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HOW TO ANALYZE BIG DATA: A STUDY ON UNDERSTANDING WHAT THE TURKISH THINK ABOUT SYRIAN REFUGEE CRISIS¹

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ABSTRACT

The term big data is becoming an essential part of our lives since it is one of the pioneering components of the communication process providing us with real-time data and insights. However, it is a difficult task to process it. What is important at this stage is to create little stories out of big data and try to make them as meaningful as possible, say the experts.

This paper seeks ways of making meaningful data out of the cloud called Syrian refugees crisis. The piece of news selected mentions Alan Kurdi in the headline. Comments made by Turkish readers in top online Turkish newspapers are evaluated according to the Perception Analysis Model (PAM) created. Comments used in this study are taken from Hurriyet, Sabah and ensonhaber.com and they were all under the first pieces of news about the boat which had Alan dated 02.09.2015.

Perception Analysis Model includes three categories: emotions, attitudes, and behaviour are all examined through the categorical content analysis technique that is brought together to be able to make a better understanding of Turkish people's way of thinking. This model includes working with the comments through coding. All the comments are coded in three different categories.

Keywords: Big Data, Big Data Analysis, Perception Analysis Model

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BÜYÜK VERİ ANALİZİ: TÜRKLERİN SURİYELİ MÜLTECİLER HAKKINDA NE DÜŞÜNDÜĞÜNE DAİR BİR ÇALIŞMA

ÖZET

Büyük veri, gerçek zamanlı veri ve bu veriye dair öngörü sunması açısından günümüzde iletişim sürecinin en önemli bileşenlerinden biri haline gelmiştir. Ancak bu veriyi analiz etmek oldukça zordur. Bu nedenle uzmanlara göre yapılması gereken büyük veriden küçük parçalar alıp bu veriyi derinlemesine analiz etmektir. Bu çalışma bizlere dünyanın verisini yapılandırılmamış bir şekilde sunan büyük veriyi anlamlandırma girişimi olarak değerlendirilebilir.

Bu çalışma Suriyeli mülteci krizi şeklinde isimlendirilebilecek büyük veri bulutunun anlamlandırılma sürecidir. Suriye'yi terk eden mültecilerin çoğu için yeni yaşamlarının başlama noktası olan Türkiye'de üretilen sosyal medya içeriğinin anlaşılması büyük önem taşımaktadır. Bu amaçla başlığında Aylan Kurdi geçen haberler seçilmiş ve bu haberlere yapılan okuyucu yorumları bu çalışma için yaratılmış Algı Analizi Modeli (PAM)'ne göre incelenmiştir. Bu çalışmada analiz edilen yorumlar Aylan'ın bulunduğu botun batmasıyla ilgili 02.09.2015 tarihli haberlere internet sitesinde yer vermiş Hürriyet, Sabah ve ensonhaber.com gazetelerinden alınmıştır. Bu gazetelerin Türkiye'ye dair bir örneklem sunduğu söylenebilir. Algı Analizi Modeli her bir yorumu üç kategoride değerlendirmektedir: duygular, tutum ve davranış kategorileri Türklerin konuya dair düşüncelerini kategorisel içerik analizi yoluyla daha iyi anlayabilmek için ayrı ayrı incelenmiştir.

Anahtar Sözcükler: Büyük Veri, Büyük Veri Analizi, Algı Analizi Modeli

INTRODUCTION

There have been many collective and individual migrations throughout history and some of them still continue. Not only the ones who migrate but also the ones who live in the migrated areas do encounter some social, political, cultural and economical problems as a result of migration. The fact that it is impossible to

ignore these migrations has become even more visible since Syrian refugee crisis became an issue for all the world. With this crisis, Turkey's position as a country that is migrated to and from has been recognized in the international arena.

Internet is a crucial source of information in this process and with its many communication tools such as social media applications, online newspapers or forums, it serves as a means of communication, information, and interaction. With this recently created public space, people can openly share their emotions and ideas on refugees without any agents in between. This intense data flow causes an environment of distrust; however, it also gives way to having the right insight in the right time. In such a context, the responsibility of the communicator is to prevent the accumulation of data and make meaning out of the data that is present and ready-to-use with the research he conducts. This study aims to reflect Turkish people's perception of Syrian refugees correctly and in a meaningful way. To do this, online newspapers which give their readers the opportunity to reflect their emotions, ideas, and even behaviour through the comments sections are chosen. Analysis of these comments could make it possible to understand what Turkish people feel and think about the current situation.

There have been many studies on international migration, refugees, and immigrants in Turkey. For instance, Kolukırk (2014) emphasizes that Turkey has a certain geographical position in international migration route and this makes the country a center of attraction. The politically unstable environment in neighbour countries encourages migration to Turkey and causes a population mobility. According to this study, when it comes to local practices, there are inadequacies despite the efforts of improving refugees' living conditions. The study concludes that international cooperation and sharing the responsibility internationally is to be reconsidered and experience Turkey has on migration movements since it has been exposed to this mobility is to be valued. In another study, Deniz (2014) tries to reveal Turkey's position in the problem of international migration. Ünal (2014), in

a similar study, aims to detect what Turkish people's approach to migration and immigrants is. In this study, the author examines blogs and forums and concludes that people have an otherization perspective reflected as a exclusionary and depreciatory discourse. Boyraz (2015) studies the tent cities in Turkey founded for Syrian refugees. Tunç (2015) compares the behaviour of immigrants to Syrian immigrants in Turkey and the behaviour of migrated society to Turkish society in his study titled as "Immigrant Behaviour and Its Social Effects: A Study on Syrians in Turkey". Seçim (2015) examines the comments in English made under the video news on Syrian refugees by euronews.com. This study concludes that likes of the comments increase as the hate speech against Muslims, feelings of violence and nationalism increase. In this hate speech, EU citizens and even governors who welcome refugees are also targeted. Another target in these comments is Turkey criticized due to the fact that it is home to too many refugees. Yıldırım and Yurtdaş (2016) analyzes how Syrian refugees are portrayed in the most popular dictionary sites in Turkey, Ekşisözlük and Uludağsözlük. As a result of their research seven different repertoires which are threat, othering, Muslim, empathy, normative refugee, administration problem, economic burden, were defined. The reason why there are even more studies on refugees lately is probably due to the fact that Turkey is facing the biggest refugee crisis of its history. This study aims to analyze Turkish people's perception on Syrian refugees through the comments made under the refugee news on online newspapers. The piece of news that is selected is the piece which mentions Alan Kurdi, the little boy drowned in the sea while trying to cross over to Greece, for the first time since this news made the crisis impossible to ignore for all the world.

1.THE CONCEPT OF BIG DATA

While it is possible to see the consequences of the information society easily, the information itself is harder to detect. Half a century after computers entered our lives, today, data has started to accumulate turning the world into a fast growing

and changing environment full of information. Such a change in scale causes a qualitative and quantitative variation and in the years 2000s fields of science such as astronomy and genomics started to use the term *big data*. Today, this term is used nearly in all the areas. (Mayer-Schönberger and Cukier 2013: 14). Gary King, who is a director of Harvard's Institute for Quantitative Social Science, said that "It's a revolution. We're really just getting underway. But the march of quantification, made possible by enormous new sources of data, will sweep through academia, business and government. There is no area that is going to be untouched." (Lohr, 2012).

Big data does not have an exact definition and it has become ubiquitous (Ward and Barker, 2013). Mayer-Schönberger and Cukier, (2013: 14) state that big data refers to things that one can do at a large scale that cannot be done at a smaller one, to extract new insights or to create new forms of value, in ways which change markets, organizations, the relationship between citizens and governments and more. Ward and Barker (2013) attempt to collate the various definitions and stated that despite the range and differences of definitions there are some similar points. All definitions make at least one of the following assertions:

Size: the volume of the datasets is a critical factor.

Complexity: the structure, behaviour and permutations of the datasets is a critical factor.

Technologies: the tools and techniques which are used to process a sizable or complex dataset is a critical factor.

Based on from here they defined big data as "a term describing the storage and analysis of large and or complex data sets using a series of techniques including, but not limited to: NoSQL, Map Reduce and machine learning."

Big data is about three big changes of mind that are interrelated. First of these is the skill to analyze more data instead of small data sets. Second is the will to accept the real world normal distribution of data. Third big change is taking correlations into consideration instead of searching for the causality that is difficult to find

(Mayer-Schönberger and Cukier 2013: 27). With all these changes, what is really crucial is to manage this process effectively. Moreover, in their studies which states that big data is management revolution McAfee et al. (2012) emphasized that Pablo Picasso might have been thinking domain experts when he stated that computers are useless and can only give you answers. Despite the fact that big data is an important revolution, it does not eliminate the need for vision of human insight. The need for vision of human insight could be satisfied thanks to fragments of big data. While big data is easy to understand but difficult to process, fragments of big data are easy to understand and easy to process which is exactly what people need to be able to make sense out of big data and decide whether human insight is to be trusted or not in big data studies.

Internet offers valuable resources for people to find information relevant to their current information needs. Especially social networking sites, bookmarking systems and microblogging systems are a new generation web-based applications. In these platforms, content is generated by users and shared with others. (Zoltan and Johann 2011: 1). In order to perform data mining, say Steiner, et al (2013: 69), a statistically significant amount of microposts is necessary. Radovanovic, et al. (2015) postulated that

social dynamics facilitate new forms of communication structures in social lives. One of those structures present Microposts – each a small, brief message, theme or a single thought, quick and easy to publish, and that, posted from a variety of platforms and by very large numbers of individuals with as many viewpoints and interests, collectively provide a rich source of information and opinion about a range of topics.

Microposts let users to express ideas and opinions dynamically although in a very limited space. These datas provide relevant clues about the judgment about products, events, services etc (Vanin et al 2013: 635). Radovanovic and Ragnedda (2012: 12) stated that communicative dynamics established with the web 2.0

paradigm change and the development of microblogging culture and utilization of social media, social networking sites using mobile communication encouraged users to practice in everyday life. All these forms have elements of communicative discourse to allow users to get socially engaged via brief, non-formal messages that have meaning and within their context denote something: interaction, connected presence and fostering and maintaining connections.

Different social networking sites provide an expressive medium to share with others our feeling, needs, current status or simple statements. They allow their users create microposts directed to all, or a subset of their contacts (Radovanovic and Ragnedda 2012: 10, Steiner et al 2013: 69). Similar to social networking sites, web based online newspapers also give users to generate content to a certain extent. Comments users make under pieces of news are considered as microposts through which people share their emotions and ideas with other users, society, government, organizations etc. This study aims to analyze the content of microposts users shared on Syrian refugee crisis.

2.TURKEY AND THE REFUGEE CRISIS

Many conflicts and civil wars around the world have made many people leave their homelands. Today, one of the greatest problems Turkey is facing is refugees like many other countries of the world. Civil war that started in 2011 in Syria caused many deaths and when the civil war spread throughout the country many Syrians were forced to move. While the first countries to get affected were Turkey and Egypt, the neighbour countries, in the first years of the war, other countries could not ignore this war anymore when refugees scattered through the European continent.

United Nations High Commissioner for Refugees (UNHCR) state that refugees migrating to neighbour countries were above 4 million and this makes Syrian refugee crisis the biggest refugee crisis in the world (UNHCR, 2015, <http://www.unhcr.org/turkey/home.php?content=648>, Access Date: 06.06.2017).

The country which received the biggest number of refugees is Turkey with 2,287,360 refugees as of 7 December 2015. 263,677 of this number is registered in camps whereas 2,023,683 of them live in the country outside camps (UNHRC, 2016, http://www.unhcr.org/turkey/uploads/root/november_-_external_update_2015.pdf, Access Date: 07.12.2017).

Bariş Karasu, member of Human Rights Joint Platform, explains that Turkey faces a two dimension problem. Firstly, there is the problem of Syrians living in camps or camp-like places where government organizes and controls more. Second issue is the problem that there is a big population of refugees outside camps (Depeli and Oğuz 2015: 244). When this situation is considered from the viewpoint of refugees, it is possible to say that they experience serious problems during the escape and also in the countries they flee to. Syrians who have to flee from their homeland have secured their lives taking shelter in neighbour countries taking advantage of international law. However, as countries they refuge to could not meet all their increasing needs, refugees left the camps they were placed in search of a better life. Among the places they could refuge to, European Union has become one of the best options with the opportunities it presents to refugees. Hence, refugees have started to enter European Union countries using legal or illegal ways (Seçim 2015: 135).

According to the Turkish Coast Guards Command, between 1-30 November 2015, 9,244 people were rescued while trying to leave Turkey irregularly through Aegean and Mediterranean Seas and the majority of the people apprehended claimed to be Syrians (63%), Afghans (21%), Eritreans (2%) and from Myanmar (3%). They use cargo ships, inflatable boats, fishing boats and private boats for trying to cross (UNHRC, 2016, http://www.unhcr.org/turkey/uploads/root/november_-_external_update_2015.pdf, Access Date: 07.12.2017). One of these boats was the one that sank while trying to cross over to Greece from Bodrum, Mugla. 11 people

died in this accident in 02.09.2015 and a Syrian boy that drowned and washed up on the beach made it to the headlines making refugee crisis an issue for all the world. The photograph of 3-year-old Aylan was in breaking news everywhere and it is still one of the most striking symbols of the Syrian refugee crisis today. This study aims to analyze the perception of Syrian refugee crisis in Turkey through this photograph.

3.AIM AND METHOD

Aim and method of the study within the framework of Syrian refugee crisis are given below.

3.1.Aim

The aim of this study is to find out what Turkish people think about the Syrian refugee crisis. Today, to most of us, one of the biggest problems is the refugee crisis which we are informed via TV, internet, and new media tools. New media is one of the most visible platforms where we can express our ideas, including our ideas about the refugees. This never ending process creates an online cloud of so called *information* which doubtlessly includes mostly our thoughts. This study can well be considered as an attempt to make meaning of the new media that present us nothing but the world in an unstructured way.

The study seeks new ways of structuring fragments of big data and make an analysis of the rather vague information cloud called *Syrian refugees crisis*. Since Turkey is the starting point of many refugees' new life after leaving their home town Syria and these two countries have many common values such as culture, tradition, religions, and history, what Turkish people think could be an important indicator. To make the analysis, comments made by ordinary people under the news of Syrian refugees are taken into consideration and analyzed. With such an aim, the research questions raised in this study are as follows:

R.Q.1. What is the tone of the comment?

R.Q.2. Who is the commentator talking to? Who does the commentator think the responsible / the one to blame for is?

R.Q.3. How does the commentator deal with the situation?

3.2.Method

The method used in this study is categorical content analysis which may be seen as an effective way to process unstructured big data.

Although the piece of news selected was supposed to be the ones that mention Alan Kurdi in the headline, after further study, it was seen that the very first piece of news mainly titled as *Refugees Drowned in Mugla* had more comments to be analyzed. Hence, the comments analyzed here belong to the first news that mentioned *The Little Boy in the Shore* and had photos of him.

At the very beginning of the study, websites of the five top selling newspapers were chosen and the comments under the aforementioned pieces of news were studied. However, it was seen that some of the websites had quite few comments. As a further method, the top sites of Turkey were decided via Alexa.com. From the first 25 websites clicked in Turkey, news sites were chosen; these sites were *milliyet.com.tr*, *hürriyet.com.tr*, *sabah.com.tr*, *haber7.com*, *ensonhaber.com*, and *sozcu.com.tr*. These websites mostly belong to newspapers except *haber7.com* (which is a part of press group) and *ensonhaber.com*.

All these websites were studied in detail for comments and after certain study it was found out that *Milliyet*, *Haber7* and *Sozcu* either had problems with archives or did not have any comments at all. This may be due to the fact that the website directs you to the Facebook page of the newspaper. This means that the editors prefer online activity on the Facebook page and such comments are to be excluded in this study whereas they can be considered within the framework of a future study. In short, comments used in this study are taken from *Hurriyet*, *Sabah* and *ensonhaber.com* and they were all under the first pieces of news about the boat

which had Alan dated 02.09.2015. It is possible to say that these newspapers represent different opinion groups of the country and we can have a good sample representing all Turkey.

In total, 735 comments from 3 different online newspapers were analyzed according to the Perception Analysis Model (PAM) which will be used for this study for the first time. In the analysis process, many comments were excluded since they did not contain any data relevant to our study or they were simply replies to other users' comments and did not reflect any ideas or emotions. PAM includes three categories: emotions, attitudes, and behaviour are all examined through the PAM that is brought together to be able to make a better understanding of Turkish people's way of thinking. This model includes working with the comments through coding. All the comments are coded in three different categories. The comments are coded separately by two different people and the results are compared. If need be, that is if there is a disagreement in either of the categories, a third person is consulted for a final decision.

Firstly, emotions are analyzed according to the *positiveness* and *negativeness*. Secondly, the comments are coded according to attitudes. Here, Allport's terms *ingroup love* and *outgroup hate* are used. Here it is important to see whether Turkish people see Syrian refugees ingroup or outgroup (Allport 1954). However, throughout the study, it is seen that it is nearly impossible to categorize all the comments into two categories only. As a result of further examination on the topic, it is seen that some sub-categories have been created such as *ingroup bias* and *outgroup favoritism*. These categories are also added to the attitudes category.

Thirdly, the way Turkish readers react to the comments is analyzed. Here, crisis coping strategies of Duchacek are used since this can also be considered as a crisis. These strategies are *action coping*, *rational thinking*, *positive thinking*, *emotional support*, *instrumental support*, *emotional venting*, *avoidance* and *denial* (Duhachek 2005).

The main aim of the study is to find ways of making meaning out of big data. Comments made on online newspapers is data ready to-be-processed and it may give us important hints about public opinion. The method used is categorical content analysis which may be seen as an effective way to process unstructured big data. Results of the study is quite important since it gives hints about what Turkish people really think about Syrian refugee crisis and if this research is repeated periodically, it could even be possible to see the tendency changing.

4.FINDINGS

The first research question analyzes the tone of the comment. In the 735 comments analyzed, it is possible to see that nearly every commentator reflects negativity. They are sad, upset or angry about the situation and the tone of their comments is negative. There is only one comment by one of the users that can be considered as positive. This user nicknamed Realisst made a comment like “He’s become an angel and he will make it to Heaven without any interrogation. I wish I was dead before adolescence”. Apart from this, there is not a single comment that has a positive tone and this shows that Turkish people were deeply sorry for what happened.

The second research question is *Who is the commentator talking to? Who does the commentator think the responsible / the one to blame for is?.* After analyzing the comments, it is possible to say that commentators mostly talk to the *other*. They mostly blame the others with whom the commentators disagree on many matters, especially the political parties they support. This causes an impossibility in categorizing the comments as either ingroup love or outgroup hate. After analyzing a certain number of comments, we saw that there was a need of adding two more categories like *ingroup bias* and *outgroup favoritism*. The need for adding the category ingroup bias comes from the fact that the matter of otherization in Turkey is at its peak nowadays and Turkish people are blaming each other even when the matter does not relate to Turkey directly. In all the comments (n=735),

158 of them, with a ratio of 21,4%, reflects ingroup bias where commentators blame either the government, the President, or the opposing party rather than Syrian political actors.

459 of the comments reflect ingroup love. Commentators think that Syrian refugee crisis is an inner problem and they mostly state that they are deeply sorry or upset for what happened. These comments mention refugee crisis as our problem and while commenting or making suggestions indicate an inner group idea. These comments constitute 62,4% of the total comments.

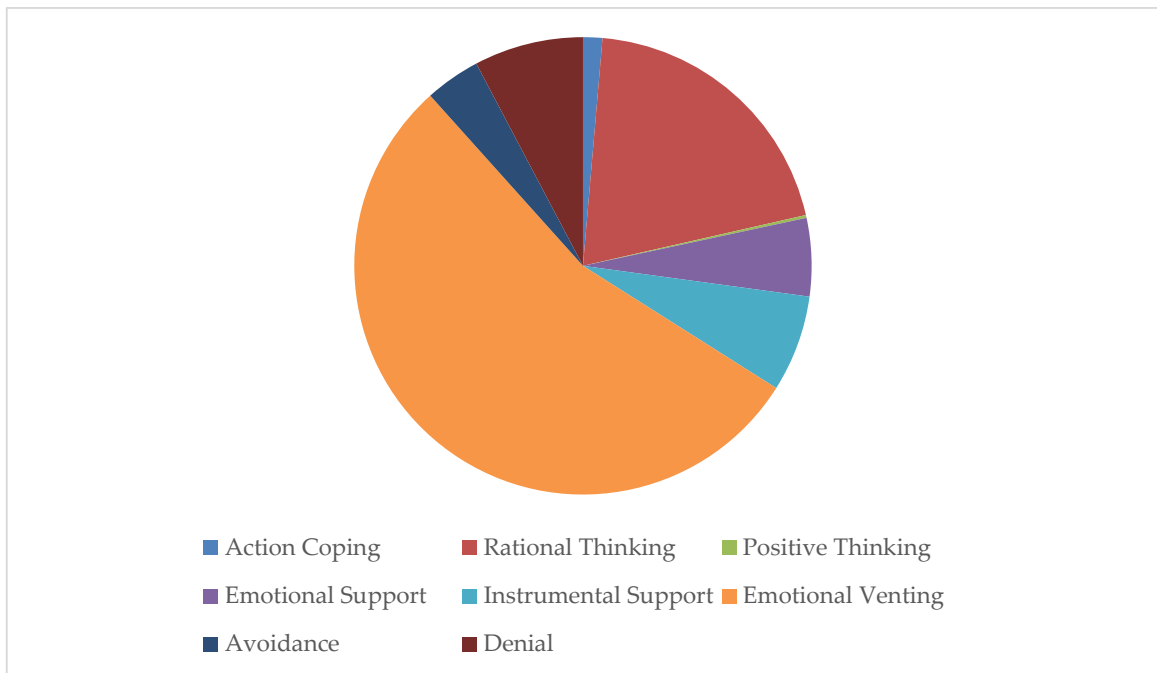
The comments that reflect outgroup hate are 32 comments with a ratio of 4.35%. These comments question *why refugees use Turkey as a bridge, why we do not have any borders, why refugees are escaping Turkey risking their lives, why they are keeping making such mistakes, why they cooperate with imperialist powers, why there are no refugees in other Muslim countries* etc. In these comments, the common point is that they all mention Syrian refugees as *they* and not *we* or *us*. It is possible to see that this time they are considered as the ones that do not belong to the group.

The last category in this analysis is outgroup favoritism which include the comments that reflect a certain feeling of consideration although commentators see the refugees as outgroup. The number of these comments is 86 (n=735) with a ratio of 11,7%.

The third research question deals with the crisis coping strategies looking for an answer to the question *How does the commentator deal with the situation?*. In this questions, the comments are categorized into 8 sections as *action coping, rational thinking, positive thinking, emotional support, instrumental support, emotional venting, avoidance* and *denial*. Action coping is a strategy used by 10 people whereas 147 commentators use rational thinking as a crisis coping strategy with a ratio of 20%. Positive thinking is a coping strategy used by only two people both of which reflect their happiness for the boy who turned into an angel. Emotional support is the crisis coping strategy of 41 people and instrumental support is reflected by 50

people. These supportive commentators offer their condolences or their ideas on how to solve the problem. Emotional venting is the crisis coping strategy used by 399 commentators with a ratio of 54,2%. The reasons for this emotional venting is various such as blame, guilt, disappointment and deep sorrow after seeing the photograph. Avoidance is reflected by 20 commentators whereas 57 people reflected denial as the crisis coping strategy they use. These people mostly reacted to the editors of the websites nearly begging them to remove the photographs. Here, the image of the little boy is also worth mentioning. Many comments are about the photograph and the little boy despite the fact that only in that boat 11 people died. It would not be wrong to say the photograph made the situation perceived as a crisis, hence, it not only served as a breaking news material but also effected all the people deeply urging them to take action.

Table 1: Crisis Coping Strategies of Commentators



CONCLUSION

This study uses Perception Analysis Model as a way to process the fragments of big data and it is possible to say that it functions as a working model. With the two categories added for the second research question, it is possible to say that data can be processed effectively.

The results of the study show that Turkish people are either angry, upset, or deeply sorry for what is going in Syria. They do not see this situation as a problem because there are many Syrians in Turkey, they are sorry for Syrians because they have had many problems from leaving their homelands to losing their homes and loved ones. This feeling of deep sorrow stems from the feeling of proximity. This proximity is historical, physical, and cultural apart from the fact that countries in this part of the world have always been frenemies.

62,4% of the comments reflect ingroup love and Turkish people's approach to this refugee crisis is like a problem of their own. It should also be taken into consideration that people have ingroup bias even when the matter does not directly stem from Turkey. A civil war going on in another country may be the reason why Turkish people blame each other and they seem to be ready to blame each other any time. This otherization in the country is visible even when analyzing the news about a little boy drowned while trying to cross over to another country. Commentators leave this aside and insult each other using every opportunity to criticize the other, the source of all the problems in the country and even in the world according to them. Such a result is quite worrying since it is possible to see these comments in different online newspapers that reflect different tendencies in the country.

As seen in the results of the third research question, the most frequently used crisis coping strategy is emotional venting. This may be the natural result of the otherization in the country causing people to react to everything in the form of an emotional outburst. However, the proximity between Syria and Turkey that stems

from historical, physical, cultural, and religious similarities do surely increase the intensity of the outburst. Many commentators state that they cannot sleep, they cry all the time, they cannot do enough for Syrian refugees who are our brothers. The number of the comments that do not care about refugees is nearly zero and even when commentators use the crisis coping strategies such as avoidance or denial, none of the comments have a tone like *they deserved it*.

Results of the study is quite important since it gives hints about what Turkish people really think about Syrian refugee crisis and if this research is repeated periodically, it could even be possible to see the tendency changing. Syrian refugee crisis is an ongoing issue that continues for quite a long time and it includes many events such as Turkey-Russia tension due to an aircraft. All these events surely affect what Turkish people think and it is important to see whether this feeling of ingroup love and emotional venting stemming from the feeling of brotherhood goes on. This refugee crisis is a matter of Turkish politics now and if the government needs to listen to the citizens to be able to improve a policy that is in line with its people, processing sharings on the internet is a good way to understand what people really think, it should be repeated periodically nonetheless.

A similar study can also be conducted within a wider framework that includes online platforms of international newspapers where people from all over the world can express themselves, that way a comparative study could also be possible. It would be quite interesting to see whether there is a difference in international commentators who do not have any proximity to Syrian refugees.

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