# Comparative Analysis of Disdain in Duets from Eurovision and Pop Idol Music: An Approach from Emotional Data Mining and Sentimental Analysis

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**Abstract.** The present paper discusses a research related to analyze Sociolinguistics using Atlas. Ti a tool that mine information of the structure and content of speech related with a sample of 51 duets or bands which sung in Eurovision or conform icons from Pop Culture which develop a performance related with disdain reflex the feeling of a couple with problems with the purpose of discovering hypostasis and parataxis, which consists of relation in formal and informal use of language induced by the relation with another people interfering in their relationship, this phenomena has been documented recently, but with few detailed research with truly information, for this purpose we record speeches from different songs in a repository recreating these social behavior, to realize a detailed sociolinguistics analysis. We propose a model to represent emotional data mining to understand the relationships of each song with its relative music.

Keywords Sociolinguistics, social simulation, modeling of societies.

#### 1 Introduction

Social Data Mining Systems allow the analysis of the society's behavior. These systems do that by mining and redistributing the information on computer files storing the social activity. Although, we generate two general questions to evaluate the performance of such systems: (1) is the extracted information of any value? And (2) is it possible to determine if a set of physical separated people can show a similar way of thinking about likes and preferences?

We made an analysis that provides positive answers for both questions. We live in an age plenty of information. The Internet offers endless possibilities. Web sites to experience, music to listen, chats rooming, and unimaginable products and services offering to the consumer an endless option varying in quality. People are experiencing difficulties to manage the information: they can not and do not have time to evaluate the whole options by themselves, unless the situation seriously forces them to do that. In this paper we try to describe how two groups of couples sing about disdain from different perspectives about a sentimental relationship, these songs have similar discourses from a similar perspective.

A task to manage information which several internet users must do is "the subject management", searching, evaluating and organizing information resources for a specific subject sometimes Users search for professional interest subjects, some other times just for personnel interest. Our approach to this problem combines social data mining with information about sociolinguistics. In the daily life, when people desire forming part of a social group, without having the knowledge to chose among different alternatives, they trust frequently on the experience and opinions of others.

They look for advice in their ethnic-social group, perspective of a couple in love or not, familiar with certain likes and ways of thinking. For our research we need this information to understand how these sites on the web are populated and conformed. Social data mining can be applied to analyze the records generated on the web [5] (answering the question: Which are the most visited sites for the most of people?), online conversations [7] (Which are the sites where people purchase "thematic" things or for a community.

This paper is organized in five sections. In section one, we introduce our paper. In section two, we describe our Sociolinguistic approximation focusing in Social Data Mining. In section three we discuss the application of Atlas. Ti confirm the hypothesis of our research. In section four, we discuss the tests made to the analyzed information. In section number five, we discuss the results generated for the tests, and finally on the last section, we give the conclusions and future research of our research.

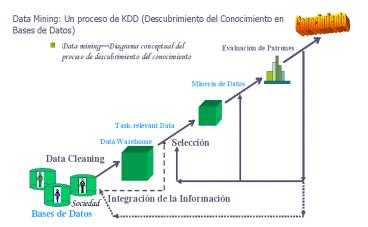
# 2 Sociolinguistic Approximation

Distinction between emotional grammatical and is not clear but it is possible to be conceited that emotional is pejorative and that thinks that the hypostatical style is superior. An analogy can be realized that "While a masculine oration usually is like a game of Chinese boxes, one fits within the other, a feminine one is like a Rep necklace them united by a thread of Greek is and other similar words", is for that reason that parataxis is common in British prose and the hypostasis are common in Renaissance prose, when a social group is affected by a historical success these tend to express more parataxis and less hypostasis.

#### 2.1 Proposed Methodology

The motivation to make an approach by means of applications with Emotional Data Mining is based on previous research of Social Data Mining in this research area. This research area emphasizes the role of the collective analysis of conduct effort, rather that the individual one. A social tendency results from the decisions of many individuals, joined only in the location in where they choose to coexist, yet this, still it reflects a rough notion of what the researchers of the area find of what could be a correct and valid social tendency [6]. The social tendency reflects the history of the use of a

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**Fig. 1.** Data Mining process. The society information inside a *Data bases* is cleaned and stored in a *Data Ware House*, then is mined by means of a loop back *selection* and *patterns evaluation* processes.

collective behavior, and serves like base to characterize the behavior of different ethnicity or socio-cultural cohesion [3].

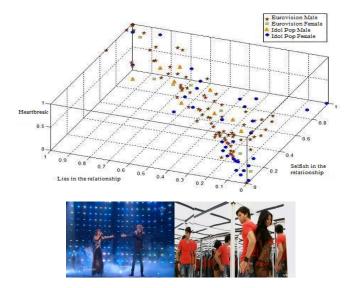
## 3 System Development

The system will be able to analyze the behavior for the social networking of people involved in 51 songs performing by couples or bands in Eurovision in addition the same number related with Pop Culture Idols, by means of Atlas. Ti use, which has demonstrated being an efficient tool for searching hiding parameters that must be discovered [5]. The compiled information was analyzed to discover behavior patterns that share these individuals, and based on their gender, age, language or social cohesion and their interpretation about disdain, we determine if this behavior was an innate or induced tendency by their partners in each different song occurs in two samples from singers.

The name of Social Data Mining derives from the similarities between looking for valuable information in great data bases - for example: to find information of the tendencies of the society behavior in great amounts of stored Gigabytes – and mining a mountain to find a vein of valuable metals. Data mining automates the process to find predictable information in great data bases (See Figure 1). Questions that traditionally required an intensive manual analysis now can be directly and quickly answered from data [3].

### 4 Applied Tools

Atlas.Ti was used to analyze data. First, we proceed to develop a model that allows explain the behavior by the social networking, and how affects their speech style.



**Fig. 2.** Comparative analysis of Hypotaxis & Parataxis in a duet associated to two samples from Eurovision and Pop Idol singers.

Tables 1 and 2 discover the existent relation among hypostasis and parataxis parameters.

The male and female audiences held captive on the Eurovision music platforms and pop music idols are detailed in figure 2, and it can be seen that both platforms differ in terms of the female and male audiences they capture and in this respect it can be seen in Eurovision that the majority of the audience are men while the pop music idols are followed to a greater extent by women and the total of the captive audience on these musical platforms are encouraged by loving indifference in relationships by breaking their hearts, with the death of relationships and when dealing with selfish tendencies.

Although if we should put places Eurovision is followed mostly by men than women, and unlike the pop music idol is more attended by female audiences and to a lesser extent by men. This means that both men and women express their feelings in a very similar way and almost in the same magnitude, and yet men are the ones who express the most their feelings about break-up, death and love selfishness through duets or musical duets.

We found the indicator in all cases, especially when the people try to built a blog, a newspaper or follow a person in Twitter showed a higher hypostasis and banners, card gift or book in any language showed lowest parataxis regarding their participation in different situations of this social behavior, in figure 3, we show emotional data mining associated with a repository of Tweeters associated with these songs.

This can be explained by the use of informal speech of antagonism roll because they resist losing their love in a couple related with theirs feelings, and purchase decision is highly influenced induced by their community, in this moment many singers thinking that the people likely very much the songs with this thematic and the gender live a great époque, many specific linguistic tools and book and music projects related with disdain

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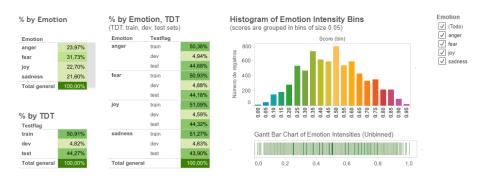


Fig. 3. Emotional Data Mining representation of these songs in Eurovision.

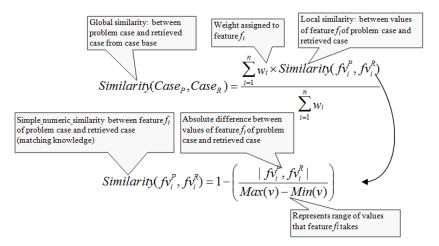


Fig. 4. Social distance between lyrics and emotional representation.

receive many acceptation in all world specially in Central Asia, East Europe and Latin America [8].

# 5 Results of Emotional Data Mining

We took in consideration the speech of a sample of: -51 couples participated in Eurovision and same quantity in Pop Idol from diverse countries- from two samples (Sample 1, Eurovision singers and Sample 2, Idol Pop singers) using their speeches in a social networking to identify different behaviors and explain the Imaginary collective of the people involved in this kind of songs (See Table 1). We applied a social similarity function to understand the closeness between lyrics and emotional representation of a song, as is possible see in figure 4.

The use of data mining in social aspects has demonstrated being key part to corroborate the linguistics tendencies of a group with common situations in different songs when the people suffer collectively, we found variations depending on the use of Sentimental analysis of emotions Speech, see Table 2.

**Table 1.** Distributions of demands by category and sort of the two analyzed samples. Sample 1 is associated with fans from Euorvision, and Sample 2 are fans club from Pop Idols duets or bands.

	Sample 1		Sample 2	
Category	F	M	F	M
N	13	27	28	39
Imperatives	12%	36%	26%	35%
Directives declaratives	5%	6%	7%	4%
Directives of Simulation	11%	4%	5%	6%
Interrogatives Directives	2%	0%	1%	1%
Interrogatives Postscripts	35%	16%	28%	19%
Joint Directive	15%	3%	11%	2%
Explosive Questions	2%	11%	4%	13%
Information Questions	16%	22%	17%	19%
Mechanisms of attraction of the attention	2%	2%	1%	1%
Total	100%	100%	100%	100%

Table 2. Contributions to the speech in a social network organized by kind of duet.

	Volume of Speech			
People	Total of Emitted Words	Total of Turns	Average of words in turn	
Sample 1	788	127	4.9	
Sample 2	992	108	7.2	

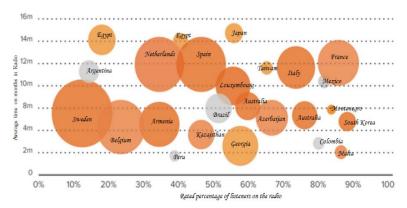
In figure 5, is show the relation between duets, duration in radio and the size of bubble represents the quantity of original music from these duets in the time.

In this regard, it was found that Egypt (Africa-Asia), Argentina (Latin America), Sweden (Stockholm) and Belgium (Europe) are the countries that have the shortest radio time, with a 10 to 30 percent rotation, while the countries of Spain have the shortest rotation, Brazil (Latin America) and Kazakhstan (Central Asia) are among the countries with the highest average percentage of rotation in the radio (approximately 50 per cent), while Italy, France, South Korea, Malta, Montenegro (European countries) and Australia (Oceania nation), Colombia and Mexico (Latin America) have the highest percentage of rotation in the radio duets between 70 and 90 per cent.

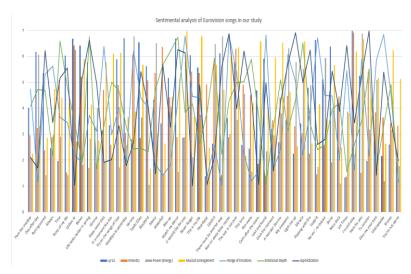
Secondly, it was found that in terms of average time in months in the radio of duets, the countries with less temporality of two to four months are Peru (Latin America) and Georgia (Europe and Asia); while Egypt (Africa-Asia) and Japan (East Asia) are the countries with more months of duet music in the radio from 14 months onwards.

Thirdly, with regard to the representativeness of the countries in terms of the amount of original music by means of bubbles, it was found that Sweden (Stockholm) occupies first place, followed by Spain, the Netherlands, Belgium, France and Italy (European countries) and that the last places are occupied first by Mexico, followed by Colombia, Argentina and Brazil (Latin American countries).

An analysis of the findings shows that European countries have the highest production and rotation of music, while Asian countries have the highest rotation of duos on the radio and finally, emphasizing, Latin American countries have the highest rotation of duos on the radio and the lowest production of original music. Now,



**Fig. 5.** Correlation between musical production, time on radio and quantity of original songs in a sample of societies of our study.



**Fig. 6.** Emotional representation of seven attributes in each song analyzed from sample of Eurovision (2000-2019).

emphasizing our country, Mexico can be detailed as having a rotation of listening to duets on the radio of approximately eighty-five percent (one of the highest worldwide), a temporality of durability of the songs on the radio of ten months (it is high in comparison with Japan that occupies the first place with more than fourteen months) and is the country with the least production of original music of duets; In this regard, it can be said that although Mexico does not produce high rates of music, it does have high demand for rotation and permanence in the radio, which means that people in our country are expressing their feelings through music and therefore the rotation and repetition of music is permanent.

In figure 6, we show the correlation between lyrics and different sentimental analysis according at age, social socioeconomical level, studies and life trajectories. In this

sense, the 51 songs of the duets that were chosen on the emotions of relationships were taken at Eurovision and linked to seven basic aspects: the lyrics, the intensity, the power/energy, the musical arrangement, the range of emotions, the emotional depth and the sophistication of the songs. With regard to the lyrics, it was found that these occupy first place to capture the attention of people (men and women) as they reflect the highest peaks, followed by emotional depth, range of emotions, musical arrangements, intensity, sophistication and ultimately energy as it is a matter of expressing couple feelings is not transcendental as in other music genres that may require combinations of high and/or low waves of power/energy that allow to transmit other types of emotions other than love, lack of love and couple problems.

#### 6 Conclusions

With respect to the findings in the field, four important aspects can be concluded. The first is that the mining of emotional data is a useful instrument to evidence and analyze the feelings that people express through the adoption of certain styles of music.

Secondly, that there is a balance with respect to the transmission of feelings transmitted and/or expressed by men and women, however, there is a stronger tendency for men to express feelings of death, brokenness and selfishness in terms of love and/or lack of love evidenced by listening to musical duets.

Thirdly, European countries are the ones that have the highest musical production and rotation, while Asian countries have a higher rate of temporality of listening to music on the radio, while Latin American countries have a higher rate of musical rotation on the radio and less musical production; specifically in Mexico there is not a high musical production, but there is a high rotation and permanence of music on the radio, which means an important expression and externalization of feelings through virtual media. And fourthly, the attributes that people take most into account when listening to a song are: the lyrics, the emotional depth and the range of emotions, leaving out other attributes that they consider less important such as musical arrangements, intensity, sophistication and ultimately energy.

There are an important number of questions that deserve additional research. One will be to find new information sources to mine about the use of Cognitive Social Blockade Speech. With all these knowledges is possible predict a duet winner Eurovision for first time since 1995 may be is possible whim will be win is the duet from Azerbaijan which occurs in 2014.

In JESC'2020 two societies send duets Germany and Scotland in their respective debit, and they will be win. An area with great potential is the electronic usage of media, specifically, digital music [1].

In [6] is shown a system that learns of the user preferences based on the music listened, after songs are selected to be play on a shared physical environment, based on the preferences of the whole people present, this software has a narrative script to realize recommendations to another users in a free text [9].

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