

# Exploration of Determinants of Verbal Aggressiveness and Leadership through Network Analysis and Conventional Statistics: Using School Class as an Illustration

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## Abstract

The purpose of this study is to detect structures of verbal aggressiveness and leadership using social networks analysis. Standardized questionnaires including network and non-network variables have been distributed to 128 students and 43 teachers at secondary schools. We performed complete analysis of social networks and further processing by applying principal component analysis. According to the results, a complex structure of verbal aggressiveness occurred in the classes (networks) and the structure was necessary to be explored with several network indicators (Katz, pagerank etc.). Structures of verbal aggressiveness and leadership appeared to converge. The following types of verbal aggressors were proposed: a) the “mockers”, b) the “scorners”, c) the “insulters”, d) the “teasers” and e) the “ridiculers”. As for the leadership, two types of leaders have been revealed: a) the “ideologist leader”, b) the “realist” leader. It is noticeable that both leader types appear in the occasional (indegree) as well as in the accumulative (Katz) structure. This means a rigid character of these leadership profiles.

## Keywords

Verbal Aggressiveness, Leadership, Network Analysis, Typology

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## 1. Introduction

### 1.1. Verbal Aggressiveness

Infante & Wigley (1986) have defined the verbal aggressiveness as an attack in the perception of individual without, or with, simultaneous attack to the attitude that the person takes toward a communication issue. Verbal aggressiveness

functions as a catalyst for physical aggressiveness (Infante, Chandler, & Rudd, 1989; Infante & Wigley, 1986; Sabourin, Infante, & Rudd, 1993). The negative effects of verbal aggressiveness may be more disturbing even than physical aggression because its effects may last longer (Infante, 1995). The majority of research shows that the verbal aggressiveness is considered to be destructive (Bekiari, 2016; Bekiari, Kokaridas, & Sakellariou, 2005, 2006; Bekiari, Perkos, & Gerodimos, 2015; Infante, 1995; Myers, Edwards, Wahl, & Martin, 2007; Myers & Rocca, 2000). It has been found that there is a negative relationship between perceived verbal aggressiveness of the teacher with the affective learning (Bekiari, 2012; Bekiari & Manoli, 2016; Myers & Knox, 1999, 2000; Myers & Rocca, 2000, 2001). It is also negatively correlated with students' motivation (Bekiari, 2014; Bekiari & Sakellariou, 2002; Bekiari & Syrmbas, 2015; Goodboy & Bolkan, 2009; Myers et al., 2007; Rocca, 2004, 2008) and fair play behaviors (Hassandra, Bekiari, & Sakellariou, 2007). Also, verbal aggressiveness affects on the discipline in class (Bekiari et al., 2006; Bekiari & Tsiana, 2016) causing behaviours (Claus, Booth-Butterfield, & Chory, 2012; Kennedy-Lightsey & Myers, 2009), reducing teacher's reliability (Infante, 1985; Infante et al., 1992) and interpersonal attraction (Syrmpas & Bekiari, 2015). Students declare lower levels of satisfaction and learning (Bekiari, 2014; Bekiari, Perkos, et al., 2015; Manoli & Bekiari, 2015; Mazer & Stowe, 2015; Myers, 2002; Myers et al., 2007; Myers & Knox, 1999, 2000; Myers & Rocca, 2001; Schrodts, 2003) and present lower academic achievement scores (Uludag, 2013; Yaratana & Uludag, 2012). Also, verbal aggressiveness is negatively associated with interest (Weiss & Houser, 2007), self-esteem (Buford, 2010; Infante & Wigley, 1986; Schrodts, 2003), behaviour, thinking and motivation (Bekiari, Perkos, et al., 2015; Hasanagas & Bekiari, 2015; Mazer & Stowe, 2015). Verbal aggressiveness practised by instructors negatively affects the relationship with their students (Frymier & Wanzer, 2006; Manoli & Bekiari, 2015; Martin & Myers, 2006) or athletes in training context (Bekiari, Digelidis, & Sakellariou, 2006; Bekiari, Patsiaouras, Kokaridas, & Sakellariou, 2006). The use of verbal aggressiveness by teachers has adverse effects for themselves, as they appear to be less communicative (Myers et al., 2007). Students present a less scientific approach and sociability (Hasanagas & Bekiari, 2015; Myers & Rocca, 2000; Rocca & McCroskey, 1999) while they report burnout (Avtgis & Rancer, 2008; Yaratana & Uludag, 2012). Instead, the lack of verbal aggressiveness enhances motivation, positive perception of classroom climate and emotional learning (Mazer & Stowe, 2015). Several studies describe the negative effects of using verbal aggressiveness from their chiefs to subordinates at the workplace (Infante, Anderson, Martin, Herington, & Kim, 1993; Infante & Gorden, 1985a, 1985b; Wheelless, Wheelless, & Howard, 1984) but few are those who associate the verbal aggressiveness with the leadership.

## 1.2. Leadership

Research on leadership mainly focuses on transformational leaders who could change deep structures, major procedures or the overall organisation (Van Wart,

2003). Bass (1985) model examines the relationship between transactional and transformational leadership. Transactional leadership based on a relation transaction between directors and members/employees, promoting them with rewards (Burns, 1978; Pashiardis, 2004). It consists in an administration of minimal interventions (laissez-faire), based on the exceptions management (management by exception) and contingent reward (Robbins & Judge, 2012). In contrast, transformational leadership is a special leadership style applied by superiors to motivate subordinates to operate at a higher level, offering spiritual challenges and paying attention to their individual needs by creating a supportive environment (Belias & Koustelios, 2014; Gkolia, Belias, & Koustelios, 2014b). Transformational leadership is based on trust and respect, engaging a parallel commitment to a vision creating incentives for employees (Eliophotou-Menon, 2011). The transformational leadership is grounded on the following characteristics: idealized influence, inspirational motivation, intellectual stimulation and personalized care (individualized consideration) (Bass, 1991, 1999; Bass & Stogdill, 1990; Robbins & Judge, 2012). According to the afore-mentioned assumptions, leadership can be regarded as process influencing thought, emotions, attitudes, and behaviours of a group of people from the leader. In this process, the led members are supposed to willingly and appropriately cooperate in order to achieve their best performance (Bouradas, 2005).

Aim of this research is to suggest determinants and effects of verbal aggressiveness and leadership, measured in term of its effect, leadership, as well as to analyze relations between leadership and verbal aggressiveness. The expected innovation lies in the implementation of complete network analysis which is expected to depict more objectively the structures of leadership and verbal aggressiveness.

## 2. Method

### 2.1. Network Analysis

Complete network analysis focuses on the interaction of participants and uses a set of metrics for the analysis of their relationships (Scott, 2000; Wasserman & Faust, 1994). The following network analysis metrics have been calculated by Visone software:

- 1) In-degree is defined as the percentage of edges which ends in a node. It can be interpreted as an occasional hierarchy position.
- 2) Katz status expresses chains of successive relations using power series. Thus, it can be interpreted as an accumulative hierarchy position. It signifies situations much deeper than indegree.
- 3) Pagerank is based on the transferred value from one node to others and interpreted as distributive hierarchy position. It is similar to Katz status but it restricts outliers. Furthermore, it prevents hierarchy deformations induced by Katz status.
- 4) Authority indicates the nodes who attracting most links from other nodes, among those ones who intensively seek to maintain links.

All aforementioned metrics have been repeatedly used and interpreted in real-empirical context (Bekiari, Hasanagas, Theocharis, Kefalas, & Vasilou, 2015; Bekiari & Hasanagas, 2015, 2016a, 2016b; Bekiari & Spyropoulou, 2016; Hasanagas & Bekiari, 2015; Theocharis & Bekiari, 2016).

## 2.2. Sampling

Classes of public secondary schools (Gymnasium and Lyceum) in Trikala have been surveyed as network samples. Each class consisted a network, where the pupils were the nodes and the links among them were their relations (trust, company, conflicts etc). In other words, such a network sampling is a cluster sampling including the survey of links among the population (Farmakis, 2000). The set was calculated to be composed by 171 individuals. There were 128 pupils (class A: 20 pupils, female: 5 male: 15, class B: 21 pupils, female: 10 male: 11, class C: 22 pupils, female: 8, male: 14, class D: 21 pupils, female: 10 male: 11, class E: 21 pupils, female: 8 male: 13, class F: 24 pupils, female: 15 male: 9). Their age varied from 13 to 17. Also, there were 43 teachers (female: 22, male: 21). Their age varied from 32 to 62. Precondition to participate a teacher was to teach over two hours per week in the class involved in the research.

## 2.3. Questionnaire

The questionnaire consisted of two parts: a) non-network variables (e.g. gender, birth year, teaching years etc.), and b) network variables (power dimensions, verbal aggressiveness and leadership).

The part b of the questionnaire was based on the Verbal Aggressiveness Scale (Bekiari & Digelidis, 2015) in order to measure verbal aggressiveness. Preliminary examination Scale (Bekiari & Digelidis, 2015) supported the psychometric properties of the instrument. In particular, confirmatory factor analysis indicated satisfactory fit indices (CFI: .97, SRMR: .02), and internal consistency of the scale ( $\alpha = .96$ ). The scale consisted of eight items (e.g., “insults students or teachers,” “makes negative judgments of ability”).

The part b of the questionnaire was based on the Principal Leadership Questionnaire which consisted of twenty four items (Gkolia, Belias, & Koustelios, 2014a) in order to measure transformational leadership. Preliminary examination supported the psychometric properties of the instrument. In particular, confirmatory factor analysis indicated satisfactory fit indices (CFI = .97, RMSEA = .06), and internal consistency of the scale ( $\alpha$ : from .60 to .81). The scale consisted of four factors (leader models behavior, fosters commitment, provides individual support, and holds high expectations) (e.g. “treats me as an individual with unique needs”, “leads by ‘doing’ rather than simply by ‘telling’”).

Additional questions of the power dimensions (part b of the questionnaire) concerning trust (e.g., advising about humanities and natural Sciences), socialization patterns (e.g., companion within and outside faculty) and study and general cooperation. The power dimensions based on Popitz model (1992) has been used in previous researches (Bekiari & Hasanagas, 2015, 2016a, 2016d; Bekiari & Spyropoulou, 2016; Hasanagas & Bekiari, 2015).

## 2.4. Statistical Analysis

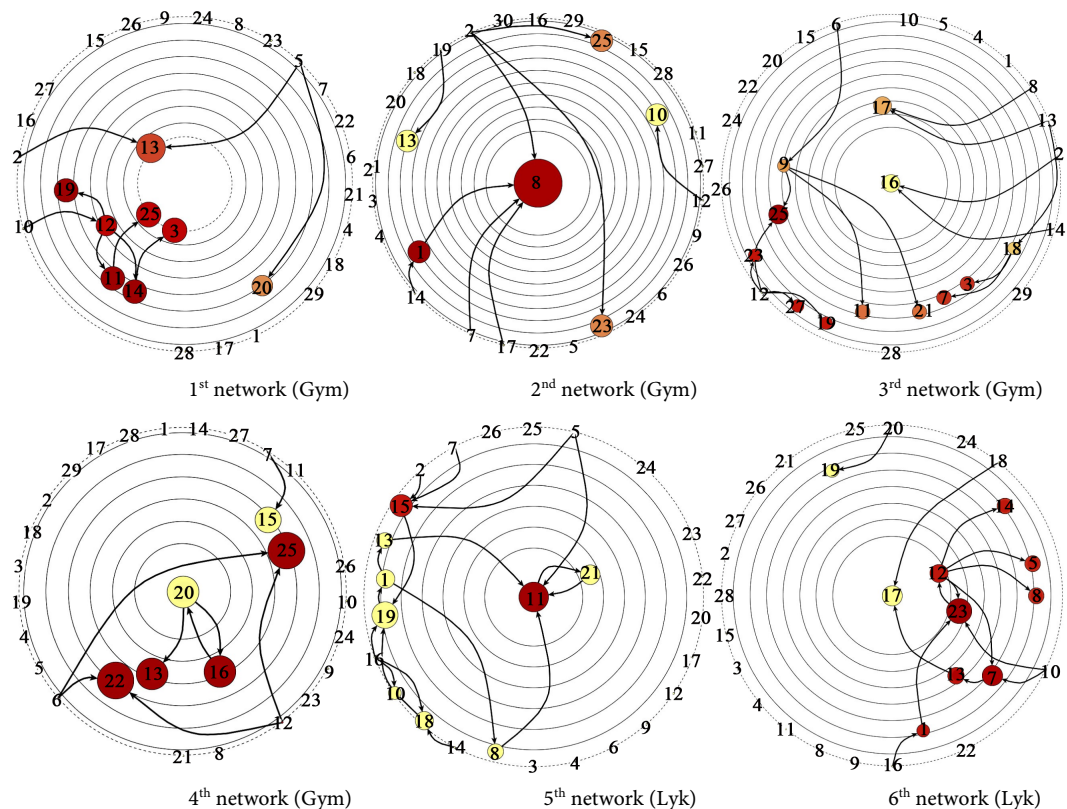
The network data were processed by Visone 2.16 software. Several indicators were computed (indegree, status, pagerank, authority, density). Also, different networks structure was depicted.

Thereafter, both the network and non-network data were entered into SPSS 21. Spearman bivariate correlation (to avoid outlier effect) and principal components analysis (for formulating typology) were conducted.

## 3. Results and Discussion

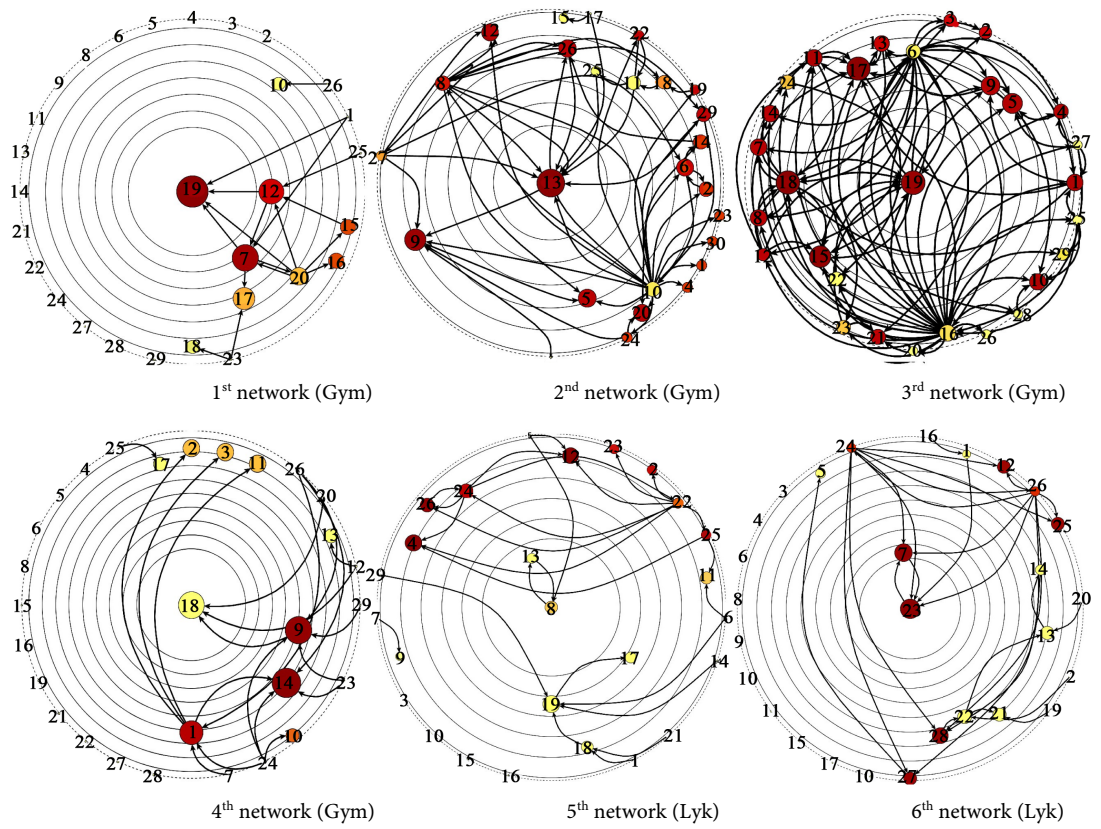
### 3.1. Examples of Structures in Verbal Aggressiveness and Leadership

In **Figures 1-3** several structures (status of Katz, pagerank and authority) of verbal aggressiveness and leadership are presented. Differences can be observed between the structures of verbal aggressiveness and leadership networks. The networks do not have the same density and networks of leadership are denser than those of verbal aggressiveness. Density was the measure depicting the intensity of the relations between individuals in classes. Density can be utilized as a measure of cohesion, at least 0 case of non-conflicting relations ([Borgatti, Everett, & Johnson, 2013](#)) and has been used to examine leadership relations in classes ([Carson, Tesluk, & Marrone, 2007](#)). More specifically, the density of each network is the portion of the potential connections in a network that the

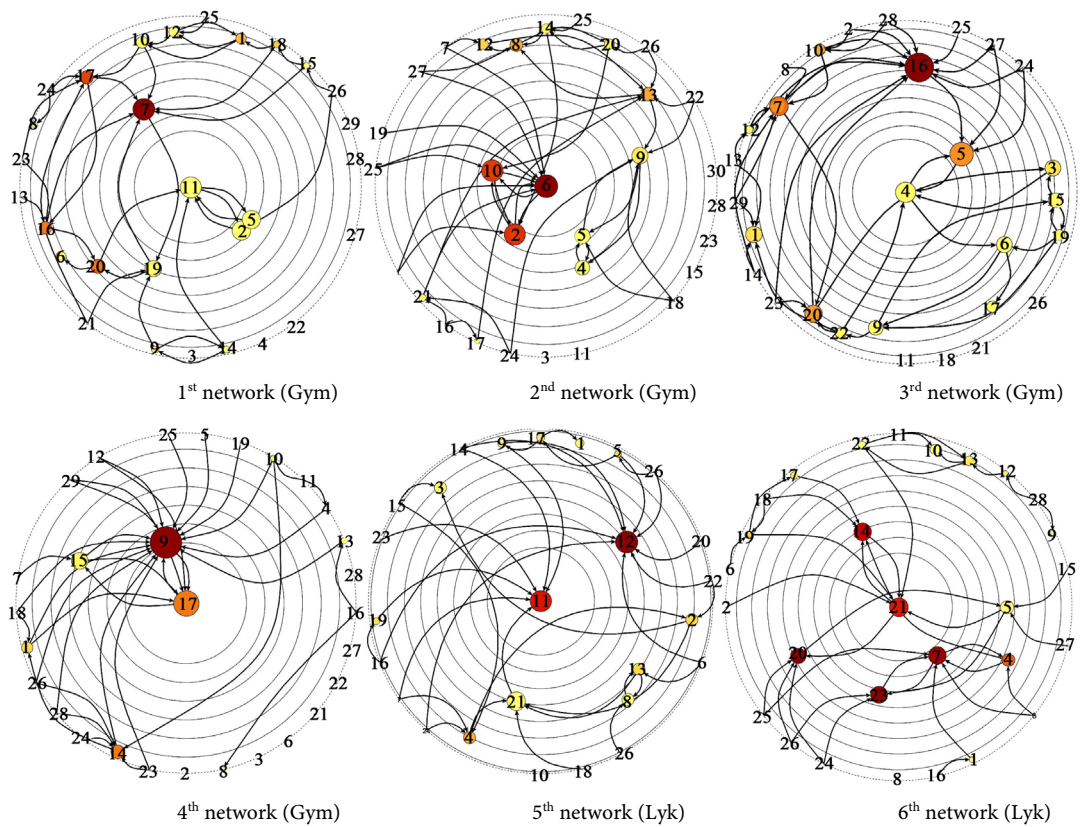


**Figure 1.** Structure of verbal aggression (negative comments).





**Figure 2.** Structure of leadership (leader act).



**Figure 3.** Structure of the preferred class president.

actual connections (Sparrowe, Liden, Wayne, & Kraimer, 2001). The observed conclusion can be confirmed and as shown in the **Table 1**, the average density of verbal aggression was .030 while leadership has average density .090 and the proposed as president was .091. Additionally, the average indegree-outdegree of leadership networks was bigger than verbal aggression one as shown in **Table 2**.

Additionally, differences can be observed in the networks observing various indicators (pagerank, status, authority etc.). These differences were expected because various indicators reveal no identical properties and meanings. So, it is useful to apply several indicators in social network analysis and not only one (Bekiari & Hasanagas, 2015).

### 3.2. Relationship between Verbal Aggressiveness, Leadership Characteristics and Preferred Class President

In **Table 3** it is noticeable that numerous significant correlations occur between preferred class president and leader characteristics (.230 to .564) or of verbal aggressiveness attributes (.174 to .303) or of social interactions (.268 to .370).

All leadership variables were significant correlated with the property of being preferred for president. The results showed a positive correlation between this property and the various characteristics of leadership (leader acts, leader is an example, does not believe in mediocrity, personal approach and communication). No significant correlation had been found between the property of being preferred president and “have high expectations of a leader”. This can be explained by the nature of the position of the class president. It is sure that anyone of classmates expects the president to be the most capable but also knows the limitation of the position, so they don't have high expectation from him. Also, all

**Table 1.** Density of six networks (computed by Visone 2.16).

	1st network	2nd network	3rd network	4th network	5th network	6th network	Mean	Std. Deviation
Verbal aggressiveness (negative comments)	.022	.021	.037	.017	.049	.034	.030	.01
Leadership (leader act)	.039	.11	.204	.049	.074	.066	.090	.06
Preferred class president	.081	.087	.101	.079	.105	.09	.091	.01

**Table 2.** Average in-out degree of six networks (computed by Visone 2.16).

	1st network	2 <sup>nd</sup> network	3rd network	4th network	5th network	6th network	Mean	Std. Deviation
Verbal aggressiveness (negative comments)	.31	.3	.517	.276	.654	.5	.426	.15
Leadership (leader act)	.586	1.733	3.103	.69	1.038	.964	1.352	.95
Preferred class president	1.345	1.433	1.483	1.172	1.346	1.357	1.154	.51

**Table 3.** Table of correlations.

Spearman's rho	Preferred for President			
	indegree	pagerank	status	authority
Consociation	<b>.565**</b>	<b>.432**</b>	<b>.555**</b>	<b>.470**</b>
	.000	.000	.000	.000
Cooperation	<b>.634**</b>	<b>.528**</b>	<b>.627**</b>	<b>.489**</b>
	.000	.000	.000	.000
Future business relation	<b>.599**</b>	<b>.479**</b>	<b>.561**</b>	<b>.410**</b>
	.000	.000	.000	.000
Ask help for social matters	<b>.408**</b>	<b>.326**</b>	<b>.375**</b>	<b>.312**</b>
	.000	.000	.000	.000
Ask help for technical issues	<b>.316**</b>	<b>.268**</b>	<b>.287**</b>	<b>.337**</b>
	.000	.000	.000	.000
Verbal Aggressiveness (negative comments about spirit)	<b>.207**</b>	<b>.114</b>	<b>.204**</b>	<b>.175*</b>
	.007	.138	.007	.022
Verbal Aggressiveness (negative comments about behavior )	.148	.079	<b>.151*</b>	<b>.175*</b>
	.054	.302	<b>.049</b>	<b>.022</b>
Verbal Aggressiveness (negative comments about appearance)	.115	.027	.114	.100
	.134	.726	.137	.191
Verbal Aggressiveness (negative comments about surroundings)	<b>.232**</b>	.146	<b>.212**</b>	.124
	.002	.056	<b>.005</b>	.107
Verbal Aggressiveness (negative comments)	<b>.169*</b>	.109	<b>.174*</b>	-.010
	<b>.028</b>	.155	<b>.023</b>	.895
Verbal Aggressiveness (mockery)	<b>.271**</b>	<b>.249**</b>	<b>.303**</b>	<b>.173*</b>
	.000	.001	.000	<b>.024</b>
Verbal Aggressiveness (threat)	<b>.165*</b>	<b>.343**</b>	<b>.179*</b>	<b>.217**</b>
	.031	.000	.019	<b>.004</b>
Verbal Aggressiveness (belief of expressing negative comments)	<b>.265**</b>	<b>.288**</b>	<b>.283**</b>	<b>.270**</b>
	.000	.000	.000	.000
Verbal Aggressiveness (don't want you in his social surrounding)	<b>.282**</b>	<b>.332**</b>	<b>.305**</b>	<b>.348**</b>
	.000	.000	.000	.000
Afraid of being hit	<b>.166*</b>	<b>.364**</b>	<b>.187*</b>	<b>.218**</b>
	.031	.000	.014	<b>.004</b>
Leadership (leader act)	<b>.429**</b>	<b>.378**</b>	<b>.402**</b>	<b>.312**</b>
	.000	.000	.000	.000
Leadership (leader is an example)	<b>.344**</b>	<b>.230**</b>	<b>.327**</b>	<b>.281**</b>
	-.103	.002	.000	-.122
Leadership (have high expectation from leader )	.182	.027	-.115	.111
	.123	.721	.136	.363
Leadership (leader do not compromise with mediocrity)	<b>.461**</b>	<b>.272**</b>	<b>.440**</b>	<b>.297**</b>
	.000	.000	.000	.000
Leadership (leader treat me special)	<b>.230**</b>	<b>.174*</b>	<b>.234**</b>	<b>.247**</b>
	.002	.023	.002	.001
Leadership (leader consider my opinion)	<b>.563**</b>	<b>.384**</b>	<b>.564**</b>	<b>.416**</b>
	.000	.000	.000	.000

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).



other characteristics of power were significant correlated with the preferred class president. The cooperation, the socialization, possible future business cooperation, advisory on social matters or technical themes is positive correlated with the preference of pupils for the class president. Also, the property of being preferred for class president is positive correlated with some verbal aggression variables. If someone has threatened a classmate or keeps him out of his social surrounding he creates a profile of detached person. This profile can be enforced if the person believes that the other one use negative comments for him in his surroundings. Additionally, the use of verbal aggression in run around situations is positive correlated with the preference of class president. This can be explained as a result of the fact that pupils use verbal aggression as a technique for choosing someone from their friends as a president.

### 3.3. Target Typology of Verbal Aggressiveness and Leadership

#### 3.3.1. Typology of Verbal Aggressiveness Based on Indegree Indicator

**Table 4** shows the factor loadings after rotation. The same components suggest that the type “mocker” represents verbal aggressive pupils that making negative comments and mock with their classmates. The “insulter” type depicts pupils who do not simply mock or comment other pupils but threaten and exclude their classmates from their social milieu. The “insulter” could be regarded as an aggressive type stronger and more threatening than “mocker”. Both types are based on indegree. Thus, they express an occasional situation.

#### 3.3.2. Typology of Verbal Aggressiveness Based on Pagerank Indicator

**Table 5** shows the factor loadings after rotation. The types appearing in this table are quite similar with these revealed in **Table 4**. “Mockers” want to cause

**Table 4.** Indegree typology of verbal aggressiveness.

Rotated Component Matrix <sup>a</sup>		
INDEGREE	Component	
	Mocker	Insulter
Verbal Aggressiveness (negative comments about spirit)	<b>.704</b>	.388
Verbal Aggressiveness (negative comments about behavior)	<b>.736</b>	.005
Verbal Aggressiveness (negative comments about appearance)	<b>.653</b>	.306
Verbal Aggressiveness (negative comments about surroundings)	<b>.746</b>	.195
Verbal Aggressiveness (negative comments)	<b>.652</b>	<b>.492</b>
Verbal Aggressiveness (mockery )	<b>.661</b>	.272
Verbal Aggressiveness (threat)	.147	<b>.837</b>
Verbal Aggressiveness (do you believe that you express negative comments)	.220	<b>.824</b>
Verbal Aggressiveness (don't want you in his social surrounding)	.186	<b>.454</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
<sup>a</sup>Rotation converged in 3 iterations.

**Table 5.** Pagerank typology of verbal aggressiveness.

Rotated Component Matrix <sup>a</sup>		
Pagerank	Component	
	Mocker	Insulter
Verbal Aggressiveness (negative comments about spirit)	<b>.768</b>	.290
Verbal Aggressiveness (negative comments about behavior)	<b>.906</b>	.118
Verbal Aggressiveness (negative comments about appearance)	<b>.916</b>	.153
Verbal Aggressiveness (negative comments about surroundings)	<b>.943</b>	.103
Verbal Aggressiveness (negative comments)	<b>.913</b>	.166
Verbal Aggressiveness (mockery )	<b>.775</b>	.100
Verbal Aggressiveness (threat)	.461	<b>.606</b>
Verbal Aggressiveness (do you believe that you express negative comments)	.030	<b>.759</b>
Verbal Aggressiveness (don't want you in his social surrounding)	.099	<b>.725</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
<sup>a</sup>Rotation converged in 3 iterations.

repeated emotional pain, distress, or annoyance to theirs' classmate using any type of comment. The "scorner" type describes schoolchildren who the victim describes them as pupils who have lack of approval for them. "Mockers" use verbal aggressiveness because they don't want someone to be to their surroundings. "Scorners" seem to be more decided to exclude others, as they do not even spend time for commenting them.

### 3.3.3. Typology of Verbal Aggressiveness Based on Kantz Status Indicator

**Table 6** shows the factor loadings after rotation. The items that cluster on the same components suggest represents mockers and the second component "scorners". This could be explained because status and pagerank have quite similar structural meaning.

### 3.3.4. Typology of Verbal Aggressiveness Based on Authority Indicator

**Table 7** shows the factor loadings after rotation. The items that cluster on the same components suggest that first type represents verbal aggressive students named "teaser". They act cruel and criticizing their classmates with unkind way. The second type describes verbal aggressiveness students proposed to named "ridiculer". They were making harsh comments, making fun in cruel way.

This typology is authority based. Thus, these two types reveal a much more persistent structure created by a respectively fanatical activity. The "teaser" behavior simply consists in commenting while the "ridiculer" is much more active than just commenting.

### 3.3.5. Typology of Leadership Based on Indegree Indicator

**Table 8** shows the factor loadings after rotation. The first factor had four parameters with high loads that denote a leader behaviour pattern but also with high

**Table 6.** Katz status typology of verbal aggressiveness.

Rotated Component Matrix <sup>a</sup>		
Status	Component	
	Mocker	Scorner
Verbal Aggressiveness (negative comments about spirit)	<b>.753</b>	.254
Verbal Aggressiveness (negative comments about behavior)	<b>.696</b>	.041
Verbal Aggressiveness (negative comments about appearance)	<b>.714</b>	.232
Verbal Aggressiveness (negative comments about surroundings)	<b>.778</b>	.117
Verbal Aggressiveness (negative comments)	<b>.723</b>	.378
Verbal Aggressiveness (mockery )	<b>.619</b>	.267
Verbal Aggressiveness (threat)	.259	<b>.767</b>
Verbal Aggressiveness (do you believe that you express negative comments)	.235	<b>.786</b>
Verbal Aggressiveness (don't want you in his social surrounding)	.082	<b>.607</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
<sup>a</sup>Rotation converged in 3 iterations.

**Table 7.** Authority typology of verbal aggressiveness.

Rotated Component Matrix <sup>a</sup>		
Authority	Component	
	Teaser	Ridiculer
Verbal Aggressiveness (negative comments about spirit)	<b>.530</b>	.514
Verbal Aggressiveness (negative comments about behavior)	<b>.784</b>	-.013
Verbal Aggressiveness (negative comments about appearance)	<b>.705</b>	.203
Verbal Aggressiveness (negative comments about surroundings)	<b>.686</b>	.100
Verbal Aggressiveness (negative comments)	<b>.676</b>	.163
Verbal Aggressiveness (mockery )	.252	<b>.499</b>
Verbal Aggressiveness (threat)	.157	<b>.706</b>
Verbal Aggressiveness (do you believe that you express negative comments)	.196	<b>.717</b>
Verbal Aggressiveness (don't want you in his social surrounding)	-.121	<b>.627</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
<sup>a</sup>Rotation converged in 3 iterations.

expectations. This factor was named “ideologue” leader. The second factor had the remaining two parameters that indicate providing personalised support from the leader. This factor was called “realist leader,” after trying to take account of real possibilities and the degree of acceptance of decisions. These two leadership profiles seem to be exclusive to each other, as they do not present any common parameter. Thus, they are two absolutely different alternatives.

### 3.3.6. Typology of Leadership Based on Kantz Status Indicator

**Table 9** shows the factor loadings after rotation. The factors are the same just with those of the indegree (see **Table 8**) and, therefore, are named similarly,

**Table 8.** Indegree typology of leadership.

Rotated Component Matrix <sup>a</sup>		
Indegree	Component	
	Ideologue leader	Realist leader
Leads by “doing” rather than simply by “telling”	<b>.768</b>	.287
Provides good models for faculty members to follow	<b>.835</b>	.150
Shows us that there are high expectations	<b>.558</b>	-.471
Does not settle for second best in the performance of our work	<b>.809</b>	.276
Treats me as an individual with unique needs and expertise	.172	<b>.719</b>
Takes my opinion into consideration when initiating actions that affect my work	.231	<b>.715</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
<sup>a</sup>Rotation converged in 3 iterations.

**Table 9.** Status typology of leadership.

Rotated Component Matrix <sup>a</sup>		
Status	Component	
	Ideologue leader	Realist leader
Leads by “doing” rather than simply by “telling”	<b>.734</b>	.380
Provides good models for faculty members to follow	<b>.823</b>	.178
Shows us that there are high expectations	<b>.561</b>	-.281
Does not settle for second best in the performance of our work	<b>.799</b>	.327
Treats me as an individual with unique needs and expertise	.093	<b>.786</b>
Takes my opinion into consideration when initiating actions that affect my work	.164	<b>.767</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
<sup>a</sup>Rotation converged in 3 iterations.

“ideologue” and “realist” leader respectively. This means that they both are equally implemented in incidental as well as in deep-rooted leadership tactics.

## 4. Conclusion

Results of present study, regarding structures in verbal aggressiveness and leadership, indicate that pupils choose for their leader as a person which comes from their surroundings, especially those they trust and have the most of the characteristics of a transformational leader. The networks of leadership were more cohere than ones of verbal aggressiveness.

As for the verbal aggressiveness is present to our classes and the structure seems to be complicated so it is useful to apply several indicators (Katz, pagerank etc.) and not only one. Different indicators reveal different properties and meanings. The following types were proposed: a) the “mockers”, b) the “scorners”, c) the “insulters”, d) the “teasers”, and e) the “ridiculers”. The using of a wide range of network metrics (indegree, Katz, pagerank, authority) reveals a re-

spectively meticulous range of types depicting distinct structures and behaviors.

As for the leadership types (“ideologue” and “realist”), it is noticeable that they both appear in the occasional (indegree) as well as in the accumulative (Katz) structure. This means a rigid character of these profiles.

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