg"

URL type

Each individual URL within a tweet was manually coded in 10 categories which emerged deductively. The distribution of various types of URLs within the sample is depicted in Figure 10. The most represented group (42%) were URL linking to social media content; in this group there were predominantly links to tweets from other users (also known as re-tweets), with only 3 cases of linking to Facebook content and 4 cases of linking to Instagram content.
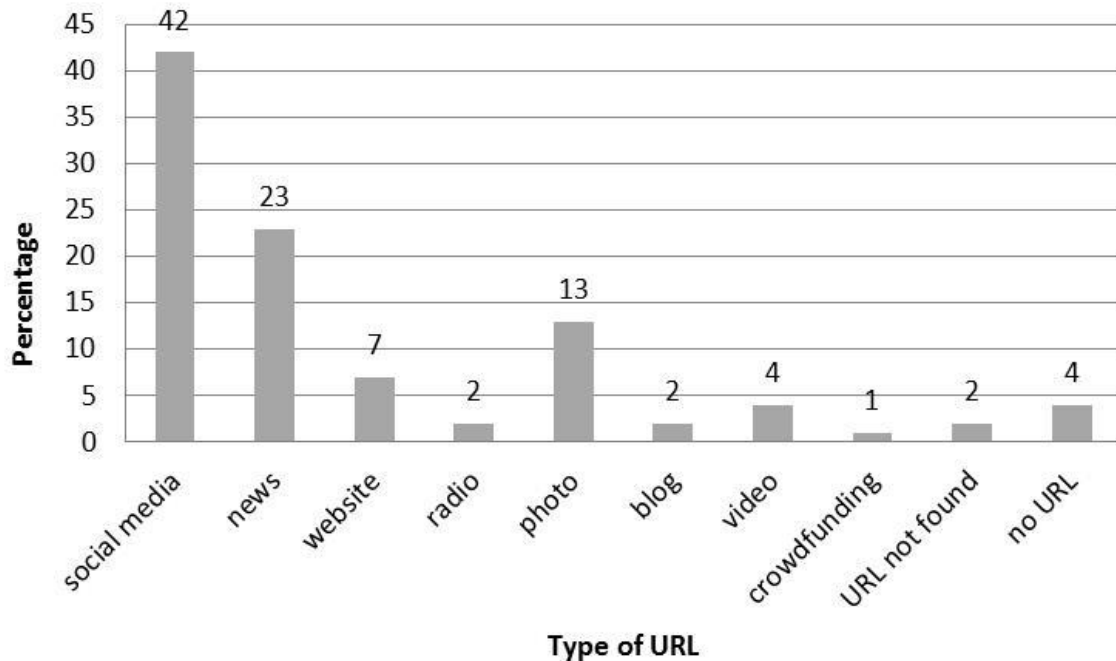
Figure 10. Distribution of URLs by type (%)

The second biggest group (23%) were URLs linking to news by traditional media's online content, followed by URLs linking to photo material (13%) including caricatures, photos from events, maps, promotional pamphlets etc. URLs linking to websites had 7% representation, usually to websites of corporations such as TransCanada and EE supporting or opposing organizations. Video links represent only 4% of all URLs, mostly YouTube content (21 cases) and 4 cases of Vimeo content. Radio and blog content was both represented by 2% of URLs, and URLs linking to crowd funding were only represented by 1% of tweets (5 tweets containing URL of Indiegogo website).

Structure

17% of tweets were seed tweets or original tweets and 83% were retweeted. A tweet which is retweeted is a re-posted tweet by another user, which may or may not be accompanied with the re-poster's own content (Figure 11). Tweets do not necessarily contain a URL or they may contain more than one. Within the sample, 10% of all tweets contained two different URL, while 13% had no URL (Figure 12). 21% of tweets did not contain any @ signs, which means no other twitter users were mentioned or addressed in these tweets.

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Origin

■ Seed tweets ■ Re-tweets

17%

83%
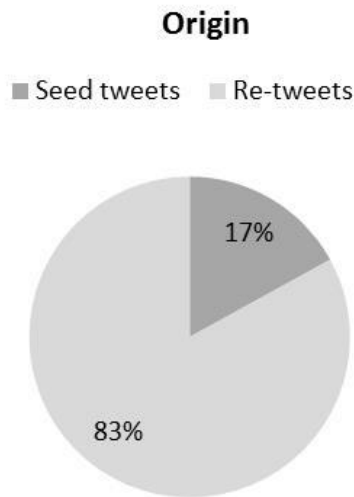
Figure 11. Tweets by origin (%)

URLs

■ No URL ■ Single URL ■ Double URL

10% 13%

77%
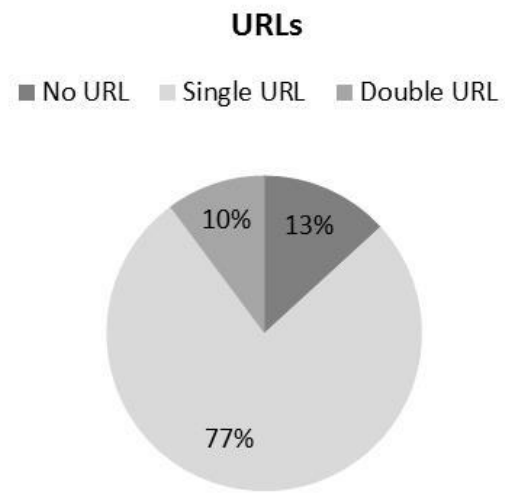
Figure 12. Number of URLs used (%)

Position on EE

Position on EE within the sample of tweets was expressed in three ways: pro-pipeline tweets were represented with 29%, anti-pipeline were a vast majority with 60% and 11% were tweets with neutral stance on the pipeline. In the last group, tweets were related to EE, but the author's stance on the pipeline could not be established; usually because the tweets were targeting specific politicians or events surrounding the pre-election campaign whereby addressing the pipeline only indirectly with a hashtag (Figure 13).

Position on EE

■ Pro-pipeline ■ Anti-pipeline ■ Neutral

11%

29%

60%
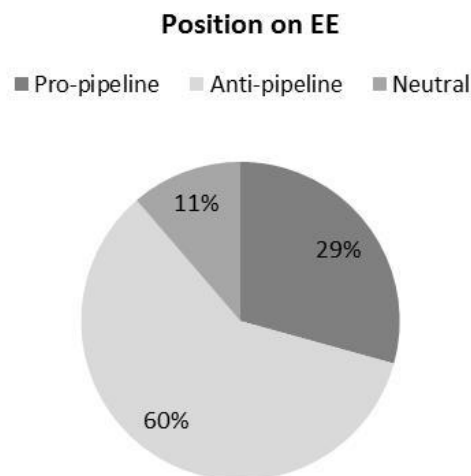
Figure 13. Position on EE in a sample of every 10th tweet (%)

Language

The most predominant language within the sample was English, with almost three quarters (73%) tweets. French was used in 27% of tweets (Figure 14). There were no tweets containing both languages.
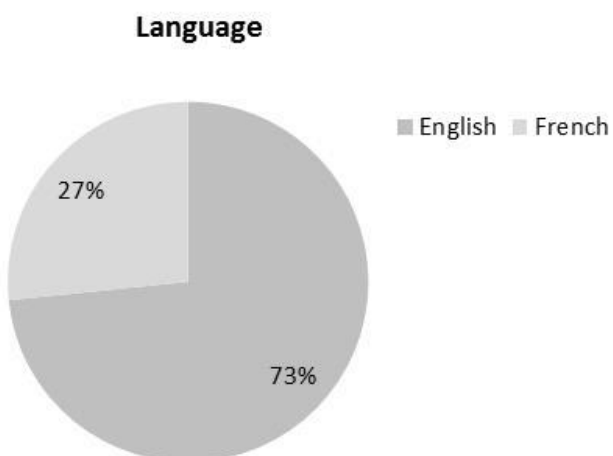
Language

Figure 14. Languages used in a sample of every 10th tweet (%)

5.1.3 Socio-political context

An automatic content analysis of the whole sample frame (n=6.303) enabled identification of the most frequent topics in a form of a hashtag which appeared in tweets together with #Energy East. Figure 15 depicts top 50 such hashtags. The bigger the size of the letters, the more frequently a specific theme is represented within the sample frame. Topics have been colour-coded in five categories: blue indicates political hashtags related to a political party, provincial and federal governments, national pre-election campaign and candidates for Prime Minister; green colour encompasses all hashtags which are related to environmental issues such as #climatechange, #water, #oilspills, #NoPipelines etc.; red colour is for geographical hashtags such as #Ottawa, #Alberta, #Québec etc.; orange indicates indigenous issues and grey colour indicates industry related topics #pipeline, #Pétrole (oil), #Oléoduc (pipeline), #KeystoneXL, #TransMountain, #TransCanada. Violet colour was used for one single hashtag, which did not fit into any other category - #video.

Figure 15. Tag cloud representing 50 most frequent hashtags

Figure 16 shows top 10 most frequent hashtags with the frequency of their occurrence. By far the most represented hashtag is #cdnpoli with 1.923 cases. Within this group I combined all hashtags which were spelled also as #polcan, #canpoli and #cndpoli, because they all refer to the same topic of Canadian federal politics. The only other hashtag which stands out with 790 cases is #polqc, referring to Québec's provincial politics. The category of political tweets is prevailing with 7 out of 10 most frequent hashtags, with a single environmental topic 4th on the list, single industry topic 7th and a single indigenous topic as 9th on the list.

Figure 16. Distribution of 10 most frequent hashtags

5.1.4 Discussion

The following section will discuss the first three research questions related to the data set of tweets on EE published within a month period. The research questions are as follows:

> RQ1: Who is using #EnergyEast?
>
> RQ2: What is the content of tweets which include #EE?
>
> RQ3: In connection to which other # does #EE appear?

5.1.4.1 Users

In response to the first research question, the findings show the handful of most devoted and influential users who post EE related material are predominantly organizations and individuals affiliated with organizations. With a high number of followers and frequent publishing on the topic, these users can be considered as influencers and thought leaders on the topic within the confines of this particular social media platform. Since there are other ways of determining leading influencers within a social network, a different approach to defining them might give out different results. For example – a famous Canadian social activist and best-selling author on climate issues and corporate globalization, Naomi Klein has a vast audience of well over 300.000

followers and she might post a single tweet on EE which will have a much bigger influence on pro- as well as anti-pipeline community than any other user on my list of influencers. Therefore interpretation of my research has to take into consideration the limited time-frame of collected data as well as chosen methodology, for which my findings cannot be generalized to the whole population.

Business entity representation among the leading 50 influencers was quite low; the leading was TransCanada Corporation's promotional account established for EE. It can be speculated that its group of followers consists of both pipeline supporters as well as pipeline opponents, as both can use TransCanada's publications to stay informed on EE issues. The other two business entity representatives, Live Events and BHIVE Social media Labs (BHIVE), are of a completely different origin; both are social media-related companies whose business strategies evolve on promoting their clients' posts on Twitter. Both companies were hired to regularly and consistently post material on a specific topic to increase visibility of a particular message their clients want to promote. Despite Live Events posting pro-pipeline tweets and BHIVE posting anti-pipeline tweets, both of their clients cannot be identified. Since both entities work as a buffer between the original author of the message and the audience, the author of the message does not take the responsibility nor does it have to deal with potential negative feedback on their own profile. This corresponds with claims made by Nitins and Burges (2014) that the social media-based approach to public relations and advertising demands a well-developed strategy because potentially negative feedback from the audience can result in the loss of control over the advertiser's reputation. By hiring a company to spread messages on behalf of someone who has chosen to stay anonymous is one such strategy to disseminate information without risking consequences of a negative feedback. The question which arises is: to what extent is such behavior damaging the role of Twitter as an online tool for public deliberation?

The above mentioned are only two such entities within the top 50 most influential users for which it is obvious that monetary exchange was made for promoting of tweets. Unfortunately, there is no way of establishing how many user accounts on the list are artificially created astroturf accounts funded by the pro- or anti-pipeline groups. There were some public accusations by the anti-pipeline movement that Canada Action and its sub-group Pipeline Action, who are 9th and 23rd on our list of influencers respectively, were established and funded with strong ties to the oil

industry and the Conservative Party. Their intent was said to have been creating an artificial counter-movement against the increasingly well-organized and connected groups of pipeline opponents across the country (Linnitt & Gutstein 2015). Without sufficient proof, these remain accusations, yet combined with the two business entities which base their profit on artificially increasing visibility of tweets, it shows how vulnerable Twitter is to becoming an artificially created public sphere in which the platform is saturated with voices of the already privileged of which Fuchs (2014) warns about in his critique of Twitter as a public sphere. Building on Brandbury (2013) and his view of the consequences of this situation - the more such behaviour is enabled by Twitter and starts saturating the platform, the less it can operate as a public sphere as people are more likely to lose trust in it.

However, it is important to emphasize that there is also an indication of the more positive sides of Twitter as a public sphere in terms of its active users in this research. The most influential user is an indigenous grassroots organization Idle no More which arose from the frustrations caused by the conservative government's environmentally malign politics (Idle no More n. d.). Their own Twitter account is enabling them to gain a substantial audience of indigenous and non-indigenous followers and share with them their disagreement with the current policies, call for action and information on their protest activities. In this case Twitter enabled geographically dispersed indigenous communities to transcend geographical obstacles and create an interest-based online community that is enforcing their civic engagement. My observation supports Delli Carpini's (2013) understanding of one of the main attributes of social media is shifting the nature of the community from localized to interest-based. Moreover, indigenous people in Canada have been enduring an underprivileged position with countless cases of human rights violations throughout history and little has changed today (Amnesty International Canada 2015). Here, Twitter as a form of social media provided a channel of voicing their dissent which is also aligned with Delli Carpini's (2013) views that social media can positively affect inclusion of the parts of the public that had fewer opportunities to actively take part in public life prior to social media emergence. A high number of followers and regular tweeting on EE is an indication their opinion is seen and their influence on public life is increasing. This also confirms Denning's (2000) claims that the emergence of a relatively inexpensive and accessible means of expression in a form of social media is especially beneficial to such groups who deal with limited resources and repression.

Identifying the top 50 most influential users of #EE also enabled observation of the polarization of support towards the pipeline. The anti-pipeline sentiment prevails with a substantial majority of 70%. This could be due to the fact that current situation indicates EE is more likely to be built since other pipelines in Canada are facing more challenges and Keystone XL has been rejected (Haavardsrud 2015), which gives EE opposition more motivation to actively express their disagreement with the project.

Another observation when identifying the most influential users was the language of their tweets, which to some extent helps to gain a better understanding of the geographical location of some of the users. Canada's two official languages are English and French and both were represented within the sample. French speaking Canadians reside predominantly in Québec, with a much smaller representation in New Brunswick and Ontario (Statistics Canada 2013). The percentage of French speaking influential users who tweeted on EE is close to 40% which shows the topic is of significant importance for Francophones who represent around 20% of Canadian population (Ibidem.). In addition, the results showed all of the users posting in French language were opponents of the pipeline. Such a substantial representation of French language within the top 50 most influential users with all of them opposing EE indicates where the strongest resistance to the new pipeline is concentrated. The explanation for this could be found in the fact that the last 1.460 km of the pipeline which has to be built anew is planned to cross Québec and New Brunswick, where most of the pipeline construction activities are expected to take place. Inhabitants of these areas are unwilling to accept the environmental risks associated with potential defects of the pipeline, especially as they are doubtful their province will benefit from the project (Tomesco 2015).

5.1.4.2 Content

The second research question delved into the content of posted tweets, with the objective to improve the understanding of predominant ways in which Twitter is being used in EE polemics. It consisted of examining their purpose, type of attached links or URLs, their structure, position on EE and the language in which they were written.

The purpose of the tweets was predominantly informative, which is aligned with Lovejoy and colleagues' (2012) claim that collection and publication of information - alongside dialogue, coordination of actions, and lobbying policymakers - represent the main elements of online civic

engagement. My findings are also aligned with those of Kwak and colleagues (2010) who found that users in their study were utilizing Twitter primarily as an information source rather than for social networking purposes. The category of reactive tweets was the second most represented. The ability to express one's opinion, whether in agreement or disagreement is one of the attributes of social media which derives from being informed. Thus, the user who was informed on an issue - within or outside of social media platform - can react to it through social media, where others can see it, share it and react to it themselves. Moreover, the person to whose action or statement the user is reacting to can be directly addressed within this reactive tweet, so one is given a straightforward and uncensored feedback, which is publicly visible on Twitter. This is aligned with Schechter's (2009) as well as Merry's (2003) observations of social media offering a step towards improving transparency and accountability of the corporate and governing structures as their actions have become more exposed to the public eye and scrutiny than ever before.

Inciting and promotional tweets were almost equally represented in the sample. Inciting tweets express a direct call for action and engagement in civic life by trying to motivate the audience for mobilization to join an event, participate in a protest, sign a petition, who to vote for in the upcoming elections etc. Obar and colleagues (2012) see social media to be most beneficial for these kinds of processes of increased democratization. Despite not being represented as much as informative and reactive tweets, the mere presence of inciting tweets shows Twitter is being used as an instrument for strengthening of the civil society at least to some extent. Promotional tweets enable anyone present on Twitter to influence each other's perceptions and change their opinions; according to Cozier and Witmer (2004), this is one of the contributions of social media to the public sphere as it enables people to interact while transcending the limitations of time and space. Adding to the informative role of Twitter also the ability of its users to react, incite and promote shows the advantage of social media in comparison to traditional forms of media and supports Shirky's (2011) claims that social media can be seen as having a strengthening influence on the public sphere.

More than three quarters of tweets included a URL and 10% included two. This shows how ubiquitous the practice of adding a link to enrich the strict character-limitation of a tweet to give it more expressive power. The type of URL included in a tweet is an indication of which sources within or outside of Twitter environment users were drawing upon when posting. It helps to gain

a deeper understanding of deliberative practices on Twitter. The majority of URLs were re-tweeting other users' tweets, followed by links to news articles from online outlets of traditional media, which Thimm and colleagues (2011) referred to as *transmediality* with the primary role of information dissemination. This shows the importance of Twitter's role to disseminate information created through traditional channels that corresponds to Denning's (2000) claims that the effectiveness of social media in strengthening online civic engagement increases when combined with traditional forms of media. Sharing links to graphic material in forms of photographs was the third most common type of URL, which together with a small fraction of links to video and blog content, can be referred to as *intermediality* or using different mediums of expression to address a certain topic (Thimm et al. 2011). Only a small fraction of URLs were links to online crowdfunding campaigns, yet this shows Twitter is being used also for addressing social issues through donations, which does not support Lovejoy and colleagues' (2012) view of attributing such actions only to offline civic engagement. Such diverse typology of URLs used within the sample supports Delli Carpini's (2010) observations on social media's contribution to increased democratic deliberation by blurring the lines of distinction between different types of media distributed online as users share information in audio, video, textual and photo formats through the same platform.

Examining the origins of tweets, the findings indicate that a vast majority of tweets are reposted from other users either in a direct citation or with an additional comment by the re-poster. This function of Twitter to enable simple redistribution of ideas contained in original or seed tweets is helping to diffuse information very quickly beyond the confines of original users' community of followers, which - aligned with views of Thimm and colleagues (2011) - can also be understood as a contribution towards improved active citizen participation in a political discourse. Despite this promising feature, it remains unclear how much of redistributing certain material on Twitter contributes to any tangible impacts on society and how much of it is mere clicktivism, which is one of the main critiques of online civic engagement promoted by Gladwell (2010) as well as Cornelissen and Karelaia (2013).

Determining the ratio of tweets expressing support for EE and those opposing it was also a part of analyzing the content, which helped gain a better understanding of the attitudes towards the pipeline. Well over half of all tweets (60%) were opposing EE, which is a bit less, but still

comparable to the position of the 50 most influential users of #EE discussed in the previous section. A stance on EE of a small percentage of tweets could not be determined, as they were mostly referring to the political issues and the ongoing pre-election campaign and only mentioning the pipeline with a hashtag; this issue is addressed in the following section which discusses the wider socio-political context of EE hashtag. The percentage of pro-pipeline tweets corresponds with the percentage of pro-pipeline orientated among the 50 most influential users, both reaching 29%, which shows that pro-pipeline sentiment on Twitter is much less represented.

Three quarters of tweets were in English and one quarter in French language. In comparison, French language was a bit less represented in tweets than in the group of 50 most influential users, indicating the leading influencers using French language were more active than non-influencing French speaking users. However, such a high percentage of French language in the sample of tweets comparing to only 20% of Canadian population using French as their first language (Statistics Canada 2013), displays that the issue is of a big concern for the French speaking part of the population for reasons which were discussed in the previous section.

5.1.4.3 Socio-political context

The third research question was exploring the occurrence of other hashtags in connection to #EE, with the aim to improve understanding of the EE controversy within a wider socio-political context. In order to address this question and achieve its objective, all other hashtags were extracted from the sample frame and only the first 50 most frequently used were analyzed.

By far the most frequently represented topic in connection to EE was politics, e.g. various hashtags covering both federal and provincial politics, national elections, names of leading political figures and acronyms of political parties. This shows how the controversy surrounding the uncertainty of EE approval has been harnessed in the pre-election campaign to promote certain political parties and to challenge peoples' voting preferences based on the candidates' position on EE. This observation supports Parmelee and Bichard's (2013) views on the increasing significance of Twitter for political communication. An example, although not a story of success, of how this manifested in practice in connection to EE is the case of the New Democratic Party (NDP) candidate for Prime Minister (PM), Thomas Mulcair. During the pre-election campaign, his public statements on EE were changing from approval to disapproval, depending on which province he was presenting his views (Radwanski 2015). Whether his statements were

misinterpreted by journalists or not, it did not matter much, as Twitter community responded fiercely to reports of his shifting positions. Numerous reactive tweets were circulating for a couple of weeks after his controversial statements were published. This was also observed within my sample. The negative response on Twitter gave the impression his credibility as a potential PM was rapidly diminishing, which might have contributed to his defeat in the October 2015 election.

Other most prominently represented hashtags connected to EE were environmental-, industry- and indigenous-related, indicating the three major topics to which EE is associated with. Pipeline opponents were using protection of the environment from the harmful consequences of tar-sands extraction and potential pipeline defects as the main argument against the pipeline. Observed indigenous topics originated from Canadian First Nations representatives and activists expressing strong opposition against the pipeline, referring to treaties and human rights violations stemming from the planned tar sands expansion together with the extensive network of proposed pipeline infrastructure. As Thimm and colleagues (2014) explained, hashtags are useful for organization of a discourse by helping the audience to orientate themselves within an otherwise chaotic Twittersphere according to their interests. This Twitter-specific feature of indexing a topic with a hashtag has an important function of enabling users to interact with a topically homogenous community outside of their enclosed group of followers, which in practice means all users interested in #EE will be able to interact with others who are sharing their interest in the pipeline, but do not necessarily share their position on it. A hashtag therefore enables Twitter to defy at least some of the negative critiques of social media. For example Sunstein's (2009) and Dahlberg's (2001) warnings of social media potentially representing a threat to deliberative democracy due to the lack of exposure to opposing ideas in online communities.

Moreover, hashtags enable contextualization of material posted on Twitter that in our case showed EE is closely tied to political, environmental, industry-related and indigenous issues. The pipeline is embedded in this socio-political context within which its future remains inevitably dependent on power relations among the stakeholders representing these four areas of interest. In the light of Habermasian (1976) interpretation of legitimation crisis, the findings of this research indicate EE seems to be lacking legitimacy primarily because the political sphere remains torn between the economic interests of the industry and interests of the socio-cultural system

represented by the environmentalists and indigenous people opposing the capitalist-driven economy.

5.2 Respondents

A total of 11 interviews were performed, out of which 4 were with representatives of environmental non-governmental organizations (ENGO), one with independent media organization and 6 were with individuals. Due to the limitations of my research explained in the methodology chapter, all but one individual respondent were pipeline opponents in some way connected to an ENGO.

Table 2. List of respondents with their location and affiliations

Respondent	Location	Affiliation
Environmental Defence (ED)	Ontario	n/a
Toronto 350.org (T350)	Ontario	n/a
Transition Initiative Kenora (TIK)	Ontario	n/a
Council of Canadians - Winnipeg Chapter (CoC)	Manitoba	n/a
Green Majority Media (GMM)	Ontario	n/a
Individual_A	Ontario	Environmental Defence
Individual_B	Ontario	Toronto 350.org
Individual_C	B.C.	scientist, blogger
Individual_D	Québec	350.org
Individual_E	Ontario	Fossil Free campaign
Individual_F	Ontario	Greenpeace

5.2.1 Engagement with Twitter

This part of the interview schedule was designed as an introduction into the interviewing process by providing an insight into the user's activities on Twitter in general. Four questions were addressing: the duration of their presence on Twitter, frequency of posting tweets, the origin of content they are posting (self-generated or re-posted) and their views and strategies on improving the visibility of their posts.

Organizations

The longest presence on Twitter was 6 years by Environmental Defence (ED), the shortest was one year by Transition Initiative Kenora (TIK) and it was run through its founder's personal Twitter profile for a year, before an official account for the organization was made. Toronto 350.org (T350) has its profile established since 2012 and Council of Canadians – Winnipeg Chapter (CoC) has its account established since 2010. The frequency of tweeting differs greatly from a couple of tweets per day for ED and T350, to weekly tweets for TIK and CoC. All respondents emphasized the frequency of tweets increases as a reaction to a relevant event or an ongoing topic-related situation. In terms of content, all reported on posting a mix of their own content and re-tweeting other topic-specific and relevant material. ED mentioned they post their own reports and petitions, but re-post mostly news or when they react to other users' material. T350 stated that they post their own material only on issues where there is no previous content available, such as their own divestment campaign.

When asked about how the organizations manage the issue of increasing their visibility on Twitter, all answered they are not paying for it. Only ED had some previous experiences with paying small amounts for improving visibility of their posts on Twitter, but their conclusion was that the return on investment is much smaller than investing in improved visibility on Facebook and to some degree on YouTube. T350 has experience in paying for visibility on Facebook and does not consider it a priority for Twitter. All four organizations are using other, non-monetary strategies to increase visibility of their tweets. Both T350 and TIK emphasized that in their tweets they are mentioning (tagging) prominent and like-minded users that have very high numbers of followers. This increases the chances their tweets will be seen by those users' followers. T350 mentioned also the importance of re-tweeting original posts from their official account to personal accounts of their members as well as tweeting at times when there is a bigger likelihood that the tweet will be seen as soon as it is posted. TIK and CoC also mentioned the posting of photos and videos as a good way to increase visibility. ED outlined their approach to increasing visibility as fairly limited by the status of their organization, so they resort to utilizing efficient application of hashtags. In their view:

> We need to stay on the brand and the brand is kind of serious, so we very rarely use humor.
> It's serious, fact-based and we try to be concise and so it limits what I can put in a tweet.

And then also another thing which limits what we can do is the word charity - we are registered as charity - so we cannot promote anything that is partisan or that would contradict our charitable status […] so that in a way our tweets are kind of boring sometimes […] but in terms of getting visibility, I am trying to use appropriate hashtags and different content types, but it's not that easy, there is a lot of competition on Twitter obviously.

Media

The Green Majority Media (GMM) has been active on Twitter since 2010 and is actively tweeting from 5-10 times daily. They too reported increased posting during important, topic-specific events. Their content is a mix of one-third internally produced material and two-thirds external material in a form of curated news from around 20 trusted sources. In terms of increasing visibility, GMM approach is based on humor and cleverness. They elaborated on their approach:

Our brand is essentially that this is the topic [environmental issues] that is difficult to talk about already, so part of our brand core is to have a sense of personality that a lot of other environmental organizations don't. So we try to be fun, we try to be clever, make jokes and for that sort of thing is good. From my experience, the two most useful things are tagging on hashtags that are already established, so I follow stuff that's trending, but I don't find that to be particularly effective.

Individuals

Individual respondents' presence on Twitter ranges from 1 to 5 years. Their reasons for joining range from expressing support for their organization (2 individuals), work requirements, university course requirements, general curiosity and staying informed on current events.

Frequency of posting on Twitter for all but one user is on a daily basis and increases in times of ongoing events which are relevant for them. The only exception is a user who only tweets when asked by an organization he is affiliated with or by a friend to tweet (or re-tweet) in connection to a specific topic. In terms of content of their tweets, two users are mostly re-tweeting other users' material. Only one user is focused on posting his own material, which derives from his activities as a blogger on two different platforms. The remaining three individuals were using a mix of their

own content and other user's content. Their own contributions were expressed as personal opinions and updates on an event they are taking part in.

When it comes to improving visibility of their tweets, all of the individual respondents thought paying for it is not an option for them. Two individuals revealed their strategy is learning how to properly use hashtags, one stated that he generates his own graphics and tries to post material that his followers might like. Two users are not applying any strategies to improve their visibility, and one stated that he relies on wit and engagement with influential users. The latter supported his negative stance towards paying for visibility with the following statement:

> Twitter likes anything that is clever, so kind of like witty repartee is popular. Whenever I have engagement with someone who has a substantial amount of following, then my following goes up. […] Through my personal account I would never do it [pay for visibility] because it is kind of like, I don't know, I feel like you are supposed to earn your presence and if you pay for it then you are cheating.

5.2.2 Perceptions of Twitter as a tool for public deliberation

This section of the interview was designed to provide an insight into respondents' perception of Twitter as a tool for discussion on its own and in comparison to other social media platforms. Four questions were addressing: which other social media the respondents are using besides Twitter, the advantages of Twitter, its limitations and suggested improvements. Organizations were asked an additional question on how they would manage their operations in case social media and Internet in general suddenly became unavailable.

Organizations

All four organizations emphasized Facebook as the main social media platform they are using alongside Twitter. All four mentioned Instagram, but admitted it is rarely used. ED and CoC mentioned YouTube is also being used to a degree. ED mentioned LinkedIn for professional uses and CoC mentioned they have tried Tumblr, but stopped using it.

All but one organization agreed the main advantage of Twitter comparing to other social media platforms is its ability to keep the users updated on live events. ED emphasized its speed and reactivity. Three organizations also pointed out the advantage of Twitter in enabling its users to

engage with people outside of their social circle, such as journalists, thought-leaders, politicians, elected officials and other Twitter users. TIK was of the opinion the main advantage of Twitter is its conciseness and enabling the users to target their own audience, which makes it more suitable for public deliberation than Facebook. They stated:

> Twitter is more like the grownup newsie social media platform and FB is very social and full of nonsense. So it's kind of hard to filter through all that on FB, but very easy to do on Twitter. […] It is better for engaging in public discussion, because you are not limited to your circle of friends but can tag anyone, it enables easy back and forth discussion and is much more open and transparent for community discussion th   an others.

One of the limitations of Twitter was that it requires constant engagement from the user, another was that it is more difficult to establish a big number of followers comparing to Facebook. However, the majority of organizations emphasized the limited visibility of tweets and therefore reduced chances to interact with the posted material and its authors, due to the sheer volume of material that is posted on Twitter. ED described this concern by comparing Twitter and Facebook:

> You put out the tweets and if people don't see it in their feeds in the next few minutes it's gone, you know, it doesn't stay, whereas on Facebook things stay in peoples' feeds much longer, especially if a friend of yours likes it or comments on it, they can even bring back old posts, whereas on Twitter once it's out and after some time it's gone, it's really short-lived.

TIK sees limitations of Twitter mainly in connection to the bigger learning curve required to master the platform, especially the Twitter jargon and how to use hashtags and URLs properly. In terms of being a tool for deliberation, CoC prioritizes Facebook to Twitter in their everyday use. In their experience:

> Conversations about an event or issue tend to work much better on Facebook. We've tried using Twitter for that, and part of the problem may be that we are all more likely to be working with Facebook, and Twitter just hasn't become our go-to.

When asked about their opinion on what could be improved to make Twitter work better for their organization's needs, there were not many suggestions; ED emphasized the need to make it easier for them to find other users who would be interested in their content.

All four organizations stated that without Internet and social media, their operations would continue, although on a much more localized level and with more direct engagement with the public. ED specified their outreach would be based on distributing direct mail, T30 would rely on their members' phone numbers, TIK would resort to door-to-door canvasing and traditional forms of media like printed press, television and radio broadcasts, CoC would rely on distributing flyers, posters, direct engagement with the community and they would start publishing their own printed publication they have always planned on starting.

Media

Alongside Twitter, GMM uses Facebook, YouTube and Google+ and the main benefit of Twitter in their opinion is in the ease of informing people. When it comes to limitations of Twitter as a platform for engaging in a conversation, GMM had much more to say, especially on the disabling environment for a constructive debate on topics of great complexity, such as environmental issues. As they described it:

> If you want to have a conversation [on Twitter] though, it is nearly impossible. When we are talking about complex environmental issues for instance like Energy East, it almost becomes, I wouldn't say counter-productive, but it is a very much a mixed blessing, because if people agree with you, it provides a very easy platform in a way for them to hit one button and show your support by helping to spread your message. But if anybody doesn't agree with you, it doesn't do you any favors in terms of having a conversation and changing your mind through that platform [...] we are trying to reach out and change people's minds, so Twitter, unfortunately, is terrible for that and I would say its biggest limitation as far as its implication to us.

A critique touched upon the 140 character-limitation of a tweet, which in their opinion enforces extreme opinions without much space for reaching any kind of understanding or consensus. They claimed that:

> Because of the abbreviated nature of Twitter, everything has to be sort of an abbreviation and because of that there is no gradient, there's no shade of grey. Either you like something or you don't and everybody who does not like something really hates it and everybody who likes it really loves it. So everything is forced into these sorts of extremes, because this is the nature of Twitter and this means it is very difficult to have a constructive conversation.

In the light of the main limitations of Twitter, the suggested improvement was for Twitter to create conditions that would allow a constructive discussion to enable it to function more effectively as a tool for public deliberation. GMM reasoning behind it was that currently Twitter does not serve as such a tool, because it promotes one-way communication.

When asked about the impacts on their organization in case of Internet and social media become unavailable, GMM saw that scenario as of no threat to their operations as the core of their activities is radio-based. For advertising purposes, they would use the door-to-door approach. In their words:

> Social media has always been a conduit for our message, but never our message, so if that platform disappeared, I'd send out carrier pigeons, the good old-fashioned way, and it will be around for some time.

Individuals

Individual respondents were all using Facebook in addition to Twitter, but used Facebook more often and for more personal posts. Only two reported they are also using Instagram, one only in a very limited scope. The most often mentioned advantage of Twitter was that it enables interacting with people one would normally not be able to reach and equally emphasized was also the ability to stay updated on real-time events. Two users affiliated with ENGO, stated that an important advantage of Twitter is its ability to mobilize action and to help express popular opposition. There was one mention of Twitter allowing the aggregation of information on one topic and making it easier for users to track a specific narrative. One user emphasized its simplicity and ease of use; she also praised its freedom of expression:

> With Twitter you have the ability to say anything you want with the possibility of the whole world seeing it. So in that respect, you could have your fifteen minutes of fame multiple times by using Twitter - if you knew what you were doing.

The biggest limitation of Twitter from the individual users is the 140-character limit. One individual pointed out that as a consequence, cleverness is prioritized over comprehension and understanding of disseminated information. Other limitations mentioned individually about Twitter being time-consuming, because of having to constantly check it in order to keep up with the current developments and difficulties it poses for measuring impact of one's activities. There was one mention of tweets getting lost too quickly in a vast amount of posts on Twitter and one individual mentioned Twitter being impersonal, which decreases the impact of the message. In her words:

> There is no real relationship between the follower and the followed […] It's hard to create momentum in a message, when you don't know the person on the other side.

Within this group of respondents none had any suggestions of how Twitter should be improved to better serve their needs and to function better as a tool for public deliberation.

5.2.3 Tweeting on EE in practice

This section of the interview schedule delved into the respondents' Twitter activities related to EE pipeline. Firstly, they were asked on their motivation for tweeting on EE, followed by their perceptions of their influence on public opinion on EE. Third question inquired about their trusted sources of information on EE and the last question was on their predictions of the future of EE under the newly elected Liberal government.

Organizations

The prevailing motivation for tweeting on EE among organizations was to inform and educate the public with the intention to further informing the already engaged public, changing the minds of the opponents, as well as sparking interest in the ones who have not yet shown interest in EE polemic, persuading them to sign petitions, engage in organized action or forward the information to their social circle.

The majority of organizations thought their tweets on EE are influencing public opinion on the topic and base their claims on positive feedback they get for their activities. Only T350 stated that their Twitter activity is not shaping public opinion on EE and supported the claim with:

> I think with regards to shifting public opinion, there needs to be a much deeper conversation about the values and where we want our country to be in regards to climate change and I don't think Toronto 350 is doing that, which I find disappointing, but yeah, that is a whole other discussion.

Trusted sources of information on EE for organizations vary. Two mentioned TransCanada's publicly available material on EE as one of the primary sources on the pipeline; majority also relies on their own research as well as news, other ENGO and listservs. ED emphasized the importance of building relationships with journalists who are active on Twitter, because it enables them to be better informed and also gives them a chance to influence published material. As they described it:

> It is much easier to get advanced notice or to give them [journalists] heads up, if we were to publish research or about to do something or to get into a story they have written ready and we want to get in we can tell them we want to have a quote, we want to be included.

TIK highlighted the necessity to cross-reference all sources of information with primary sources of research as well as policy documents before something is posted. This is of great importance in developing their own credibility as an ENGO. In their own words:

> I am very thorough about doing research on things before I share information, which is partially why our organization has a strong reputation among regional policy makers that they know we know our stuff.

When asked about their predictions about the future of EE under the newly elected Liberal government, my question was in all cases met either with a short burst of laughter or a loud sigh. Majority of respondents were expecting delays in the NEB regulatory reviewing process, due to reforms promised by the new government, which was expected make the process more participatory. Due to this reform, organizations predicted they will be allocated more time to mobilize action against the pipeline. ED was expecting the new Prime Minister, Justin Trudeau will support the pipeline, so more pressure will have to be applied on the provincial premiers,

especially those of Ontario and Québec, to reject the pipeline. CoC saw the new government as supportive of the pipeline and expected it to be given a green light to proceed with the process. T350 believed the new government is more susceptible to public opinion, so applying pressure through their voters can alter their stance on EE. TIK believed that due to the general popularity of the new Prime Minister and the changes to the regulatory system, the EE pipeline will be approved. In their words:

> Justin Trudeau [the new Prime Minister] is very charismatic and people like him a lot and so if he comes across with a policy position that is sort of weakly endorsing this pipeline he's going to have a much easier time selling it than somebody like Steven Harper who was cold and disliked by so many people and mistrusted. So he's got the ability to sell a project that is distasteful, more readily than Steven Harper did [previous Prime Minister]. He is working on developing a regulatory review reform, changing the NEB process. There is the potential for the project to gain social license because the public will perceive that the process has improved and they will trust that more readily without much scrutiny and questioning [...] the conversation happening among all the premiers on trying to reach consensus on the climate strategy seems to be moving in the direction of providing the avenue for EE to be approved.

Media

GMM's motivation to post on EE is linked to informing on the pipeline and exposing the irregularities in which the industry and policy makers are approaching the issue. Their approach is different from others by relying on humor as the most efficient means to catch the attention of the public. They describe it as:

> What we are trying to do now from our positioning point is to move into John Oliver territory, which is we want to have a serious conversation, but we're going to make you smile as much as possible, because we know we cannot hold your attention. And so that's where the Internet and politics has pushed us into that space. I am happy to be here, I think it is great, but that is not necessarily because I like that format, it is essentially because it is the only format that works right now.

GMM perceived their Twitter activity on EE as influential enough to shape public opinion; however they were aware this perception can be false and offer a good explanation on why:

Social media networks like Twitter, especially Facebook, are designed intentionally to act like an echo-chamber, so conversations with people that agree with you get highlighted and they do that because that is the content people do want to read. But it makes people who are actively trying to be objective work a bit harder for it. So we get contraction and we feel, because we stir a lot of conversations and see a lot of other content that agrees with us, that I am aware in fact that it's probably a little bit false. And that people with opposing views are also being inundated with content that agrees with them and it is probably over-emphasizing it.

The trusted sources of information on EE are considered to be ED, National Observer and Guardian. Whenever they draw from the mainstream media, they make sure the cross-reference it with other sources, because according to their experience mainstream media in Canada has a tendency to be more industry-friendly. When discussing the future of EE under the new government, GMM was of the opinion the project was not going to be approved. One of the reasons being a strong First Nations community actively opposing the pipeline and the other a strong opposition from Québec, through which the majority of the newly built part of the pipeline has to be installed.

Individuals

Individuals' motivations for posting on EE were all focused on informing the public and calling for attention and increasing advocacy on EE, to challenge their opponents' views, discredit their claims and ensuring that environmentally more beneficial decisions are made. One individual stated his objective is to enable a fully informed discussion by sharing his knowledge on the topic deriving from his scientific background. Another mentioned she aims at encouraging others to do their own research before they believe the decision-makers. One individual specified his goal was direct interaction with influencers, politicians and TransCanada in order to ensure EE is not built and expansion of tar sands is stopped.

Only one of the respondents was convinced his Twitter activity on EE is influencing public opinion and supported his claim with citations of his blog-posts in policy discussions. Others were unsure, because the extent of their following was not high enough or they did not know how to measure their influence. Trusted sources of information in this group vary a lot, mostly they rely on ENGOs they are affiliated with or others, a couple also mentioned Pembina Institute,

mainstream media. There was a singular mention of using peer-reviewed literature and policy documents, TransCanada reports and leaked documents, financial business press, Google Alerts or simply following EE hashtag on Twitter.

This group also responded with an occasional chuckle when asked about the future of EE under the new government. The general impression was that the future of EE remains uncertain and the majority of the respondents believed they have to maintain the pressure on the government in order to prevent EE from being built; however with the termination of the Keystone XL and other pipeline projects, the pressure from the industry to finalize the project has increased accordingly. One respondent summarized his answer:

> I think it is still going to be a battle. I think the government deep down is planning to make it happen and I think they probably promised a lot of people from the industry they will get that pipeline built [...] literally it comes down to the type of tar sands expansion backed up by the industry that is not compatible with the climate goals. So it is hard to predict the outcome.

And another individual compared previous Conservative government to the new Liberal government and, despite not trusting the new government, remained optimistic in his view:

> I have no trust in the Liberal Party, the only difference [from previous government] that I see is that we can move the Liberal Party through public pressure and actions to look bad and I think they are incredibly image conscious and when it looks bad, they will change. But it's making them look bad in order to change, that then becomes a challenge [...] it is not like with Harper, we had no hope with Harper. Harper was the sort of leader where direct action and making it physically impossible through blockades was sadly the only tactics that had the chance of like drawing the media attention.

5.2.4 Significance of Twitter for social interactions on EE

The final set of questions was designed to provide an insight into the respondents' perception of the role Twitter in facilitating their interactions with other individuals or groups who are either share or oppose their views on EE.

Organizations

All but one organization stated that Twitter does not play an important role in establishing and maintaining connections with other groups and organizations who are opposing EE. The majority of social connections get established outside of Twitter, usually through personal contacts between the organizational leaders, while Twitter remains only in a role of information sharing through re-tweeting. TIK emphasized the difference between Twitter and Facebook in this regard:

> Twitter network is experts, national and international experts and environmental advocates who will assist us in this battle. So it is more like gathering resources rather than social connections actually. FB is where I have made all the connections with the grassroots groups and Twitter is where I have made more professional, expert connections.

When it comes to establishing contact with EE proponents, none of my respondents mentioned any connections being established between the two opposing sides through Twitter. However, for all of the respondent organizations, Twitter offers an opportunity to indirectly keep track of their actions, learn about their strategies and publications. While only T350 said they are actively following the leading EE supporting organizations on Twitter in order to stay informed on their current strategies, others said they follow it indirectly, mostly through their colleagues' or members' private Twitter profiles, due to two reasons: firstly, time restrictions (TIK, CoC); secondly, it would not send out a good impression if an anti-pipeline organization openly follows pro-pipeline organizations (ED). ED mentioned the presence of pro-pipeline astroturfing organizations on Twitter, but they have not been taking them seriously:

> Trans Canada has been trying to astroturf and they tried to mobilize people, make it look like there is genuine movement for the pipeline, so far luckily for us those efforts have not been successful, kind of amateurish.

Media

GMM did not see Twitter as a tool to facilitate connections between pipeline opposing organizations; its role is limited to information sharing. Connections get established outside of Twitter, as there are not many organizations in Canada who engage in EE issues. In case of

pipeline supporting organizations, GMM is not following or engaging with them neither through Twitter, not outside of Twitter. They elaborated on their view:

> There are three groups of people who are going to be doing EE stuff on social media. One of them is the companies themselves, they have a financial interest and they are not interested in arguing about its proper motive of the corporation. There's an incredibly small group, well I could never prove they exist, but I am sure there is at least a couple of these people who are simply paid trolls with astroturf accounts. A much larger part of that is citizens who are either convinced by political parties or their families have worked for these companies for generations and they see them as the basis of their family's wellbeing and they will go with whatever their party says. And those folks will never have a rational conversation on Twitter, so I don't think it is of any particular use of my time to follow what they are saying, because we have a good assessment of the information from objective sources and I am either not going to learn anything from them or it's going to frustrate me hearing them give misinformation or say ignorant things or their ill-received responses and so I know there is no point in trying to engage them on it in that platform, but that is not how you are going to change somebody's mind.

Individuals

In this section, individuals were asked an additional question on their past experiences in engaging in any Twitter-advertised and EE related events by an organization. All of the respondents had taken part in such events, but Twitter was not the only source of advertisement for it. More than half of the respondents helped with organizing and posted real-time tweets from such events.

In case of respondents' perceptions of Twitter as a tool to establish connections with other like-minded individuals and organizations, the majority responded that all of their connections get established outside of Twitter. In this regard, Facebook was mentioned a few times as the major tool for establishing connections, while Twitter is used subsequently to share each other's information. One individual replied:

> It is really important for organizations not to confuse social media presence with boots on the ground […] and I don't think that Twitter has motivated anyone to come and volunteer

for an organization, I think seeing posts on Facebook of people who they loosely know motivated them to go to meetings.

When it comes to connecting with their opponents on Twitter, all of individual respondents were following them mostly to stay informed, so there was less emphasis on establishing a dialogue. Two of the respondents followed their opponents Twitter accounts also with the intention to discredit and counter their claims.

5.2.5 Discussion

The final research question inquired into Twitter users' perception of their own experience of participating in the online discourse on EE.

RQ4: How do users perceive their use of Twitter in EE debate?

The objective was to gain an insight into their opinions on advantages and limitations of Twitter in contributing to a democratic debate on the pipeline, their experience and motivations for engaging in this debate, predictions of the future of EE and importance of Twitter for their social interactions with the EE-related community. Collecting information from the first-hand user experiences combined with information collected from the sampled tweets was designed to enable a more holistic view and understanding of the addressed issue. In the following sections, media representation is encompassed in the group together with other organizations, because the nature of their operation is similar.

Engagement with Twitter

According to my respondents, Twitter plays an important role in everyday activities of organizations; however, it seems to have a strong competitor in Facebook. Bigger organizations with more resources and manpower are utilizing both social media platforms and are tweeting more frequently, while those with limited time and resources tend to focus more on one of each, depending on their preferences and intentions. Findings indicate that organizations do not rely on Twitter as a source of information, but use it primarily to disseminate their own information and help redistribute other users' material when in line with their organizational values and views. As a result, the frequency of posted tweets by organizations greatly increases each time there is a topic-specific event occurring and they want to respond to it or help increase its exposure within

the platform. In this regard, Twitter seems to play an important role as a reactive and a swift distributive tool in engaging in an online public discourse.

Among individuals, Twitter does not surpass the popularity of Facebook; they prefer the latter for personal use and resort to Twitter when expressing support to a specific cause or an organization, work requirements and general curiosity. Unlike organizations, individuals resort to Twitter more as a convenient source of information on a specific topic, which supports Chen and colleagues' (2010) findings on Twitter serving more as an information source than for social networking. Dissemination of information seems to be of secondary importance for individual users; when disseminating information, it is mostly in a form of retweets, much less often in a form of spreading their own original material. The latter is most widely produced and posted in cases of reporting on live-events, such as protests, promotional events and other forms of organized action. Both organizations and individuals accentuated the importance of Twitter in direct reporting from an event which corresponds with Leung's (2009) observations of social media as the main enabler of the emergence of a new type of journalism in which citizens become the reporters offering independent, reliable and accurate information. This so-called citizen journalism posts appear alongside posts of professional journalists and challenging their monopoly over informing the public.

There is a consensus among all of the respondents in this study that increasing the visibility of their posts on Twitter relies on their own creativity and does not and should not rely on monetary exchange. Perhaps if respondents in this study were also representing business entities or some other organizations and individuals, the responses might have been different, as we have seen the presence of two social media marketing companies among the most frequent users posting on EE. The latter indicates that paying for increased visibility on Twitter does indeed take place, but it is not easily exposed or linked directly to the customer paying for the service. Furthermore, exposing increased visibility on Twitter through monetary means could potentially decrease the credibility of the paying customers' posts and potentially also of the entire platform, as one of the individual respondents remarked. In this view, there seems to be a very thin line of distinction between paying for increased visibility of tweets and astroturfing, as both diminish the credibility of the customer and make it harder for the recipient to separate truth from fabricated material, which harms the perception of Twitter as a tool for public deliberation. This observation supports

Bradbury's (2013) findings that any such action clouds the communicative space of the platform and diminishes public trust in the medium. It also supports Cho and his colleagues (2011) claims that because it brings doubt in public perception of the discussed issue it decreases overall civic engagement on the issue. Moreover, it also supports Fuchs (2014) accusations of Twitter being transformed into a pseudo- or a manufactured public sphere, due to profit-orientated Twitter activities.

Instead of paying for increased visibility, the respondents resort to their own creativity and mastering the use of Twitter-specific features such as hashtags and mentions of influential people, informing themselves of when is the best time to post a tweet to reach more people, using humor and graphic material to catch people's attention as well as asking their supporters, friends and employees to disseminate their material. It seems my respondents all perceive the above as legitimate ways of helping their message disseminate more effectively through the communicative space within Twitter as opposed to paying someone else to do it for them in a highly automatized, professional manner.

Perceptions of Twitter as a tool for public deliberation

The main advantages of Twitter as a tool for public deliberation according to organizations and individuals represent valid points that speak in favor of Twitter as a good tool for online deliberation. The most pronounced advantage was its potential as a platform for citizen journalism on real-time events as well as for mobilizing collective action, which supports Segerberg and Bennet (2011) in their views on the two complementary roles of Twitter in citizen empowerment. Commonly mentioned was also the advantage of Twitter offering an enabling environment for engaging with other Twitter users outside of established circles of followers, also claimed by the analysts to be more pronounced in the case of Twitter than Facebook. This observation supports Cozier and Witmer's (2004) view that social media give the opportunity for the previously unrelated individuals to connect and influence each other independently from their geographical location which increases democratization of a public discourse.

Twitter's reactivity and speed of propagated information were also mentioned as advantageous attributes comparing to other social and traditional forms of media which aligns with Delli Carpini's (2010) observations on the main advantages of social media towards improved

democratic processes. According to my respondents, another advantage of Twitter is its freedom of expression and transparency of online discussions, which corresponds with another of Delli Carpini's (2010) observations that the flow of information disseminated on social media bypasses traditional information gatekeepers, which positively affects citizen engagement. The last of the pronounced advantages of Twitter is ease of access to updates on a specific topic through aggregating information enabled by the hashtag convention, which is also supported by Delli Carpini's (2010) views on the benefits of social media comparing to traditional forms of media when it comes to increased democratization of deliberative practices.

Despite the numerous benefits of Twitter as a tool for public deliberation, they have to be weighed against its main limitations. The prevailing disadvantage of Twitter among my respondents was perceived to be its character-limitation which results in difficulties of discussing complex issues, promoting extreme opinions as well as leads to one-way communication. This shows that despite the presence of numerous Twitter-specific communicative elements of indexing topics, addressing users, redistributing material as described by Thimm and colleagues (2014) to be beneficial for an online public discourse, the abbreviated nature of tweets seems to limit Twitter's contribution to an overall improved online deliberative process.

Another limitation of Twitter is the decreased visibility of tweets due to a short duration of their exposure caused by the high velocity and volume of propagated information. While some users as well as Delli Carpini (2010) saw Twitter's speed of transmitting information as an advantage and Castells (2013) as a main driver of social change, this also has a downside as it leads to decreased chances to see and interact with posted material. This supports the views elaborated by Castillo and colleagues (2011) as well as Moriss and colleagues (2012), that the swiftness and volume of the information posted on Twitter hinders the user to process the information sufficiently and to be able to distinguish true information from fabrications. Moreover, this particular disadvantage also decreases individual's reflexivity to critically asses their own views as well as to be able to listen and grasp the views expressed on the other side of the discourse as described by Dahlberg (2001).

Next in line of important limitations, which might seem too trivial to be emphasized at first, is that Twitter takes a certain amount of time and effort from the beginner user to learn how to master the platform so one can use it more effectively. This indicates that there are certain aspects

of Twitter which might deflect potential users to take part in its online deliberative space. This is a form of the so-called digital-divide, hindering complete discursive inclusion and equality due to lack of certain skills and knowledge as viewed by Epstein and colleagues (2014). The last emphasized limitation of Twitter was in its impersonal nature of interpersonal connections that makes it difficult to influence people enough to change their opinions within the platform. This is aligned with Gladwell (2010), White (2013) and Fuchs (2014) in their critiques of Twitter's weak bonds that are less likely to lead to offline engagement in organized action and bring concrete changes within society. As Halpern and Gibbs (2013) stated, the more personalized setting of a social media platform ensures a better environment for online deliberation. According to many of my respondents, Twitter is perceived as less personal than Facebook, yet what it prevents the latter to be more effective for online public deliberation is that it lacks the openness for its users to interact outside of their established Facebook community. According to Dahlberg (2001) this has a counter-productive effect on democratic deliberation as it creates homogenous communities of like-minded people whose views do not get challenged. The above advantages and limitations of Twitter expressed by the respondents of this study coincide with theoretical observations of both proponents and opponents of Twitter as an effective tool for democratic online public deliberation. These findings indicate that there is no clear answer whether Twitter serves as a tool for increasing democratization of online public deliberation practices; however, compared to its biggest rival, Facebook, many respondents saw Twitter as superior in this regard.

Without Twitter, social media and Internet in general, the main impact for organizations would be a limited scope of their outreach and more emphasis on direct engagement with their local communities. There would also be fewer opportunities to directly address and influence decision-makers and thought leaders outside of their community. Despite these setbacks, all of the respondents were self-confident their activities would continue also without Twitter or other forms of social media. Their adjustment would be based on resorting back to more time- and resource-consuming traditional means of disseminating information through the public sphere. This indicates respondent organizations do not depend on Twitter as an integral part of their engagement in a public debate on specific issues, but use it primarily out of convenience, whereby staying aware of its limitations and benefiting from its advantages comparing to other types of social media as well as traditional forms of public deliberation. As Hemmi and Crowther (2013) observed, Twitter offers multiple opportunities for organizations to promote their agenda

and they increasingly resort to it due to low-costs and efficiency, yet the findings of my research show it has not yet become inseparable element of their activities. Perhaps if I had interviewed many more organizations and focused my research on investigating this particular issue, my findings would have been more aligned with Merry's (2013) observations of an increasing dependency of organizations as their main channel of online communication.

Tweeting on EE in practice

The respondents' main motivation behind tweeting on EE was to inform the public and to raise awareness on EE controversy, influence public opinion on it and increase civic engagement to collectively affect the future of the proposed pipeline. All but one of the respondents represented EE opposition, so their main objective when tweeting was to disseminate counter-information to the carefully crafted pro-pipeline propaganda published under the patronage of the oil-industry. Even the single respondent supporting the pipeline said he is using Twitter to share his scientifically-based observations on EE with the general public aiming at increasing their level of awareness on the topic. In this regard, all of the respondents were using Twitter primarily as a platform to create a space for a fully-informed public discussion on EE. This confirms Shriky's (2009) and Delli Carpinis's (2010) views that social media such as Twitter can offer a good alternative to circumvent the restrictive practices of traditional media as producers and gatekeepers of information.

Perceptions of their own influence on public opinion on EE were more positive in case of organizations than individuals. Only two organizations expressed doubt their EE-related activities on Twitter have enough traction to influence public opinion. Organizations tend to use Twitter mostly as a platform for disseminating information, they have a bigger audience of followers, established ties with other influential users and have more time and resources to frequently publish relevant material on EE comparing to individuals. The latter were unsure about their influence on public opinion mainly because they did not know how to measure it, while organizations measured their impact on public opinion by the feedback they were given, inclusion of their contributions on EE topic in policy debates and quotes in traditional media. There was some doubt expressed on how much reality matches their perceptions of their influence on public opinion, because the positive feedback on their work on EE comes predominantly from people who already share their views and follow their Twitter account. This

shows that even though Twitter is more open than Facebook for interaction between heterogeneous groups, there is still a barrier of filtering the content according to individual preferences. This barrier echoes one side of the EE story throughout the community and prevents interaction with counter-arguments, which, according to Sunstein (1999), represents a threat to online deliberative democracy.

Trusted sources of information on EE vary from traditional media outlets, peer reviewed literature, industry reports and material published by NGOs. Most pronounced was the need to cross-reference between various sources in order to avoid biases and prevent the loss of credibility when redistributing information; however the majority relied on a handful of trusted sources they would continuously draw their information from. Especially organizations expressed their reliance on established relationships with journalists present on Twitter, with whom they would exchange information prior to official publications of their material. Individuals tend to rely more on Twitter for staying updated on the latest information on EE by following the #EE. This shows Twitter plays an important role as a platform for disseminating information originating from various sources. However, due to the sheer volume and velocity of information circulating on Twitter regarding EE, users are exposed to information overload. Delli Carpini (2010) sees this as one of the downsides of social media contribution to more democratic online deliberation as it results in diminished capacity of recipients of information to reflexively asses its validity. As we have seen from some of the respondents, they adapt to information overload by relying on same trusted sources, which leads to diminished exposure to competing ideas, which is one of the main concerns related to the social media as elaborated by Dahlberg (2001). In order to successfully avoid these potential downsides of Twitter as a tool for online public deliberation, each user would have to invest a great amount of time and energy to process all relevant information and assess them properly.

Respondents' predictions on the future of EE under the new Liberal government ranged from optimistic to pessimistic. The most represented opinion was that the new government is supportive of the pipeline, yet they are a lot more susceptible to public opinion than the previous government, which gives EE opponents hope their increased efforts to stop the project can make an impact. These efforts include also enforced online activities and utilizing Twitter to disseminate information and increase civic engagement and collective action in opposing the

pipeline. Those who thought the pipeline will not be approved assigned credits for it to the powerful First Nations anti-pipeline movement as well as Québec's clear stance against the pipeline. This opinion supports the findings from the analysis of tweets, which indicated a prevailing anti-pipeline sentiment among the French speaking users, as well as the most influential user on EE in my database being an indigenous grassroots organization.

Significance of Twitter for social interactions on EE

The final inquiry of this research delved into the users' perception of Twitter as a tool for facilitating social interactions among its users that reach beyond merely viewing of, commenting on and redistributing of each other's information on EE. Twitter does not play a significant role in establishing and maintaining connections between like-minded organizations as this process happens primarily offline. For them, Twitter's role remains primarily focused on dissemination of their own material, calls for action and to a certain degree for maintaining expert connections to journalists and other professionals as reliable sources of information. Furthermore, when it comes to interactions with users who do not share their views and values, e.g. the pro-pipeline organizations, individuals and representatives of the industry, Twitter seems to be even less utilized. There is minimal or no direct interaction or dialogue between the representatives of two opposing views on EE taking place on Twitter, yet the majority of respondents admitted they are using the public nature of published posts on Twitter to collect information on the opponents' strategies and views on EE.

Individuals also reported on not establishing bonds with like-minded individuals that would reach beyond reposting of each other's material. When it comes to their opponents, Twitter is being utilized primarily to stay informed on their views and in some occasions to respond to their posts with the intention to publicly discredit their pro-pipeline claims. The latter seems to be the only mentioned indication of an attempted dialogue between both opposing sides of the EE polemics on Twitter. Organizations mentioned they are refraining from such dialogue on Twitter as the abbreviated nature of tweets prevents any such attempt to develop into a constructive debate; therefore, it is not worth the time and resources to engage in it for the purposes of influencing someone's opinion.

Also when it comes to taking part in organized action advertised on Twitter, all the individual respondents were in a way connected to organizing or taking part in such events, yet they were of the opinion that Twitter is not crucial for such recruitment as there are many other channels through which the same events are being advertised and are more likely to be shared among their community. My findings show that while Twitter is being valued for creating an enabling environment for citizen journalism on real-time events from such forms of organized action it is not considered crucial for organizing and motivating its users to take part in them. It shows that out of the five main benefits of social media to increase online civic engagement as defined by Lovejoy and his colleagues (2012), dialogue seems to be lacking the most. Other four elements, e.g. collection and publication of information, coordination of actions and directly addressing policy-makers were at least to some extent mentioned by my respondents. The lack of dialogue on Twitter quite effectively speaks against its contribution to increased democratization of online public deliberation and adds to the main sceptics of the idea that Twitter can function as an online public sphere.

6. CONCLUSION

This study aimed to investigate the value of social media in contemporary democratic practices with a specific focus on the use of Twitter in Canadian tar-sands pipeline infrastructure debate and the efforts to legitimize or confront the development of the EE project. Four distinct research objectives were steering the course of my study. While the first three were addressed through the analysis of collected tweets, the fourth one was addressed on the interviews with individuals engaged in the EE debate on Twitter. The latter served primarily to explore Twitter users' motivation as well as their perceptions of advantages and disadvantages of the platform for engaging in the EE online debate. The last research objective served to complement the first three objectives and enabled a more comprehensive research outcome.

Firstly, a closer examination of who is using Twitter to engage in the EE debate revealed that Twitter is being utilized actively to express people's views on the pipeline, but that these postings and debate predominantly represent pipeline opponents, with ENGOs and social justice movements as leading influencers. This observation, combined with the reported prevailing uni-lateral mode of communication and absence of constructive debate, may lead to an enforced polarization of views among the users of the platform. I suggest this threatens the chance of a truly democratic deliberative process, reducing the role of Twitter to a mere echo chamber among the already convinced. A particularly strong indication of this phenomenon is the case of the homogeneous online community of French-speaking Twitter users located within the proximity of the planned EE pipeline where its risks will be the highest and benefits the lowest, so their anti-pipeline views are mutually reinforced with the help of the social media platform. Furthermore, my research revealed indications of vulnerability of Twitter to manipulations, insincerity and advertising by powerful actors. These practices undermine the public trust, reduce Twitter's credibility and contrast the need of a public sphere to be equally accessible to all.

On the other hand, research also showed Twitter has some positive attributes which strengthen public deliberation. Second research objective aimed at examining the content of posts on EE and findings revealed Twitter is a useful tool for swift dissemination of information on a specific topic by applying the hashtag convention. It also eases access to information for the user by offering a space where all forms of media are being distributed through the same channel, transcending the barriers of the traditional media. In addition to increased accessibility to relevant

information, I argue that another of Twitter's main contributions to improving democratic practices takes place through enabling its users to reach potential audiences that would otherwise remain out of reach; through its public nature and enabled feature to directly address or reply to anyone present on the platform. As such it has become a useful tool for the public to communicate their views to decision-makers and politicians, which increases their accountability and leads to improved transparency of their actions. Moreover, my research confirmed Twitter embodies both proactive as well as reactive medium of public communication; therefore, it has a potential for empowering effect on civic engagement in democratic processes. However, the findings derived from the interviews indicated this is not without certain drawbacks: the sheer volume and speed of information exchanged on Twitter as well as the above mentioned vulnerability to various forms of manipulation can have an equally disengaging effect on the public.

Thirdly, the study delved into identifying the wider socio-political context of tweets on EE. It revealed EE is a highly politicized topic utilized primarily for expressing support or opposition towards the 2015 national election campaigns, overshadowing environmental and indigenous topics. This speaks in favour of Twitter's potentials to influence political discourse. However, I argue that this potential is not quite fully utilized, because the ongoing discourse on EE pipeline on Twitter does not represent the views of the general public and has a limited capacity to influence public opinion. This is due to the fact that nowadays the diversity of various social media platforms offers people to choose their own medium of expression and information-gathering aligned with their needs and preferences, or they can also chose to abstain from online social media interactions altogether. Taking into account all forms of digital divide and personal preferences between potential users and the medium, it becomes clear that Twitter is only one of the arenas where the contemporary democratic deliberative practices take place. Just as some people prefer one newspaper to the other and one news channel to the other, so is Twitter merely one of the options to get informed or express one's opinion. As such, it represents only a fragment of what can be considered the new public sphere and definitely not one-size-fits-all solution to the contemporary legitimation crisis.

Indeed, examination of secondary sources on the origin of Twitter clearly shows it was not created with such ambitions. Also the conflicting opinions among scholars on whether Twitter

can be seen as a contribution to increased democratization of online deliberation prove there is no straightforward answer. While some see it as an important enforcement of contemporary democratic practices through its positive influence on increased civic engagement and collective action (Denning 2000; Cozier & Witmer 2004; Shirky 2011; Auger 2013), a substantial number of other scholars remain highly skeptical and warn of its main limitations (Dahlberg 2001; Papacharissi 2004; Sunstein 2009; Gladwell 2010; Delli Carpini 2010; Castillo et al. 2011; Morris et al. 2012). This lack of general consensus on the issue, however, does not imply Twitter's role in the ongoing public debate on EE pipeline is to be ignored. The empirical findings of my study revealed both its advantages and disadvantages and indicated Twitter posts do have some power to influence publications in offline media and consequentially also public opinion, although only in a limited scope.

The main conclusion is that when examining Twitter's role in democratic practices, it is necessary to keep in mind its strengths and weaknesses in order to evaluate its impact on the deliberative practices more objectively. I argue that the speed, the responsiveness, accessibility and volume of information combined with freedom, connectivity and openness of the medium can easily create a misleading perception that when something is discussed on Twitter, it is simultaneously discussed everywhere else and that all points of view are equally represented and debated. In my opinion, the role of Twitter in EE debate remains constrained within informative and reactive aspects of its service on current developments on the pipeline polemics and has a limited influence on legitimation processes surrounding the proposed pipeline. Twitter's contribution to deliberative democratic practices seems to be that of an easily accessible medium through which citizens raise topical matters and disseminate information. In its best, it proves to be useful for individuals or organizations to challenge authority figures and practice real-time citizen journalism.

For users actively engaged in the EE debate on Twitter, this medium obviously represents an important arena to express their views on the topic. However, its role seems to be limited within this narrow context and deprived of relevant audience for these opinions. What is missing for Twitter to become more engaging for all citizens, and for the ones already engaged to move beyond the mere clicktivism, is for their concerns to be heard and included in the decision-making processes. As a public platform for expression of opinions, Twitter clearly lacks an

enabling environment for a constructive discussion. I started this thesis with a quote on democracy being a synonym for governing through deliberative processes, yet its efficiency relies on preventing citizens to engage in discussion (Atlee in Quirk 2011: 91). If Twitter does not rise above its limitations and profit-centered nature then it is very much in line with this quote and its contribution to democratic practices remains highly questionable.

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8. APPENDICES

Appendix A: Interview schedule for individuals

A – Basic Twitter use

1. How long have you been active on Twitter and what was your reason for joining?
2. How often do you post on Twitter?
3. Do you post only your own content or do you re-tweet other users' or media content?
4. What measures are you taking to improve your Twitter visibility (humor, photos, paying for visibility etc.)?

D – Twitter as a tool for public deliberation

5. Which other social media platforms do you use?
6. What are the main benefits of Twitter (comparing to other social media platforms)?
7. And what are its limitations?
8. What would you improve to make Twitter work better for your needs?
9. Have you ever taken part in an event that was organized by people you follow on Twitter (or organized one yourself in your behalf of on behalf of an organization)?

C –Energy East pipeline & Twitter

10. What is your motivation and goal when tweeting on Energy East pipeline (EE)?
11. Do you feel your tweets are impacting public opinion on EE (how do you measure it)?
12. Do you tweet on EE in support of a specific organization/company/institution?
13. What is your primary source of information on EE?
14. In your opinion, how do you see the future of EE and tar-sands with the newly elected government?

D – Social interactions on Twitter regarding EE

15. Are you using Twitter to connect with EE opponents/proponents (do these connections extend outside of social media environment)?
16. Are you using Twitter to establish a dialogue with EE opponents/proponents?
17. Are you using it as means to learn about views and strategies of people whose views on EE oppose yours?

E – Final

18. Is there anything related to the topic we have not touched upon in this interview and you would like to add?

Appendix B: Interview schedule for organizations

A – Questions on basic Twitter use

1. How long has your organization been active on Twitter?
2. How often do you post on Twitter?
3. Do you generate your own content or do you retweet other users' content or post media material?
4. What measures have you taken to improve your Twitter visibility (e.g. humor, videos, paying for improved visibility)?

D – Twitter as a tool for public deliberation

5. Does your organization use any other social media besides Twitter?
6. What are the benefits of Twitter in general and comparing to other social media?
7. And what are its limitations?
8. What would you improve to make Twitter work better for your organization's needs?
9. If Internet suddenly becomes unavailable, how would this affect your outreach? What would be the communication channels you would (re)establish?

C – Questions on Energy East pipeline & Twitter

10. What is your organization's goal behind tweeting on Energy East pipeline (EE)?
11. Do you consider your organization as an important influence on public opinion on EE?
    - If yes, how do you measure this?
12. What is the organization's primary source of information on EE?
13. In your opinion, how do you see the future of EE with the newly elected government?

D – Social interactions on Twitter regarding EE

14. Is your organization using Twitter to connect with other opponents of EE (NGOs, companies, individuals)?
15. Is the organization using Twitter to learn about the EE supporters' views and strategies (do you follow their Twitter accounts)?

E – Final

16. Is there any information we have not touched upon in this interview and you would like to add?

Appendix C: Interview schedule for media

A – Questions on basic Twitter use

1. What are Green Majority Media's main channels of reaching out to the public?
2. How important is Twitter in your outreach?
3. How often do you post on Twitter?
4. Do you post only your own content or do you retweet other users' or media content?
5. What measures have you taken to improve your Twitter visibility?

D – Twitter as a tool for public deliberation

6. What are the main benefits of Twitter?
7. And what are its limitations?
8. What would you improve to make Twitter work better for Green Majority Media's needs?

C – Questions on Energy East pipeline & Twitter

9. What is your objective when tweeting on EE?
10. What is your primary source of information on Energy East?
11. Do you consider your Twitter activities as an important influence on public opinion on EE? (How do you measure it?)
12. In your opinion, how do you see the future of EE with the newly elected government?

D – Social interactions on Twitter regarding EE

13. Is Green Majority Media using Twitter to connect with other EE opponents (also outside of Twitter)?
14. Is it using Twitter as a way to learn about the opponents' views and strategies?
15. What would it mean for Green Majority Media if tomorrow there is suddenly no Internet anymore? Would you still be around?

E – Final

16. Is there any information we have not touched upon in this interview and you would like to add?

Appendix D: List of queries for data retrieval

Data was retrieved from a content-specific Twitter stream for which *Node.js* software was used. All the details of the data collecting process are stored and available upon request. Below is a list of queries used in *Mongo DB* software used to retrieve specific samples from the data set. The author of the entire data retrieval process and the queries presented below is K Raiyan Kamal.

All Tweets between 16th July and 16th August, 2015:

```
db.getCollection('tweets').find({$and:[{"timestamp_ms": {$gt: "1437004800000"}},
{"timestamp_ms": {$lt: "1439683200000"}}]}).count()
```

List of most frequent users on EE:

```
db.getCollection('thesis_tweets').aggregate([
{$group: {_id: "$user.id", name: {"$first": "$user.screen_name"}, followers: {
"$last": "$user.followers_count" }, count:
{$sum:1}}},{ $sort: { count: -1 } }])
```

List of all hashtags and their frequency:

```
db.thesis_tweets.aggregate ([{$project:{_id: 0, hashtag:
'$entities.hashtags.text'}},{$unwind: '$hashtag'},{$group: {_id: '$hashtag',
frequency: {$sum: 1}}}, {$project: {_id: 0, hashtag: '$_id', frequency:
1}},{$sort: {frequency: -1}}])
```

List of top 50 most frequent hashtags:

```
db.thesis_tweets.aggregate([{$project:{_id: 0, hashtag:
'$entities.hashtags.text'}},{$unwind: '$hashtag'},{$group: {_id: '$hashtag',
frequency: {$sum: 1}}},{$project: {_id: 0, hashtag: '$_id', frequency:
1}},{$sort: {frequency: -1}},{$limit: 50}])
```

Top users (100) by number of post on EE:

```
db.getCollection('thesis_tweets').aggregate([{$group:{_id: "$user.id_str", name:
{"$first": "$user.screen_name"}, followers: { "$last": "$user.followers_count"
}, count: {$sum:1}}},{$sort: {count:-1}},{$limit: 100}]
```

Top users (50) by followers (out of the group of most frequent users of #EE):

```
db.getCollection('thesis_tweets').aggregate([{$group:{_id: "$user.id_str", name:
{"$first": "$user.screen_name"}, followers: { "$last": "$user.followers_count"
}, count: {$sum:1}}},{$sort: {count:-1}},{$limit: 50},{$sort: {followers:-1}}]
```

Finding tweet contents by a user by screen name:

```
db.getCollection('thesis_tweets').find({"user.screen_name":"name"})
```