

**Understanding European Institutional Policy Discourse on the Council of Europe's
Convention on Preventing and Combating Violence Against Women through Automated
Content Analysis**

by

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I Introduction

Considerable academic research on violence against women and domestic violence, gender politics, and European international organizations has emerged in the last twenty years. Several clusters or categories of research can be identified: 1) a vast array of publications in multiple disciplines on studies related to causes and types of violence against women and domestic violence in Europe (See for example, World Health Organization, 2010; Martinez and Schrottle, 2006; Council of Europe, 2006; Crowell and Burgess, 1996; Heise, 1994; Levinson, 1989); 2) research on Europeanization of gender equality policies and to what extent European gender policies are implemented at the domestic level or in member states (Roth, 2008; Avdeyeva, 2007); 3) studies of gender mainstreaming and its effects on gender policy in the European Union (Kantola, 2010; Verloo, 2005); 4) examinations of the institutionalizing intersectionality (Silm and Mokre, 2012; Krizsan, Skiele, and Squires, 2012) ; and 5) the interaction of the European international organizations such as the EU with transnational advocacy networks or civil society (Htun and Welton, 2012; Montoya, 2009; Joachim, 2003).

Another area of research, focusing on the study of European policy discourse and the meaning of gender equality policies, has also appeared. In 2004, *West European Politics* devoted a special issue to policy change and discourse research in Europe. In the concluding summary of this volume, Radnelli and Schmidt note that what can be of interest is trying to understand the conditions in which discourse can be a key factor in policy change at the national and EU levels, the situations in which discourse has limited importance, and whether discourse, in certain historical and institutional contexts, can be transformative not only for the EU but its member states (2004, p. 364).

Under the auspices of the European Commission, the Mainstreaming Gender Equality in Europe (MAGEEQ) Project, in a multi-year study beginning in 2003, used frame analysis to explore what is the meaning of gender equality in the EU. These studies analyzed European Union policy texts such as resolutions, communications, reports, press declarations, and speeches from the main EU institutions such as the Commission, the Council of Ministers, and the European Parliament. By assigning codes to each dimension of a text, policy documents are organized around "sensitising questions" and analyzed to reveal policy frames (Verloo, 2005; Lombardo and Meier, 2008, p. 7; see also, Lombardo and Forest, 2011).

Rather than manual coding, framing, or defining "sensitizing questions", our work goes a slightly different direction by using automated text analysis to begin to explore to what extent policy positions, through words, are privileged in both the European Union and Council of Europe prior to and after the adoption of the Council of Europe's recent Convention on Preventing and Combating Violence Against Women (2011). We look for word similarities to the Convention and the frequency of their appearance in speeches and minutes of the members of the European Council of the European Union and the Committee of Ministers of the Council of Europe.

The Convention, often referred to as the Istanbul Convention, is a landmark European legal instrument containing a comprehensive framework to protect women against all forms of violence and domestic violence. If the EU also adopts the Convention, the document will be one of only a handful of European Conventions introduced and fully endorsed by both the EU and the Council of Europe. As Meyersfield (2009) notes, the content of the document, as well as its potential ratification and implementation, may signal not only a broadening of gender policy agendas, but a deepening of the understanding of gender, gender equality policy issues and

practices, and violence prevention, survivor protection. Unlike other international instruments, the Convention defines gender as "the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women." (Article 5, Convention, see: <http://conventions.coe.int/Treaty/EN/Treaties/Html/210.htm>). Its language further characterizes gender violence as a violation of human rights and form of discrimination (Article 3a, Convention). The document recognizes the transnational nature of gender violence and the need to change attitudes of all members of society, including men and boys. Gender rights and issues of violence against women and domestic violence are now enshrined as human rights and matters for which states can be held accountable.

The content of the Convention and the dialogues at the level of European institutions surrounding its adoption and promotion are therefore an interesting case for investigation of emerging policy positions, political discourse, and European gender policy change. To understand what is meant by policy discourse, we draw on the definition articulated by Radaelli and Schmidt (2004) whereby discourse in terms of its content can be understood as both a set of policy ideas and values and as a "process of interaction focused on policy formulation and communication" (Radaelli and Schmidt, 2004, p. 183.) The policy ideas and values are contained in key words and phrases, and the process of policy creation can involve the intermittent discussion, ebb and flow, or privileging of various topics.

We focus on policy discourses surrounding human rights and prevention of women against violence against women and domestic violence as filtered through the words found in speeches and minutes of European Council of the EU and Council of Europe's Committee of Ministers. We also place that analysis in the historical context of European institutional efforts to combat gender violence at the regional level. What is of interest is to understand whether the

existence of the new Convention will mean a durable change in the visibility of these issues in dialogue, agenda setting, policy creation, and implementation in European institutions over time

Using automated text analysis in our study, we compare the content of speeches of leaders from 2008 to 2013 of European Council with those of representatives of the Committee of Ministers of the Council of Europe in an effort to understand the emergence of policy debates surrounding the Convention and its key topics. The Council of Europe's Committee of Ministers is the key decision-making body of the institution. The Committee is composed of the foreign affairs ministers of all the member states, or their permanent diplomatic representatives. The Committee of Ministers serves as a governmental body, where problems of European societies can be discussed, and a "collective forum, where Europe-wide responses to such challenges are formulated" (Council of Europe website, retrieved 3/9/2013).

The European Council is made up of the heads of state of each of the European Union's member states. The leaders meet approximately four times a year, and their main purpose is to set the political agenda of the European Union. The European Council prioritizes key initiatives and gives the European Union direction (http://europa.eu/about-eu/institutions-bodies/european-council/index_en.htm, retrieved 3/9/2013). Although it is not a legislative body, the European Council, like the Council of Europe's Committee of Ministers, deliberately provides a high level forum for discussing European-wide issues. By looking at the words in speeches and minutes of both bodies, we can detect what topics are privileged and sustained in discourses over time.

As Laver and Benoit (2003) note, texts can become data in the form of words which can reveal policy positions. We use words to begin to explore the prevalence of interest in the Convention, issues related to violence against women, domestic violence, and human rights, and the convergence of Council of Europe and European Union dialogues. Our research questions

are as follows: 1) To what extent is discourse (words) about preventing and combating violence against women appear in the speeches of key political figures of the European Council and the Committee of Ministers and minutes of these institutions prior to the opening for signature and ratification of the Convention? Put another way, to what extent does the content of speeches show the privileging of gender policy debate and human rights? 2) To what extent has reference to the Convention been prevalent in the dialogues of key European institutional leaders after the opening for signature and ratification of the Convention? Do we see overlapping features and word similarities to the Convention in dialogues in both the European Union and the Council of Europe which may signal continued interest in the Convention? And 3) how effective is automated content analysis in helping us answer these questions?

In this paper, we begin with a brief discussion of the evolution of European institutional efforts to create gender policy and programs related to combating violence against women and domestic violence. This historical outline will help provide some context for the emergence of the Convention and policy debates in both the European Union and the Council of Europe. We then provide an overview of our data, methods, and results. We acknowledge that text analysis is only one small piece of a much larger puzzle in understanding the emergence of gender policy change and the synergy of European international organizations in that process, but this research method can provide one more set of tools to examine and to compare the frequency of discourse on policy issues at the European institutional level.

II Evolution of European Institutional Efforts to Combat Violence against Women and Domestic Violence

The European Union and the Council of Europe, with their respective bureaucratic structures and members, are separate bodies with different roles. The Council of Europe has been engaged in creating guidelines and standards related to human rights issues for its member states since 1949. The European Union has been involved with economic and political integration of its 27 members, but often draws on the legal instruments and guidelines of the Council of Europe in establishing its own regulations, directives, and communications. In recent years, the EU has expanded its agendas, through the Social Charter and the Charter of Fundamental Human Rights to include social issues where the Council has already been at work. For example, both the Council of Europe and the European Union have developed shared values in seeking to fight against human trafficking, the sexual exploitation of children, and violence against women (Council of Europe website and EU website). However, each organization has sought to address these issues in different ways and through different mechanisms.

The issues of gender violence and violence against women as a violation of human rights were slow to appear on the agenda of the European Union in part because they were not perceived by EU leaders as within the purview of the European Union's mainly economic activities (Montoya, 2009). In 1986, the European Parliament passed a comprehensive resolution on violence against women, calling for gathering of more data, clear definitions of sexual violence, and reform in criminal codes and judicial practices as well as educational campaigns, but the resolution was not binding and did not provide for enough accountability for state actions (See European Parliament Documents, Doc. No. A2-44/86; http://www.ff.uni-lj.si/fakulteta/dejavnosti/ziff/daphneeng/EP%20Resolution_1986%20_A2-44-86.pdf)

The European Parliament's "Campaign for Zero Tolerance for Violence Against Women", that followed and was funded by the European Commission helped to raise public

awareness but still did not trigger any real rules enforceable through binding dispute mechanisms or other accountability tools. As Montoya (2009) notes, international pressure grew from transnational women's groups and violence against women was connected to human rights issues in other arenas, especially through the United Nations Declaration on the Elimination of Violence Against Women, the European Union increased its own efforts by first recognizing violence against women as an important European Union issue through several new resolutions from 2000 to 2006. These resolutions dealt with trafficking of women, the elimination of honor crimes against women, and a broader set of recommendations for combating violence against women (Montoya, 2009). In March 2006, the European Council of the EU also established its European Pact for Gender Equality which called for the strengthening of the prevention of violence against women and the protection of victims, and focus on the role of men and boys in order to eliminate violence against women (See http://www.justice.ie/en/JELR/Pages/EU_Gender_Eq).

In March 2010, the European Commission adopted the Women's Charter in which the Commission renewed the European Union's commitment to gender equality, and in September 2010, the European Commission sent out its Communication to the European Parliament, the Council of Ministers, and other EU bodies which outlined a strategy for moving towards equality for men and women in the next five years. This document contained within it an explicit reference to seeking an end to gender-based violence, calling for European Union action on adopting a strategy on combating violence against women which would include criminal laws and a Europe-wide awareness-raising campaign on violence against women (See European Commission, COM(2010)491, 2010; <http://eurlex.europa.eu/lexUriServ/LexUriServ.do?uri=COM:2010:0491:FIN:EN:pdf>.)

In addition to policy reform initiatives, the European Union focused on capacity-building strategies such as providing support for domestic advocacy organizations, and the Daphne Program founded in 1997 (Montoya, 2009). The Daphne Program has run in three phases from 1997 to 2013. Established by the European Commission and under the auspices of the European Union's Department of Justice, Home Affairs and Fundamental Rights, the Daphne Program was established to bring together NGOs from member states to cooperate in research, data collection and analysis, training, exchange and networking, awareness raising and information campaigns, as well as direct action to support victims of violence, and the production of tools for policy and practice. The chief aim was to promote actions to combat violence against women and children and to make a difference in people's lives.

(http://ec.europa.eu/justice_home/daphnetoolkit/html/daphne_experience/dpt_experience_12_en.html).

While these activities were taking place in the European Union, the United Nations was also beginning to view the many forms of violence against women, and in particular domestic violence, as issues for consideration in international law. For example, The Committee on the Elimination of Discrimination against Women (CEDAW Committee) made recommendations in 1992 to highlight the importance of gender-based violence as a form of discrimination against women (See <http://www.un.org/womenwatch/daw/cedaw/committee.htm>). This was followed by the Beijing Platform of Action including clauses on the eradication of violence against women as a critical objective in the list of gender equality issues (See <http://www.un.org/womenwatch/daw/beijing/platform/violence.htm>). Following the wars in the former Yugoslavia and Rwanda, wartime rape became designated as a war crime by the UN and highlighted in UN Security Council Resolution 1820 in 2008. (See

<http://www.ohchr.org/en/newsevents/pages/rapeweaponwar.aspx>). Various United Nations organizations also took up the issue of violence against women and domestic violence as a form of torture (See for example, United Nations General Assembly Declaration on the Elimination of All Forms of Violence against Women in 1993, G.A. Re. 48/104, and UN Doc. A/RES/48/104; See also UNHRC, UN Special Rapporteur on Torture, Manfred Nowak, Report of the Special Rapporteur on Torture and other Cruel, Inhuman, or Degrading Treatment or Punishment, UN Doc. A/HRC/7/3, January 2008).

These international efforts set the stage for consideration of the Council of Europe's recent Convention. In the context of on-going international work by the United Nations, the Council, through its Steering Committee for Equality between Men and Women (CDEG) began work in the 1990s to establish a series of initiatives to raise awareness about the need to protect women and girls against violence (Council of Europe, Explanatory Report, and retrieved 2/18/2013). In 2002, the Committee of Ministers of the Council adopted a resolution (Council of Europe Recommendation Rec (2002)5 that encouraged member states to follow a comprehensive strategy for the prevention of violence against women and included a monitoring process for member state compliance.

About the same time, the Parliamentary Assembly of the Council of Europe also passed a series of resolutions and recommendations related to violence against women. These included resolutions calling for the prevention of "honour crimes", forced marriages and child marriages, and female genital mutilation, as well as recommendations on eliminating date-rape and sexual assaults related to "date-rape drugs" (See Council of Europe, Explanatory Report).

However, reports revealed that while much was done to better laws, police investigations, and prosecution, many gaps remained, especially in areas related to domestic violence and services for victims. Little progress had been made in many of the member states (Council of Europe, Explanatory Report, retrieved 2/18/2013). The Council of Europe then decided to renew its commitment to the eradication of violence against women and domestic violence through a large-scale campaign on the issues between 2006 and 2008. Again, while the campaign was acknowledged by many groups as important in bringing to light best practices and initiatives in many states, the magnitude of the problem remained. The Council came to the conclusion that a more extensive and binding framework was needed. Following a feasibility study by the Council's European Committee on Crime Problems (CDPC) in 2008, a multi-disciplinary committee, known as the CAHVIO (Ad Hoc Committee for Preventing and Combating Violence against Women and Domestic Violence) was established to create a set of legally binding standards that would cover both the issues of violence against women and domestic violence. The Convention on Preventing and Combating Violence against Women and Domestic Violence was then adopted by the Committee of Ministers on April 7, 2011 and opened for signature in May of that year.

As of March 2013, twenty-five member states have signed, and three countries, Turkey, Portugal, and Albania, have ratified the document (<http://www.conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=210&CM=&DF=&CL=ENG>, retrieved, 3/9/2013). The Convention will enter into force once ten countries, eight of which must be members of the Council of Europe, have fully approved the document. Members of the Council of Europe also appeared at the United Nations Commission for the Status of Women meetings in New York to promote the Convention where it was hailed by

United Nations representatives as "as an efficient and practical tool for governments to prevent and combat violence against women and domestic violence....a model for national and regional legislation and policies" (Council of Europe website, retrieved 3/9/2013).

The coming into force of the Treaty of Lisbon of the European Union in 2009 also opened the door for even greater cooperation between the Council of Europe and the European Union by allowing the EU itself to sign on to Council Conventions. The Convention has since been presented to the EU for consideration and is currently under debate in European Union bodies. The Convention on Preventing and Combating Violence against Women and Domestic Violence therefore becomes an interesting test case for understanding the convergence of policy positions and creating a binding legal framework which both the EU and the Council will use. Examining the statistical distribution of words regarding gender, violence against women, domestic violence and the Convention before and after its adoption can help us understand how durable the dialogue about these issues may be and to what extent leaders will continue to find these issues important.

III Data

The official languages of the Council of Europe are English and French, and the European Union currently translates all its documents into the various languages of its member states, including English. Since both organizations use English as an official language, for purposes of consistency and convenience, we used the English translation of all documents, including the Istanbul Convention.

The Council of Europe data was obtained by downloading speeches from the Committee of Ministers at www.coe.int/t/cm/WCD/fulltextSearch_en.asp#. We queried Keywords: speeches

between the dates 01/01/2008 and 01/15/2013. The data was then filtered to ensure only English full text documents resulting in a total of 251 documents between the dates: 8 January 2009 and 15 January 2013 (only four documents were obtained for the year 2013).

The European Council data was obtained by downloading documents from: www.consillium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/. This resulted in 849 documents which were then filtered to include only those from the European Council whose date was between 1 January 2009 and 15 January 2013. This resulted in 653 documents between the dates 6 October 2009 and 8 May 2012. No documents prior to and after this were within the downloaded set. Careful filtering also insured that no Council of the European Union or European Parliament documents were included.

Table 1: Number of documents in the datasets broken down by year

Year	Council of Europe	European Council
2009	67	13
2010	65	258
2011	56	267
2012	59	106
2013	4	0
Total	251	653

Table 1 shows the number of documents between 2009 and 2013 for each of the datasets. The difference in number of documents for each group is partly due to the difference in frequency of meetings, numbers of speeches, and minutes. We believe the number of documents is more than adequate for analysis in each cast.

IV Methods

In their introduction to a special issue of *Political Analysis*, Monroe and Schrodt (2008) noted that text can be an important 'artifact of political behavior'. With recent developments in the availability of documents on-line and computer programming technology, automated content analysis, as a methodology that can be applied in political science research, has become more feasible. Recent uses of such methodology can be seen in the work by Habashi, Driskill, Lang, and DeFalco (2010); Grimmer, 2008; and Laver, Michael, et. al., 2003. Wesley (2010) cautions though that using quantitative as well as qualitative methods to content analysis requires attention to the authenticity or believability of the interpretation of a document, and impartiality of the analysis.

We analyze the documents on two levels. One based on their similarity to the convention and the other to determine the topics that were being referred to in the documents. Due to the number of documents in the European Council and Council of Europe datasets, we bucket the documents into quarters based on their date and then analyze the documents within the bucket. This provides analysis of discourse over a date range rather than at the individual document level.

To determine the similarity of the documents to the convention, we use a vector-based method consisting of three steps. In the first step, we extract *ngram* features from the Istanbul Convention, specifically unigrams, bigrams and trigrams. Ngrams are defined as a contiguous sequence of N content words that occur in some proximity to each other in a document. For example, consider the phrase:

Among the international human rights treaties

The unigrams in this phrase are: *among, international, human, rights* and *treaties*. The bigrams, an ordered sequence of two content words, are: *international human, human rights,* and *rights treaties*. Notice that *among the* is not considered a bigram in this example because it contains the non-content word *the*. The trigrams, an ordered sequence of three content words, are *international human rights* and *human rights treaties*. We use these ngrams as features representing the general content of convention.

In the second step, we create a feature vector for each document based on the ngrams extracted from the Istanbul Convention where each element in the vector is either a 0 or the frequency of the word occurring for unigrams and the Log Likelihood Ratio (Dunning, 1993) for bigrams and trigrams. The Log Likelihood Ratio, discussed in more detail below, has been widely used in natural language processing (Pedersen, 2001; Korkontzelos, et al 2009).

Figure 1 shows the vector using a toy example consisting of the ngram features from above and a “set of documents” in a bucket consisting of the phrase: *conformity with the international declaration of human rights*.

Figure 1: Feature vectors for the Istanbul Convention and the documents in a single bucket

Feature	Convention Vector	Bucket Vector
Among	12	0
International	19	10
Human	23	18
Rights	23	18
Treaties	8	0
international human	13.4	0
human rights	15.6	22.3
rights treaties	13.4	0
international human rights	23.4	0
human rights treaties	25.2	0

In the third step, we compare each constitutions vector with the Convention vector using the cosine similarity measure. Cosine similarity measures the degree of similarity between two vectors by calculating the angle between them. The closer the angle the more similar the two documents are. The measure is formally defined as:

$$\text{similarity}(A, B) = \cos \frac{A \cdot B}{\|A\| \|B\|}$$

Using feature vectors to represent documents has a long history in information retrieval and Natural Language Processing (Turney and Pantel, 2010). They were first used by Salton (1971) in document retrieval to rank a set of documents based on a user's query. In this method, a vector was created for each document and the users query. The documents were ranked based on their similarity score and presented to the user. The cosine similarity score between a document's vector and the vector of the users query indicated the relevance of a document to the query. This type of method has been extended and applied to document clustering (Manning et al, 2008), document classification (Manning et al, 2008) and document routing (Chu-carroll and Carpenter, 1999). The underlying assumption in this method is that the vector captures to some degree the meaning of the document.

The similarity score provides a quantitative score of the similarity between the discourse in the documents and the convention. It does not tell us what the actual discourse within those documents. To identify the relevant topics being discussed of a set document within the specified date range we use the Log Likelihood Ratio.

The Log Likelihood Ratio is a "goodness of fit" statistics that was first proposed by Wilks (1938) to test if a given piece of data is a sample from a set of data with a specific distribution described by a hypothesized model. It was later proposed by Dunning (1993) as a

way to determine if the words in an observed ngram come from a sample that is independently distributed; meaning do the words in the n-gram occur together by chance. Therefore, we can then describe the measure as the ratio between how often an ngram actually occurred in a corpus compared to how often it would be expected occur. The Log Likelihood is calculated based on the marginal totals of the words in the ngram occurring together and independently. For example, for bigrams the marginal totals can be seen in the contingency table in Table 2, these can be extended for n-grams where $n > 2$ (McInnes, 2009).

Table 2: Contingency Table for Bigrams

	word2	word2	Totals
word1	n_{11}	n_{12}	n_{1p}
word1	n_{21}	n_{22}	n_{2p}
Totals	n_{p1}	n_{p2}	n_{pp}

With the contingency table notation, the Log Likelihood can then be formally defined as:

$$G^2 = 2 * \sum_i^j n_{i,j} * \log\left(\frac{n_{i,j}}{m_{i,j}}\right)$$

where $n_{i,j}$ are your observed values from the contingency table and $m_{i,j}$ are the expected value which are calculated as follows:

$$m_{i,j} = \frac{n_{i,p} + n_{p,i}}{n_{p,p}}$$

A Log Likelihood score reflects the degree to which the observed and expected values diverge. A score of zero implies that the data fits perfectly into the hypothesized model and the

observed values are equal to the expected. Therefore, the higher the score, the less likely the tokens in the ngram appear correspond to the hypothesized model. The intuition is that terms describing the content of the document will appear more often together than separate and that they will occur frequently in the same context across documents.

V Results

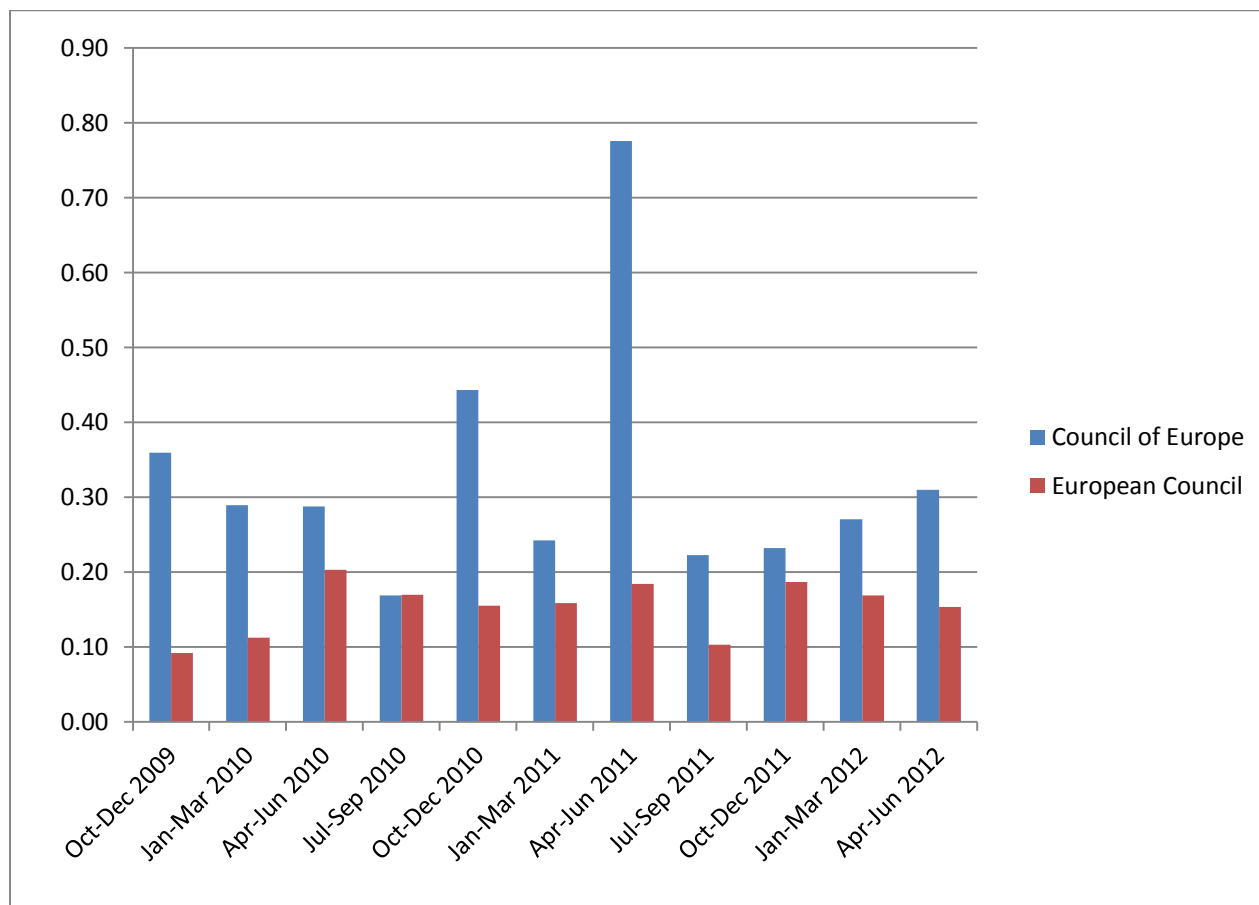
In this section, we discuss the results of our findings and attempt to answer the questions:

1) To what extent is discourse (words) about preventing and combating violence against women appear in the speeches of key political figures of the European Council and the Committee of Ministers and minutes of these institutions prior to the opening for signature and ratification of the Convention? 2) To what extent has reference to the Convention been prevalent in the dialogues of key European institutional leaders after the opening for signature and ratification of the Convention? and 3) How effective is automated content analysis in helping us answer these questions?

Table 3 shows the similarity score between documents in the specified time range and the convention for both the Council of Europe and the European Council.

The Council of Europe results show that discourse similar to that of the convention was the highest during the time frame in which the convention was adopted and opened for ratification (May 2011). The results leading up to that time period show that there was an increase during the October-December 2010 time period but dropped off until the time period in which the convention was ratified.

Table 3: Similarity scores of documents and Istanbul Convention broken down by date range



The Council of Europe shows an upward trend beginning after the initial drop after the opening for ratification. Although we do not have sufficient data yet for 2013, we would expect that increase to continue as a run up to the participation of Council of Europe officials at the United Nations Commission on the Status of Women Meetings in March of 2013 where the Convention was discussed.

Looking at the results for the European Council, we see that the similarity scores are never as high as those of the Council of Europe. Prior to the opening of the Convention, this is likely because the discussions of the European Council of the EU were prioritizing other topics. The Convention had yet not been presented and introduced to their bodies for consideration prior

to April 2011 even though the EU certainly had its own continuous approaches to violence against women in its other institutions. Another interesting observation is that the European Union similarity scores seem to decrease after December 2011. These results would suggest that again other topics were taking priority in the European Council over discussions of the Convention and its ratification. It is probably too soon to tell whether this decrease signals that European Union may not endorse the Convention or whether the endorsement of the EU as a whole may just take more time.

The European Council results show that the level of similarity compared with the convention remained constant through the time leading up to the opening of the convention for ratification and after, whereas the Council of Europe shows a greater degree of divergence across the time periods and has a higher overall similarity score.

We believe that this is because the Council of Europe's primary focus is human rights and because the Convention was initiated by the Council. The European Council has had a much broader agenda over time, and although issues of gender policy have been important, the European Union has multiple topics of concern, including most recently the European economic crisis. This can be seen when viewing the top five topics for each of the datasets in Appendix II.

However, the consistency of words, as shown in Appendix I, and policy dialogue in both the Council of Europe and the European Council indeed suggest a growing policy consensus around the importance of the topic of human rights and the issues of domestic violence and violence against women in particular leading up to the signing of the Convention. Table 4 shows the number of features identified in the documents for each of the date ranges. The results coincide with the similarity scores indicating that the Council of Europe documents contained

terminology more closely matched to the convention than the European Council, although aspects were discussed by both parties.

Table 4: Number of features found in documents

Date range	European Council	Council of Europe
Oct-Dec 09	11	116
Jan-Mar 10	6	101
Apr-Jun 10	23	120
Jul-Sep 10	7	122
Oct-Dec 10	21	85
Jan-Mar 11	20	62
Apr-Jun 11	26	9
Jul-Sep 11	10	101
Oct-Dec 11	30	140
Jan-Mar 12	23	123
Apr-Jun 12	14	96

VI Analysis and Conclusions

Our research crisscrosses areas of academic studies on European policy discourse, European institutional gender mainstreaming, and policy creation. We placed the Council of Europe's Convention on Preventing and Combating Violence against Women and Domestic Violence in the historical context of the Europeanization of gender policy reform and used automated text analysis to explore to what extent words (such as human rights, women's rights, gender, domestic violence, violence against women) appeared in the speeches of key political

leaders within European institutions before and after its opening for ratification. By comparing policy discourse in both the European Union and the Council of Europe, we found that debates over gender policy reform especially with respect to domestic violence, violence against women, human rights and the creation of more potent and binding agreements have been present in both institutions over time, especially in the Council of Europe. The results of automated text analysis help us understand that policy consensus on addressing gender violence has been emerging over the last five years in both institutions.

However, perhaps what is more interesting is that using automated text analysis can help us see whether such consensus and privileging of policy ideas is sustained or not. Following the opening of the Convention for signature and ratification, for example, the similarity of the documents with the Convention on violence against women, domestic violence, and human rights leveled off in political discourse or even decreased especially within the European Council of the European Union. This lack of discourse after May 2011 could signal a slowing of momentum around these issues or foreshadow a slower ratification process for the Convention itself by individual European states.

Our research here has only focused on the political discourse at the level of European institutions. As yet, we have not examined the domestic political discourse of local, individual leaders in comparison to European institutional dialogue. We also have not considered here other significant social, cultural, economic or political factors that may inhibit either the ratification of the Convention by individual member states or the implementation its key provisions. We do not explore the "power of Europe" in pushing forward change in a national policy or whether domestic policy patterns will be affected at all by the Convention. For now, that is beyond the scope of this paper but remain interesting topics for future research.

In the future, we would like to look more closely at the French and English speaking countries political documents at the state level to analyze the dialog of the discussion on whether to ratify the convention (or not). This analysis would allow us to look at the connection between domestic political discourse and the European institutional political discourse and to see the extent in which the two discourses (domestic and institutional) are the same/different.

The ngrams used in this work consisted of contiguous sequences of words. Therefore, *woman's equality* and *equality of women* are considered two different ngrams. In the future, we would like to expand this to allow for *windowing* which would include non-contiguous ngrams within a specified window size. For example, equality of women would render the ngram *equality women*. Although, this generalizing removes word order which may play a key role in understanding the context of the documents?

Multiple theoretical and methodological approaches can increase our understanding of the synergy of European institutions and the emergence of policies on violence against women and domestic violence in particular as well as gender policy reform in general. Automated text analysis is just one possible tool in that mix which may help us compare the frequency of policy ideas and political discourse in both the European Union and the Council of Europe over time.

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Appendix I

Top 5 convention features in the documents

date range	European Council	Council of Europe
Oct-Dec 0	law_enforcement	human_rights
	action_against	co_operation
	gender_equality	human_rights_institutions
	personal_data	international_co_operation
	human_rights	effective_co_operation
Jan-Mar 10	national_parliaments	human_rights
	co_operation	human_rights_institutions
	without_delay	co_operation
	co_ordination	parliamentary_assembly
	united_nations	national_human_rights
Apr-Jun 10	human_rights	co_operation
	co_operation	human_rights
	international_co_operation	international_co_operation
	civil_society	law_enforcement_agencies
	national_parliaments	parliamentary_assembly
Jul-Sep 10	human_rights	parliamentary_assembly
	co_operation	co_operation
	civil_society	human_rights
	national_parliaments	having_regard
	measures_taken	action_against
Oct-Dec 10	human_rights	human_rights
	private_sector	human_rights_institutions
	national_parliaments	co_operation
	civil_society	measures_taken
	co_operation	where_appropriate
Jan-Mar 11	human_rights	human_rights
	private_sector	parliamentary_assembly
	civil_society	co_operation
	having_regard	international_co_operation
	united_nations	civil_society
Apr-Jun 11	human_rights	human_rights
	private_sector	necessary_legislative
	united_nations	co_operation
	co_operation	violence_against_women
	without_delay	measures_taken

Jul-Sep 11	law_enforcement	human_rights
	private_sector	parliamentary_assembly
	civil_society	co_operation
	national_parliaments	recommendation_cm_rec
	united_nations	international_co_operation
Oct-Dec 11	human_rights	human_rights
	civil_society	human_rights_institutions
	private_sector	co_operation
	where_appropriate	awareness_raising
	national_parliaments	parliamentary_assembly
Jan-Mar 12	human_rights	human_rights
	national_parliaments	parliamentary_assembly
	united_nations	co_operation
	united_nations_convention	human_rights_institutions
	without_delay	international_co_operation
Apr-Jun 12	human_rights	human_rights
	united_nations	co_operation
	civil_society	international_co_operation
	where_appropriate	effective_co_operation
	having_regard	human_rights_institutions

Appendix II

Top 5 topical features in the documents

Date Range	European Council	Council of Europe
Oct-Dec 09	foreign affairs	human rights
	climate change	national minorities
	external action	co operation
	security policy	persons belonging
	action service	framework convention
Jan-Mar 10	climate change	human rights
	broadcast quality	sexual orientation
	informal meeting	gender identity
	economic growth	co operation
	remarks made	minority languages
Apr-Jun 10	task force	national minorities
	climate change	persons belonging
	latin america	framework convention
	lisbon treaty	co operation
	central bank	minority languages
Jul-Sep 10	task force	parliamentary assembly
	economic governance	higher education
	western balkans	co operation
	regional cooperation	protected areas
	united states	cm notes
Oct-Dec 10	task force	human rights
	economic governance	respondent state
	climate change	cm resdh
	western balkans	resolution cm
	broadcast quality	minority languages
Jan-Mar 11	southern neighbourhood	human rights
	financial stability	framework convention
	task force	persons belonging
	stress tests	national minorities
	human rights	asylum seekers
Apr-Jun 11	middle east	minority languages
	southern neighbourhood	periodical report
	free movement	evaluation report
	plus pact	human rights
	nuclear safety	national minorities
Jul-Sep 11	plenipotentiary head	venice commission
	polish presidency	human rights

	financial stability	minority languages
	eastern partnership	parliamentary assembly
	economic growth	national minorities
Oct-Dec 11	financial stability	minority languages
	fiscal discipline	human rights
	human rights	polish authorities
	sovereign debt	periodical report
	short term	racial discrimination
Jan-Mar 12	single market	human rights
	financial stability	periodical report
	fiscal compact	minority languages
	informal meeting	parliamentary assembly
	fiscal consolidation	maronite arabic
Apr-Jun 12	single market	periodical report
	human rights	romanian authorities
	fiscal consolidation	human rights
	united nations	minority languages
	debt crisis	co operation