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The Influence of Diverse Interaction Contexts on Students' Sociometric Status

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Despite there being numerous studies on sociometric status, research that analyzes this variable from a contextualized viewpoint taking into account the different school settings in which a pupil establishes relationships is rare. The aim of this study is to analyze the stability of sociometric status in different school settings. For this purpose, 522 students filled in a sociometric questionnaire that investigated two different settings: the academic setting, which refers to the formal classroom setting; and the leisure setting, which investigates a more informal and playful setting like the playground. The main results indicate that identification percentages are almost the same in both settings. Nonetheless, all sociometric types are contextually dependent, and some are more dependent than others. Thus, rejection is observed as being the most independent of context, whereas the most dependent is that of controversial pupils. Differential analyses show that sex modifies the results obtained. It is shown that, excluding a few exceptions, combinations of sociometric types in both settings investigated can be made. These results are discussed in connection with the methodology used to identify sociometric types and their practical implication for better school adjustment.
Keywords: sociometric status, contextual analysis, school settings, classroom, playground.

A pesar de que es numerosa la investigación sobre el estatus sociométrico, son escasos los trabajos que analizan dicha variable desde un enfoque contextualizado que tenga en cuenta los diferentes contextos escolares en los que los alumnos establecen relaciones. El objetivo de este trabajo es analizar la estabilidad del estatus sociométrico en los diferentes contextos escolares. Para ello, 522 estudiantes cumplimentaron un cuestionario sociométrico que indagaba en dos contextos diferentes: el académico, que hace referencia a las actividades de tipo instruccional, y el de ocio, que indaga en las actividades más informales y lúdicas. Los principales resultados indican que los porcentajes de identificación son prácticamente los mismos en los dos contextos. No obstante, todos los tipos sociométricos tienen dependencia contextual, aunque unos son más dependientes que otros. Así, se observa que el rechazo es el tipo más independiente del contexto, mientras que el más dependiente es el de los alumnos controvertidos. Además, se encontraron algunas diferencias en función de sexo. Por último, se comprueba que, salvo algunas excepciones, se pueden dar combinaciones de todos los tipos sociométricos en los dos escenarios explorados. Estos resultados se discuten en función de la metodología utilizada para identificar los tipos sociométricos y de sus implicaciones prácticas para la mejora de la adaptación escolar.
Palabras clave: estatus sociométrico, análisis contextual, contextos escolares, aula, patio.

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The importance of peer relationships for cognitive, affective, and social development is widely recognized (Fuentes, 1999; Gifford-Smith & Brownell, 2003; López, 2008; Moreno, 1990; Trianes, Muñoz, & Jiménez, 2007), and it has generated great interest in methods for its study. Within them, sociometric analysis has been shown to be an adequate tool to study peer relationships and it has been mainly used within the school setting. Research of sociometric status in the school setting has shown it to be a variable that is directly related to school adaptation, at the academic, social, and affective levels (Buhs, Ladd, & Herald, 2006; Bukowski, Newcomb, & Hartup, 1998; Díaz-Aguado, 2006; Dodge, Coie, Pettit, & Price, 1990; Ladd, Herald-Brown, & Reiser, 2008; McElhaney, Antonishak, & Allen, 2008; Ortega & Mora-Merchán, 2008; Ortiz, Aguirrezabala, Apodaka, Etxebarría, & López, 2002).

Sociometric techniques are based on the number of nominations–both positive and negative–that a student receives from his or her classmates. Combining both values, the dimensions of social preference (number of positive nominations minus number of negative nominations) and of social impact (number of positive nominations plus number of negative nominations) can be estimated. From the combination of these scores, the different types of students can be identified according to their sociometric status (Coie & Dodge, 1983; Coie, Dodge, & Copotelli, 1982): preferred (students who receive a significantly high number of positive nominations), rejected (students who receive a significantly high number of negative nominations), ignored (students with a low social impact), controversial (students with a high social impact), and average (students with average scores). Although there are various methods to classify students (García-Bacete, 2006; Muñoz, Moreno, & Jiménez, 2008), they are all based mainly on these two criteria: either the standardization of the scores, which allows the comparison of different classrooms, or using probability methods, which are based on the comparison of the expected choices and rejections from a probabilistic viewpoint.

Research of the different sociometric types has attempted to plot the behavioral profile of each one (García-Bacete, 2007; Newcomb, Bukowski, & Pattee, 1993). Thus, preferred students have been defined as sociable, not very isolated, and with low aggressiveness. The rejected type is the one that has aroused more interest in investigators, possible due to its clear association with adaptation, both current and future. In their review, García-Bacete, Sureda, and Monjas (2010) conclude that, although they are usually identified as aggressive, isolated, and not very sociable, this is a behaviorally heterogeneous type, more frequent in boys than in girls, and with high stability throughout schooling. In contrast, the ignored type has been described as not very aggressive and with medium-low levels of isolation. Lastly, controversial students have been described as aggressive, isolated, and somewhat unsociable, although less so than the rejected type. Nevertheless, the case of controversial students has produced the most contradictory results when attempting to define their behavioral profile, because, as mentioned in some works (Gifford-Smith & Brownell, 2003; Rodkin, Farmer, Pearl, & van Acker, 2000), these students share characteristics with other types, and they are boys and girls with high social impact, who please and displease a significant number of classmates.

The studies carried out have also revealed gender differences, because boys obtain higher percentages in rejected and controversial types, and girls obtain higher percentages in ignored and average types (García-Bacete, García, & Monjas, 2008), with boys displaying a higher number of aggressive behaviors and girls more prosocial behavior (Inglés et al., 2008). It has also been confirmed that the sociometric distribution maintains certain levels of stability throughout schooling (García-Bacete et al., 2008; Martín & Muñoz de Bustillo, 2009). With regard to the reasons for choosing or rejecting a classmate, they seem to be multiple and varied (Monjas, Sureda, & García-Bacete, 2008; Sureda, García-Bacete, & Monjas, 2009).

An aspect that has not received much attention has been the stability of the sociometric status in diverse school settings. In this sense, we defend an approach to the study of the psychosocial variables from a contextual focus, which takes into account the diverse scenarios and tasks that occur in social interactions (Bierman, 2004; Díaz-Aguado, 2006; Muñoz de Bustillo & Martín, 2007; Sheridan, Buhs, & Warnes, 2003). It has been confirmed that students tend to attribute clearly differentiated interpersonal contents as a function of the context in which they occur. Thus, the playground is perceived as the place where affective and conflict- resolution contents predominate, whereas contents of a pronounced intellectual nature are assigned to the classroom (Muñoz de Bustillo & Martín, 2007). Therefore, when different relations occur as a function of the context, sociometric status can be expected to vary in some cases, because the behavioral characteristics required in each context and in each activity may vary.

Most of the studies that use sociometric techniques do not contextualize the questions about who is chosen or rejected, or else they ask directly about the classroom context, where the teachers exert an important influence on students' social reputation and status (Gifford-Smith & Brownell, 2003; Jiménez, Moreno, Murgui, & Musitu, 2008; Martín, Muñoz de Bustillo, Rodríguez, & Pérez, 2008). Moreover, most of the activities performed in the classroom are directed by the teachers, with predominance of large groups in which neither the affinity among the group members nor their sociometric characteristics are taken into account (Ortega, Romera, Mérida, & Monks, 2009). However, certain behavioral characteristics may hinder the establishment of relations in the classroom but not on the playground. Thus, for example, certain levels of aggressiveness may be disapproved by the classmates in

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the classroom, but they may be more positively valued in other leisure activities, such as sports or games (Martín & Muñoz de Bustillo, 2009).

The works that have employed sociometric techniques to analyze social integration of specific collectives at school, taking contextual variables into account, have contributed data that support the need to study sociometric status from a situated perspective that considers the students' diverse scenarios at the educational center. Fernández-Enguita, Gaete, and Terrén (2008) found that immigrant students were better integrated in the group and received fewer negative nominations in the leisure context, with considerably worse results when measured within the classroom context. Moreover, the social integration of this collective seemed to be mediated by other variables, such as the number of immigrants per classroom. In a similar vein, Herrero and Pleguezuelos (2008) analyzed the interaction patterns in school settings with pronounced multiculturality and they confirmed that less structured contexts facilitated peer interaction. Similar results were found by Martín et al. (2008) when studying peer interaction at school of children and adolescents who lived in homes supervised by the public administration. These students were less accepted and more rejected than their classmates when performing academic tasks, but they seemed to enjoy the same status as their classmates when the sociometric questionnaire items referred to informal tasks and leisure.

It is within this context that we propose the goals of this work, as we hope to analyze the stability of the different sociometric types in the diverse school settings. Specifically, on the one hand, we shall ask questions in the academic context, considering this the formal space of the classroom, where activities of a markedly instructional content are developed under the teachers' supervision. And on the other hand, we shall ask questions referring to the leisure context, which are informal spaces such as the playground that are characterized by the development of playful and recreational activities, without so much supervision by the teachers. We propose three goals in this work.

Firstly, we hope to confirm whether the percentages of the different sociometric types vary as a function of whether we ask about the academic or the leisure context. We shall also confirm whether there are differences in the percentages of identification as a function of sex and educational level.

Secondly, we shall analyze whether the students identified as a certain sociometric type in one context are identified as the same type in the other, or whether they are only identified as such in one of the contexts. We shall also analyze the stability as a function of sex and educational level.

And, third and last, we shall attempt to determine the combinations of sociometric types a student can have, taking into account the classifications carried out in the two scenarios explored.

Method

Participants

This work is part of a more extensive project, whose goal was the study of social integration at school of children who live in supervised homes; therefore, we selected the classroom where these children studied. The sample is made up of 522 students from 2nd and 3rd cycle of primary education, who were studying in 28 classrooms belonging to 15 public schools from diverse areas of Tenerife Island. Of them, 67 (12.8%) were in 3rd grade, 117 (22.4%) in 4th grade, 159 (30.5%) in 5th grade, and 179 (34.4%) in 6th grade. With regard to sex, 244 (46%) were girls and 278 (53.3%) were boys.

Instrument

Sociometric Questionnaire. To elaborate and score this test, we used the nominations method, limiting the maximum number of nominations to three and the population of possible eligible classmates to the group of the class. In addition, we asked about two different spheres: academic tasks and leisure activities, that is, we used two criteria for choosing classmates to carry out two specific activities: instructional activities and leisure activities (Arruga, 1987). Specifically, in the sphere of academic tasks, we asked the following: *Which three boys or girls from your class are the ones you like to work with the most?* and *Which three boys or girls from your class are the ones you like to work with the least?* And for the sphere of leisure activities: *Which three boys or girls from your class are the ones you like to be with the most during your free time (going out, in the playground, etc.)?* and *Which three boys or girls from your class are the ones you like to be with the least during your free time (going out, in the playground, etc.)?*

To find the sociometric values, we followed the procedure described by Rodríguez and Morera (2001). Specifically, for this study, we extracted the following values for each one of the contexts explored:

1.- *Positive nominations (Pn)*: the number of classmates who choose a person.
2.- *Negative nominations (Nn):* the number of classmates who reject a person.

Procedure

We requested the collaboration of the Dirección Territorial de Educación of the province of S/C of Tenerife (Canary Islands), which sent a fax to all the centers granting permission and requesting them to participate in the investigation. Subsequently, we contacted the directive teams by phone. After obtaining the parents' consent, we

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scheduled a date to gather information with the centers that ultimately agreed to participate in the investigation. The sociometric questionnaire was completed during regular classes, and in all cases, it was administered by the same person, who explained the test and clarified all possible doubts, especially in the younger children, also commenting that the participants' anonymity would be respected.

Once we had collected all the information, we proceeded to perform the sociometric analysis of all the classrooms, extracting the individual values of all the students. The scores of each classroom were standardized (*Z* scores), so they would be comparable.

Subsequently, we identified the different sociometric types in the two contexts explored: academic and leisure. The procedure employed for their identification was the standardized one proposed by Coie et al. (1982), and described by García-Bacete (2006), in which the following values are used to identify the different sociometric types: Positive standardized nominations: ZPn; negative standardized nominations: ZNn; Social Preference (SP) = ZPn - ZNn (subsequently standardized: ZSP); and Social Impact (SI) = ZPn + ZNn (subsequently standardized: ZSI). The following conditions were used to identify the different sociometric types:

Preferred: ZSP > 1, ZPn > 0, and ZNn < 0
Rejected: ZSP < -1, ZPn < 0, and ZNn > 0
Ignored: ZSI < -1 and Pn = 0
Controversial: ZSI > 1, ZPn and ZNn > 0
Average: ZSP and ZSI between -.05 and .5
Unclassified: all the rest

Results

Do the percentages of the different sociometric types vary as a function of the context in which they are measured?

Table 1 shows the percentages of the different sociometric types identified in the academic and leisure contexts. As can be observed, the percentages are practically identical in both settings, and there are only some variations that barely exceed one percentage point. Thus, the percentage of students identified as preferred is somewhat higher in the academic context than in the leisure context, and the opposite occurs with the rejected and average types, whose percentages are higher in the leisure context.

In Tables 2 and 3 are presented the percentages of identification by context as a function of sex and cycle, respectively. In the case of sex, the Chi square tests indicate significant differences in the academic context [$\chi^2(5, N = 522) = 13.48, p < .05$] but not in the leisure context [$\chi^2(5, N = 522) = 7.70, p > .05$]. Upon analyzing the corrected standardized residuals, we confirmed that the percentage of unclassified girls was significantly larger than that of the boys in both contexts. However, we confirmed that the percentage of rejected boys was larger than that of the girls, although only in the academic context because there were no differences in the leisure context. In the case of the cycle, the analyses found no differences either in the distribution or the classroom [$\chi^2(5, N = 522) = 1.51, p > .05$] or in the playground [$\chi^2(5, N = 522) = 4.65, p > .05$]. The analysis of the corrected standardized residuals only found differences in the case of the average students, whose percentage seems to decrease with schooling.

Are sociometric types stable in the diverse contexts explored?

As the percentages identified in both contexts were practically the same, we wished to determine whether the students were the same ones, that is, whether the students have the same sociometric status in both contexts analyzed. In Table 4 are shown the percentages of students identified as belonging to each sociometric type as a function of whether they belonged to that type in both contexts or only in one context. Higher cross-contextual stability was observed in the rejected students, where more than half of the students thus identified (53.8%) were rejected in both contexts. They were followed by the unclassified students

Table 1
Distribution of the diverse Sociometric Types as a Function of the Context in the Total Sample

Type	Academic context		Leisure context	
	N	(%)	*N*	(%)
Preferred	73	(14)	66	(12.6)
Rejected	88	(16.9)	95	(18.2)
Ignored	26	(5)	26	(5)
Controversial	21	(4)	18	(3.4)
Average	78	(14.9)	82	(15.7)
Unclassified	236	(45.2)	235	(45)

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(40.6% were unclassified in both contexts), and the preferred students (40.4%). Higher contextual dependence was observed in the ignored types (only 23.8% were ignored in both contexts), average (21.2%), and, especially the controversial type, where only 14.7% of the students thus identified were controversial in both contexts at once. Despite the fact that the rejected and preferred types seem to have lower contextual dependence, we verified that there is a considerable number of students who belong to these types who are only identified as such in one of the contexts. However, most of the students identified as ignored, average, or controversial were only identified this way in one of the contexts, equally divided between the academic and the leisure context. Nevertheless, in the case

Table 2
Distribution of the diverse Sociometric Types as a Function of Sex in both Contexts

	Academic context				Leisure context			
	Boys		Girls		Boys		Girls	
	N	%	*N*	%	*N*	%	*N*	%
Preferred	37	13.3 (-.5)	36	14.8 (.5)	38	13.7 (.8)	28	11.5 (-.8)
Rejected	58	20.9 (2.6)	30	12.3 (-2.6)	56	20.1 (1.2)	39	16 (-1.2)
Ignored	13	4.7 (-.3)	13	5.3 (.3)	15	5.4 (.5)	11	4.5 (-.5)
Controversial	13	4.7 (.8)	8	3.3 (-.8)	12	4.3 (1.2)	6	2.5 (-1.2)
Average	48	17.3 (1.6)	30	12.3 (-1.6)	47	16.9 (.8)	35	14.3 (-.8)
Unclassified	37	39.2 (-2.9)	127	52 (2.9)	110	39.6 (-2.7)	125	51.2 (2.7)

Note: corrected standardized residuals in parentheses. We used a confidence level of .95, so scores higher than 1.96 and lower than -1.96 are interpreted as significant differences.

Table 3
Distribution of the diverse Sociometric Types as a Function of the Educational Cycle in the two Contexts

	Academic context				Leisure context			
	1st Cycle		2nd Cycle		1st Cycle		2nd Cycle	
	N	%	*N*	%	*N*	%	*N*	%
Preferred	24	13 (-.5)	49	14.5 (.5)	23	12.5 (-.1)	43	12.7 (.1)
Rejected	27	14.7 (-1)	61	18 (1)	30	16.3 (-.8)	65	19.2 (.8)
Ignored	9	4.9 (-.1)	17	5 (.1)	10	5.4 (.4)	16	4.7 (-.4)
Controversial	8	4.3 (.3)	13	3.8 (-.3)	6	3.3 (-.2)	12	3.6 (.2)
Average	28	15.2 (.1)	50	14.8 (-.1)	37	20.1 (2)	45	13.3 (-2)
Unclassified	88	47.8 (.9)	148	43.8 (-.9)	78	42.4 (-.9)	157	46.4 (.9)

Note: corrected standardized residuals in parentheses. We used a confidence level of .95, so scores higher than 1.96 and lower than -1.96 are interpreted as significant differences

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Table 4
Distribution of the Sample in the diverse Sociometric Types as a Function of the Context where it was Identified: only in the Academic Context, only in the Leisure Context, or in both Contexts at once (Percentage of the Total of each Type)

	Context					
	Academic		Leisure		Both	
	N	(%)	*N*	(%)	*N*	(%)
Preferred	33	(33.3)	26	(26.3)	40	(40.4)
Rejected	24	(20.2)	31	(26)	64	(53.8)
Ignored	16	(38.1)	16	(38.1)	10	(23.8)
Controversial	16	(47.1)	13	(38.2)	5	(14.7)
Average	50	(37.9)	54	(40.9)	28	(21.2)
Unclassified	100	(29.9)	99	(29.5)	136	(40.6)

Table 5
Distribution of the Sample in the diverse Sociometric Types as a Function of the Context where it was Identified: only in the Academic Context, only in the Leisure Context, or in both at once (Percentage as a Function of Sex)

	Academic		Leisure		Both	
	N	%	*N*	%	*N*	%
Preferred ($\chi^2_{(2)}$= 1.57, $p > .05$)						
Boys	15	28.3 (-1.1)	16	30.2 (1)	22	41.5 (.2)
Girls	18	39.1 (1.1)	10	21.7 (-1)	18	39.1 (-.2)
Rejected ($\chi^2_{(2)}$= 5.63, $p > .05$)						
Boys	15	21.1 (.3)	13	18.3 (-2.3)	43	60.6 (1.8)
Girls	9	18.8 (-.3)	18	37.5 (2.3)	21	43.8 (-1.8)
Ignored ($\chi^2_{(2)}$= 2.09, $p > .05$)						
Boys	9	37.5 (-.1)	11	45.8 (1.2)	4	16.7 (-1.3)
Girls	7	38.9 (.1)	5	27.8 (-1.2)	6	33.3 1.3
Controversial ($\chi^2_{(2)}$= 2.27, $p > .05$)						
Boys	11	47.8 (.1)	10	43.5 (.9)	2	8.7 (-1.4)
Girls	5	45.5 (-.1)	3	27.3 (-.9)	3	27.3 (1.4)
Average ($\chi^2_{(2)}$= 1.23, $p > .05$)						
Boys	33	41.3 (1)	32	40 (-.3)	15	18.8 (-.9)
Girls	17	32.7 (-1)	22	42.3 (.3)	13	25 (.9)
Unclassified ($\chi^2_{(2)}$= 8.40, $p < .05$)						
Boys	55	33.3 (1.4)	56	33.9 (1.7)	54	32.7 (-2.9)
Girls	45	26.5 (-1.4)	43	25.3 (-1.7)	82	48.2 (2.9)

Note: corrected standardized residuals in parentheses. We used a confidence level of .95, so scores higher than 1.96 and lower than -1.96 are interpreted as significant differences.

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Table 6
Distribution of the Sample in the diverse Sociometric Types as a Function of the Context where it was identified: only Academic Context, only Leisure Context, or both at once (Percentage as a Function of Educational Cycle)

	Academic		Leisure		Both	
	N	(%)	*N*	(%)	N	(%)
Preferred ($\chi^2_{(2)}$= 2.40, $p > .05$)						
1st Cycle	8	25.8 (-1.1)	7	22.6 (-.6)	16	51.6 (1.5)
2nd Cycle	25	36.8 (1.1)	19	27.9 (.6)	24	35.3 (-1.5)
Rejected ($\chi^2_{(2)}$= 1.37, $p > .05$)						
1st Cycle	9	23.1 (.6)	12	30.8 (.8)	18	46.2 (-1.2)
2nd Cycle	15	18.8 (-.6)	19	23.8 (-.8)	46	57.5 (1.2)
Ignored ($\chi^2_{(2)}$= 0.50, $p > .05$)						
1st Cycle	6	37.5 (-.1)	7	43.8 (.6)	3	18.8 (-.6)
2nd Cycle	10	38.5 (.1)	9	34.6 (-.6)	7	26.9 (.6)
Controversial ($\chi^2_{(2)}$= 0.91, $p > .05$)						
1st Cycle	7	53.8 (.6)	5	38.5 (0)	1	7.7 (-.9)
2nd Cycle	9	42.9 (-.6)	8	38.1 (0)	4	19 (.9)
Average ($\chi^2_{(2)}$= 2.61, $p > .05$)						
1st Cycle	18	32.7 (-1)	27	49.1 (1.6)	10	18.2 (-.7)
2nd Cycle	32	41.6 (1)	27	35.1 (-1.6)	18	23.4 (.7)
Unclassified ($\chi^2_{(2)}$= 2.42, $p > .05$)						
1st Cycle	42	35 (1.5)	32	26.7 (-.9)	46	38.3 (-.6)
2nd Cycle	58	27 (-1.5)	67	31.2 (.9)	90	41.9 (.6)

Note: corrected standardized residuals in parentheses. We used a confidence level of .95, so scores higher than 1.96 and lower than -1.96 are interpreted as significant differences.

of the controversial students, we observed a tendency to be identified as such only in the academic context (47.1%).

In contrast, these results indicate that more than half of the sample, 54.2%, maintained their status in both contexts, whereas in the rest, 45.8%, changes were observed.

In the differential analyses by sex and cycle (see Tables 5 and 6, respectively), no significant differences were found in the distribution according to the Chi-square tests, although the corrected standardized residuals indicate that the percentage of rejected girls who were only rejected in the leisure context was higher than that of the boys, and that the percentage of unclassified girls in both contexts was also significantly higher than that of the boys.

Are all the combinations of sociometric types explored in the two contexts possible?

As can be observed in Table 7, if we analyze the sociometric status of the sample in both contexts explored, we confirmed that all the combinations are possible, except for three: we found no student who combined the types preferred-rejected, preferred-ignored, and controversial-ignored.

However, we confirmed that the most frequent combinations were: unclassified students in both contexts (26.1%), rejected students in both contexts (12.3%), preferred students in both contexts, and students who were

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Table 7
Distribution of the Total Sample as a Function of their Identification in both Contexts Explored (Percentages of the Total in Brackets)

		Sociometric status in the leisure context					
		Preferred	Rejected	Ignored	Controversial	Average	Unclassified
		N (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)
Sociometric status in the academic context	Preferred	40 (7.7)	0 (0)	0 (0)	4 (.8)	3 (.6)	26 (.6)
	Rejected	0 (0)	64 (12.3)	2 (.4)	3 (.6)	8 (1.5)	11 (2.1)
	Ignored	0 (0)	2 (.4)	10 (1.9)	0 (0)	2 (.4)	12 (2.3)
	Controversial	1 (.2)	4 (.8)	0 (0)	5 (1)	1 (.2)	10 (1.9)
	Average	2 (.4)	4 (.8)	3 (.6)	1 (.2)	28 (5.4)	40 (7.7)
	Unclassified	23 (4.4)	21 (4)	11 (2.1)	5 (1)	40 (7.7)	136 (26.1)

unclassified in one context and average in the other (7.7% in all cases), average students in both contexts (5.4%), students unclassified in the academic context and preferred in the leisure context (4.4%), and students unclassified in the academic context and rejected in the leisure context (4%). For the rest of the combinations, the percentage did not exceed 3% in any case.

Discussion and Conclusions

The first goal proposed in this work was to verify whether the percentages of identification of the diverse sociometric types varied as a function of the scenario in which it was explored. The results found show that the percentages are practically the same, both in the academic context and in the leisure context, so the context does not seem to be a relevant variable when quantifying the percentages of the diverse sociometric types. Moreover, the percentages are very similar to those found in other works (García-Bacete, 2006; 2007). Although we confirmed that the percentages can vary from one classroom to another (García-Bacete et al., 2008), when analyzing large samples, the percentages seem to show some stability, which tends to be maintained throughout schooling (García-Bacete et al., 2008; Martín & Muñoz de Bustillo, 2009), and, as we have verified, the percentages do not seem to vary when exploring different contexts. Nevertheless, the differential analyses by sex indicate that, whereas in the academic context, the percentage of rejected boys is higher than that of the girls, as shown in the research (García-Bacete et al., 2010), this does not occur in the leisure context, where no significant differences were found, and where rejection does not seem to be an eminently masculine characteristic. In fact, in the case of the rejected girls, the number of girls who are only rejected in the leisure context is quite higher than that of the boys. The very different patterns of behavior shown by boys and girls (Sureda et al., 2009) could underlie these results, because the masculine characteristics of higher aggressiveness, higher preference for social interaction focused on physical activity, and poorer adaptation to social expectations could foment their being rejected in more formal contexts, whereas the same characteristics may acquire a more positive meaning in less formal environments (Martín & Muñoz de Bustillo, 2009).

However, the results of the analyses as a function of the educational cycle support those found in the literature, in the sense that sociometric status is fairly stable throughout schooling (García-Bacete et al., 2008, 2010; Martín & Muñoz de Bustillo, 2009).

The context has been shown to have great influence on students' behavior, as well as on the relations they establish with each other (Bierman, 2004; Díaz-Aguado, 2006; García-Bacete et al., 2010; Martín & Muñoz de Bustillo, 2009; Muñoz de Bustillo & Martín, 2007; Sheridan, et al., 2003). To test the degree to which students maintain their sociometric status regardless of the context where it was examined was the second goal of this study. In general, approximately one half of the sample maintained their status, and the other half changed it. More specifically, the results found indicate that, for all sociometric types, all the possibilities exist: being identified as a certain type in both contexts or only in one context: the academic of the leisure context. Nevertheless, there were some differences among the types. If we were to extract a cross-contextual stability index, we would see that the rejected type is the most stable, because more than one half of the students thus identified were rejected in both contexts. Next would come the unclassified students, the preferred students, the ignored students and, lastly, the controversial type, which seems to be the type that is most dependent on context for its identification, because less than 15% of the students thus identified were controversial in both contexts at once, whereas almost half of them were only controversial in the academic context. Martín and Muñoz de Bustillo (2009)

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analyzed the behavioral differences shown by preferred and rejected students from a contextual perspective and found that having communication problems could be the characteristic associated with the contextual stability of rejection, because this attribute always impairs peer relations, independently of the context in which they develop and of the task carried out. With regard to preferred students, not feeling superior was the attribute that best defined the preferred students in the academic context, possibly because of the importance that peers grant to helping and cooperative behaviors during academic activities, whereas aggressiveness differentiated the preferred students only in the leisure context, due to the fact that certain levels of aggressiveness, when associated with games and sports, can even have a positive nuance.

This difference in the peer rating of classmates' behavioral characteristics depending on the context could also underlie the great contextual dependence that is shown in the identification of controversial students. In their review, Gifford-Smith and Brownell (2003) found that both the identification and the behavioral description of controversial students varied enormously in the diverse studies analyzed, much more so than in the case of the other sociometric types, even attributing to these students behavioral characteristics typical both of preferred and rejected students. The results found in our study, which reveal great contextual dependence in the identification of controversial students, could explain the lack of consistency found in the work of Gifford-Smith and Brownell, because the context was not taken into account when identifying the sociometric types, and the same thing may occur with the preferred and rejected students, who are thus identified in the diverse contexts as a function of certain behavioral characteristics that are rated differentially by their classmates depending on the context and the task.

Once the contextual dependence of the sociometric status was analyzed, the third goal of this work was to determine whether all the combinations of types are possible when examining them in two different contexts. The results indicate that sociometric status is fairly flexible, and that it is possible to find students who combine all the types in the diverse contexts, except for three: preferred-rejected, preferred-ignored, and controversial-ignored. This result is of enormous interest in view of interventions to improve social integration at school. As it has been shown that intervention in play-related scenarios or through cooperative play improves learning competence, social development, and the quality of interpersonal relations (Garaigordobil, 2008; Romera, Ortega, & Monks, 2008), identifying sociometric status in both contexts can facilitate intervention designs. For example, this type of intervention may be easier with students who are rejected in the classroom but who have another status in the leisure context (unclassified, average, etc.), and they may be more complicated with those who are rejected in both contexts. In addition, as prosocial students can be powerful behavioral models for children with social skills deficits (Inglés et al., 2008), being able to identify a higher number of preferred boys and girls when asking in diverse contexts becomes an extremely interesting resource in interventions to improve social integration.

Another implication of these results is that the percentages of identification of the sociometric types change considerably as a function of the context explored, thus the importance of contextualizing sociometric questionnaires. Although some temporal stability was found (García-Bacete et al., 2008), this has been shown to depend greatly on the interpersonal dynamics established in each group (Bierman, 2004), and on the contexts where they occur and the tasks performed, as shown by our work and other studies (Martín & Muñoz de Bustillo, 2009; Muñoz de Bustillo & Martín, 2007). Moreover, other variables such as the role performed by teachers with regard to their directivity in the tasks carried out also have great influence on the relations established among the students, especially in the classroom (Ortega et al., 2009).

There are two main conclusions reached through this work. Firstly, the sociometric status depends to a great extent on the context, which alerts us about the need to elaborate contextualized instruments to measure it, which would allow us to tap the entire relational richness that students develop at school. And the second conclusion, which follows from the first, is that contextualized identification of the relational dynamics at school would allow us to design more efficaciously interventions aimed at improving social integration, adapt them to the many sociometric situations that, as seen in this work, can occur in our educational centers.

We do not want to finish this work without commenting on some of its main limitations. In this investigation, we used a single instrument, and although sociometric questionnaires are one of the most powerful instruments to analyze peer relations, in future studies, it would be appropriate to combine them with information provided by other agents, for example, parents and teachers. Also, although we asked in two different contexts, both of them belong to the academic reality and, as noted by García-Bacete et al. (2010), one of the challenges of investigation in this field is to open up to other realities, such as the family and the community, which would doubtless help us to better understand such a complex phenomenon as interpersonal relations.

References

Arruga, A. (1987). *Introducción al test sociométrico* [Introduction to the sociometric questionnaire]. Barcelona: Herder.

Bierman, K. (2004). *Peer rejection. Developmental, processes and intervention strategies*. New York, NY: Guilford Press.

Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between

https://doi.org/10.5209/rev_SJOP.2011.v14.n1.7 Published online by Cambridge University Press

peer group rejection and children's classroom engagement and achievement. *Journal of Educational Psychology, 98*, 1-13. doi:10.1037/0022-0663.98

Bukowski, A. F., Newcomb, A. F., & Hartup, W. W. (Eds.) (1998). *The company they keep: Friendship in childhood and adolescence*. New York, NY: Cambridge University Press.

Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's social status: A five-year longitudinal study. *Merrill–Palmer Quarterly: Journal of Developmental Psychology, 29,* 262-282.

Coie, J. D., Dodge, K. A., & Copotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology, 18*, 557-570. doi:10.1037/0012-1649.18.4.557

Díaz-Aguado, M. J. (2006). *Del acoso escolar a la cooperación en las aulas* [From bullyng to cooperation in the classrooms]. Madrid: Pearson.

Dodge, K. A., Coie, J. D., Pettit, G. S., & Price, J. M. (1990). Peer status and aggression in boys' groups: Developmental and contextual analyses. *Child Development, 61,* 1289-1309. doi:10.1111/j.1467-8624.1990.tb02862.x

Fernández-Enguita, M., Gaete, J. M., & Terrén, E. (2008). ¿Fronteras en las aulas? Contacto transcultural y endogamia en las interacciones del alumnado [Are there borders in classroms? Transcultural Exchange and endogamy in students interactions]. *Revista de Educación, 345*, 157-181.

Fuentes, M. J. (1999). Los grupos, las interacciones entre compañeros y las relaciones de amistad en la infancia y adolescencia [Groups, peer interactions and friendship relations in childhood and adolescence]. In F. López, I. Etxebarria, M. J. Fuentes, & M. J. Ortiz (Coords.), *Desarrollo afectivo y social* [Emotional and social development] (pp. 151-180). Madrid: Pirámide.

Garaigordobil, M. (2008). Assessment of the effects of a cooperative play programme for children aged 10-11 years on social adaptation and on the perception that parents, teachers and peers have of children's prosocial behaviours. *Infancia y Aprendizaje, 31*, 303-318. doi:10.1174/021037008785702974

García-Bacete, F. J. (2006). La identificación de los alumnos rechazados. Comparación de métodos sociométricos de nominaciones bidimensionales [Identification of rejected students: Comparing two-dimensional nominations sociometric methods]. *Infancia y Aprendizaje, 29*, 437-451. doi:10.1174/021037006778849585

García-Bacete, F. J. (2007). La identificación de los alumnos rechazados, preferidos, ignorados y controvertidos en el aula [The identification of rejected, liked, neglected, and controversial students in the classrom]. *Revista de Psicología General y Aplicada, 60*, 25-46.

García-Bacete, F. J., García, I., & Monjas, I. (2008). Distribución sociométrica en las aulas de chicos y chicas a lo largo de la escolaridad [Sociometric distribution of boys and girls during the school period]. *Revista de Psicología Social, 23*, 63-74. doi:10.1174/021347408783399480

García-Bacete, F. J., Sureda, I., & Monjas, M. I. (2010). El rechazo entre iguales en la educación primaria: una panorámica general [Peer rejection in elementary school: A general outlook]. *Anales de Psicología, 26*, 123-136.

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendship and peer networks. *Journal of School Psychology, 41*, 235-284. doi:10.1016/S0022-4405(03)00348-7

Herrero, M. L., & Pleguezuelos, C. S. (2008). Patrones de conducta interactiva en contexto escolar multicultural [Patterns of interactive behavior in a multicultural school context]. *Psicothema, 20*, 945-950.

Inglés, C. J., Martínez-Moteagudo, M. C., Delgado, B., Torregrosa, M. S., Redondo, J., Benavides, G.,… García-López, L. J. (2008). Prevalencia de la conducta agresiva, conducta prosocial y ansiedad social en una muestra de adolescentes españoles: un estudio comparativo [Prevalence of aggresive behaviour, prosocial behaviour, and social anxiety in a sample of Spanish adolescents: A comparative study]. *Infancia y Aprendizaje, 31*, 449-461. doi:10.1174/021037008786140968

Jiménez, T., Moreno, D., Murgui, S., & Musitu, G. (2008). Factores psicosociales relacionados con el estatus social en el aula: el rol de la reputación social, la amistad, la conducta violenta y la relación con el profesor [Psychosocial factors related to the student's social status in the classroom: the rol of social reputation, friendship, violent behaviour and relationship with the teacher]. *International Journal of Psychology and Psychological Therapy, 8*, 227-236.

Ladd, G. W., Herald-Brown, S. L., & Reiser, M. (2008). Does chronic classroom peer rejection predict the development of children's classroom participation during the grade school years? *Child Development, 79*, 1001-1015. doi:10.1111/j.1467-8624.2008.01172.x

López, F. (2008). *Necesidades en la infancia y en la adolescencia. Respuesta familiar, escolar y social* [Needs of childhood and adolescence. Family, school and social responses]. Madrid: Pirámide.

Martín, E., & Muñoz de Bustillo, M. C. (2009). Un análisis contextual de la preferencia y el rechazo entre iguales en la escuela [A contextual analysis of peer acceptance and peer rejection at school]. *Psicothema, 21*, 439-445.

Martín, E., Muñoz de Bustillo, M. C., Rodríguez, T., & Pérez, Y. (2008). De la residencia a la escuela: la integración social de los menores en acogimiento residencial con el grupo de iguales en el contexto escolar [From residential care to school: Peer relationships at school of minors in residential care]. *Psicothema, 20*, 376-382.

McElhaney, K. B., Antonishak, J., & Allen, J. P. (2008). "They like me, they like me not": Popularity and adolescents' perceptions of acceptance predicting social functioning over time. *Child Development, 79*, 720-731. doi:10.1111/j.1467-8624.2008.01153.x

Monjas, M. I., Sureda, I., & García-Bacete, F. J. (2008). ¿Por qué los niños y las niñas se aceptan y se rechazan? [Why do children accept and reject each others?] *Cultura y Educación, 20*, 479-492. doi:10.1174/113564008786542181

https://doi.org/10.5209/rev_SJOP.2011.v14.n1.7 Published online by Cambridge University Press

Moreno, M. C. (1990). Desarrollo y conducta social de los 6 años a la adolescencia [Development and social behaviour from 6 years old to adolescence]. In J. Palacios, Á. Marchesi, & C. Coll (Comps.), *Desarrollo psicológico y educación 1. Psicología evolutiva* [Psychological development and education 1. Developmental psychology] (pp. 405-430). Madrid: Alianza.

Muñoz de Bustillo, M. C., & Martín, E. (2007). "El mapa de mi ciudad escolar": una guía para analizar la convivencia en la escuela [My school city map: A guide to analyse the cohabitation in school]. In J. J. Gázquez, M. C. Pérez, A. J. Cangas, & N. Yuste (Eds.), *Mejora de la convivencia y programas encaminados a la prevención e intervención del acoso escolar* [Improvement of cohabitation and programmes for bullyng prevention and intervention] (pp. 43-48). Granada: Grupo Editorial Universitario.

Muñoz, V., Moreno, M. C., & Jiménez, I. (2008). Las tipologías de estatus sociométrico durante la adolescencia: contraste de distintas técnicas y fórmulas para su cálculo [Sociometric typologies during adolescence: Contrasting different scoring techniques and formulas]. *Psicothema, 20*, 665-671.

Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, and average sociometric status. *Psychological Bulletin, 113*, 99-128. doi:10.1037//0033-2909.113.1.99

Ortega, R., & Mora-Merchán, J. A. (2008). Las redes de iguales y el fenómeno del acoso escolar: explorando el esquema dominio-sumisión [Peer networks and the bullyng phenomenon: Exploring the control submission schema]. *Infancia y Aprendizaje, 31*, 515-528. doi:10.1174/021037008786140922

Ortega, R., Romera, E. M., Mérida, R., & Monks, C. (2009). Actividad e interacción entre iguales: explorando el mapping como instrumento de observación en aulas de Educación Infantil [Activity and peer interaction: Exploring mappings as observational tool in preschool classroms]. *Infancia y Aprendizaje, 32*, 405-420. doi:10.1174/021037009788964141

Ortiz, M. J., Aguirrezabala, E., Apodaka, P., Etxebarría, I., & López, F. (2002). Características emocionales, funcionamiento social y satisfacción social en escolares [Emotional characteristics, social functioning and social satisfaction in school age children]. *Infancia y Aprendizaje, 25*, 195-208. doi:10.1174/021037002317417822

Rodkin, P. C., Farmer, T. W., Pearl, R., & van Acker, R. (2000). Heterogeneity of popular boys: Antisocial and prosocial configurations. *Developmental Psychology, 36*, 14-24. doi:10.1037/0012-1649.36.1.14

Rodríguez, A., & Morera, D. (2001). *El sociograma. Estudio de las relaciones informales en las organizaciones* [The sociometric questionnaire. The study of social relationships on unofficial organizations] . Madrid: Pirámide.

Romera, E. M., Ortega, R., & Monks, C. (2008). Impacto de la actividad lúdica en el desarrollo de la competencia social [Impact of the play activity in the development of social competence]. *International Journal of Psychology and Psychological Therapy, 8*, 193-202.

Sheridan, S. M., Buhs, E. S., & Warnes, E. D. (2003). Childhood peer relationships in context. *Journal of School Psychology, 41*, 285-292. doi:10.1016/S0022-4405(03)00049-9

Sureda, I., García-Bacete, F. J., & Monjas, I. (2009). Razones de niños y niñas de diez y once años para preferir o rechazar a sus iguales [Reasons why ten and eleven years old children prefer or rejected their peers]. *Revista Latinoamericana de Psicología, 41*, 305-321.

Trianes, M. V., Muñoz, A. M., & Jiménez, M. (2007). *Las relaciones sociales en la infancia y en la adolescencia y sus problemas* [Social relationships in childhood and adolescence and their problems]. Madrid: Pirámide.

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