

# Primary School Children's Representation of the Interpersonal Relationship between Competitive Parties: The Winner and the Loser\*

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Despite much research on competition in childhood, there are just a few studies examining systematically children's understanding and representation of the interpersonal relationship between competitive parties in different outcome contexts as winning and losing. One possible way to examine this representation is via drawings. The aim of the present study was to investigate 8-9 years-old primary school children's pictorial representation of winning and losing with a special *focus* on the relationship between winner and loser. 30 second grade primary school children's drawings on winning and on losing (mean age: 8,6) were analysed using the PAIR method (Pictorial Assessment of Interpersonal Relationship) (Bombi, Pinto, Cannoni, 2007) which investigates the interpersonal relationships along 6 main scales: Cohesion, Distancing, Similarity, Value, Emotions and Conflict. The results show that 8-9 years old children can clearly differentiate the winner's and the loser's emotional states and perspectives in their drawings. The figures (the winner and the loser), and the relationship between them were represented in a different way in the context of winning and losing. It shows that the interpersonal relationship between the winner and loser is characterized by different emotions and interpersonal motivations depending on whose perspective (the winner's or the loser's) is activated. The results indicate that the emotional and interpersonal realm between the winner and loser is perceived and represented in a different way depending on the child's position in terms of outcome i.e. experiencing the situation as winner or loser.

Key words: *competition, winning, losing, drawing, PAIR, primary school children.*

## I

### Introduction

Competition is a form of social behaviour which can be present in all stages of development and in all areas of our life accompanied by its outcomes, winning and losing (Fülöp, 2009). Family life, being in the playground and also school life provides numerous situations for structured and unstructured competition, where children can develop attitudes toward competition, and build coping

\* This paper was written while all authors were supported by the grant of the National Research Fund (OTKA, K 77691).

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skills to manage winning and losing. Children can compete for grades, school achievement, popularity and peer acceptance, physical strength, sports, the teacher's attention (Fülöp, 2006; Fülöp, Sándor, 2008). Consequently, entering primary school children already have rich information to develop sophisticated and elaborated mental representations of winning and losing and of the relationship between the winner and the loser.

### 1.1. Developmental aspects of competition in childhood

Competition is based on social comparison, on the process of evaluating one's opinions and abilities in relation to others (Festinger, 1954). Although autonomous achievement motivation is already perceived in the preverbal stage of development (Veroff, 1969), children become sensitive to information from social comparison around the age of 3 (Mostache, Bragonier, 1981). Preschoolers actively and spontaneously engage in social comparison, and entering school the intensity of social comparison increases. Ruble and her colleagues (Ruble, Feldman, Boggiano, 1976; Ruble *et al.*, 1980) conducted numerous studies to investigate the development of social comparison in childhood in different age groups (kindergarten, first and second graders). Their studies show that social comparison becomes more intense with age and children over the age of 8 years are better able to use comparative information for the purpose of self-evaluation and to improve their performance. Children typically choose to compare more often with similar peers (e.g. same age, same sex), because those ones provide the most meaningful information for their own self-evaluation (France-Kaartrude, Smith, 1985). Boys typically compare with boys and girls typically compare with girls (Chafel, 1985). Younger children (first graders) are more interested than older children (4th graders) in comparing with similarly performing others (France-Kaartrude, Smith, 1985).

Considering sharing behaviour, young children (3-4 years) are typically egoistic and prefer to maximize their own individual gain regardless of the other's gain (Verba, 1994), however, children around the age of 3.5 years are already able to give competitive choices, thus maximizing their own outcomes relative to the partner's outcomes (McClintock, Moskowitz, 1976). By 5 to 6 years, children fully understand the consequences of their choices and can appropriately explain their decisions. In Sándor and her colleagues' study (Sándor *et al.*, 2007) kindergarten-aged children preferred competitive choices and they were even able to give adequate reasoning for their decisions. Competitive choices increase with age and are the most prevalent choice among 9-12 year-olds (Knight *et al.*, 1987). Understanding the long-term individual benefit of cooperative choices (maximizing joint gain) begins at 6-7 years-old (McClintock *et al.*, 1976). Sheridan and Williams (2006) applied video observations, individual and group interviews, as well as drawing and, found that already preschool children can apply both competition and cooperation simultaneously.

Several studies show that early school-age children are especially sensitive to and highly aware of the outcome (winning or losing) of a competitive game (e.g. Underwood *et al.*, 1999); moreover they are strongly receptive to and actively seek out information referring to their position in relation to others (e.g. Ruble, Frey, 1991). Additionally, at this age level they are more likely to take into consideration parents', teachers', and peers' expectations while respecting competitive rules contrary to older children (Kasik, 2010). In terms of winning and losing, primary school children's emotional reactions differ depending on the sequences of winning and losing i.e. in case losing follows winning or losing follows losing; losing after winning triggers more intense negative reactions (Hughes *et al.*, 2001). Around the ages of 7-8, children's conception of competition becomes more sophisticated, they are able to differentiate between fair and unfair competition, moreover to take into consideration whether the outcome was influenced by effort or by luck (Thorkildsen, White-McNulty, 2002). In Sándor's (2010) study 8-9 years old children were interviewed about competition and the results showed that competition was a well-known, frequently experienced and positive concept for them mostly interpreted in the frame of contest and winning-losing situation; the most common function connected to competition was 'self-evaluation by social comparison'.

In order to fully understand competitive situations certain social-cognitive skills are needed. Perspective-taking ability is crucial in order to be able to take into consideration others' beliefs and opinions. According to Selman (1980) who developed a five-stage model to describe the development of perspective-taking, children around the ages of 5 to 9 years understand that people may have different perspectives because of the different information they have access to, from the ages of 7 to 12 years children are already able to view their own thoughts, feelings, and behaviour from the other person's perspective. Similarly to perspective taking ability children's understanding of emotions also changes as they develop. In early years (around the ages of 3-4) children's understanding of emotion depends on the ability to associate facial features and situational cues with particular emotion (e.g. tears- sadness) (Pons *et al.*, 2004). As they develop, around the ages of 5-8, children become aware of the psychological aspects of emotion and begin to understand more complex or secondary emotions such as pride, envy or shame that frequently emerge in competitive situations (Saarni, 1999; Harter, 1999).

Consequently, entering primary school children are already equipped with a well-developed mental-cognitive structure to understand the social dynamic taking place in competitive situations and interpret adequately the emotions and feelings of competitive parties, the winner and the loser.

### 1.2. Gender differences in competition in childhood

Beside the prevalence of competition among school-age children, several studies point out existing gender differences in competition (Schneider *et al.*, 2011).

Ruble, Feldman and Boggiano (1976) investigated social comparison between young children in achievement situations and found that boys observed their partner's work significantly more frequently than girls did i.e. compared their own achievement to the other. Knight and Chao (1989) found that in a reward allocation task girls choose more frequently individualistic strategies (maximizing their own outcomes) contrary to boys who mostly use competitive strategies (maximizing relative gain). Considering the sex of competitive parties, girls engage in competition more frequently if the partner is a girl (Green, 2003); similarly, girls from single-sex schools are more likely to enter competition than girls from coeducational schools (Booth, Nolen, 2009). In Ahlgren and Johnson's study (1979), 8-18 aged boys showed consistently more positive attitudes toward competition, and girls showed more positive attitudes toward cooperation at all age levels. Other studies, however, show that girls while following the social norm of kindness can be highly competitive and aggressive just their competitive aspiration is expressed in a more latent, indirect way (Hughes & Dunn, 1998; Fülöp, 2005). Consequently, girls are not less competitive than boys per se, rather their competition is expressed in a different style, thus girls are more indirect, manipulative in competition than boys (Pepitone, 1980). Boys – typically from school age – prefer team sports and situations where they can form larger same-sex groups (Benenson, 1990; Benenson *et al.*, 2001). In boys' groups, dominance hierarchy becomes an important factor that is mostly based on visible physical characteristics such as physical power, fastness and agility. Boys typically compete in an explicit, direct way for status, power and territory; furthermore male interactions mostly consist of direct physical challenges and rough-and-tumble play (Archer, 2006). Girls prefer interpersonal relationships and dyadic interactions (Benenson, Apostoleris, Parnass, 1998), and less frequently engage in direct competition than boys (Benenson *et al.*, 2001). Girls tend to smooth the outcome differences in games where the winner and the loser can be clearly distinguished contrary to boys who may even deepen the conflict (Lever, 1976). Sándor (2010) interviewed 8-9 years old children in relation to competition, winning and losing and the results showed that girls reported more often about the possible harming effect of winning on interpersonal relationships and more frequently referred to the positive aspects of losing regarding interpersonal relationships. Additionally, 8-9 years old girls more frequently than boys depicted losers with tears (Sándor, Fülöp, 2007), which might show the effect of socialization in harmony with traditional gender role expectations i.e. "boys don't cry" (Vingerhoets, Scheirs, 2000).

### 1.3. Psychology of winning and losing

School life generates several competitive situations where pupils can often experience all types of outcomes of competition. Winning and losing can be

defined as special forms of success and failure, when success and failure is defined not in relation to the goal only but also to another person, the rival. Winning and losing are inevitable outcomes of competitive processes (Fülöp, Berkics, 2007).

Pekrun (1992) classified emotional experiences related to achievement along two dimensions – valence and activation – which can be relevantly applied to categorize reactions to winning and losing as well. According to Pekrun, achievement emotions could be positive or negative, and activating or deactivating resulting four possible combinations:

1. Positive activating emotions (e.g. joy, pride, hope);
2. Positive deactivating emotions (e.g. relief, relaxation);
3. Negative activating emotions (e.g. anger, frustration, disappointment);
4. Negative deactivating emotions (e.g. sadness, hopelessness, boredom).

Applying the classification in the field of losing, it can be seen, that frustration and disappointment are activating negative emotions because they keep the person active after losing, while sadness and depression are deactivating emotions since they keep the person stuck in the negative emotional state not helping him/her to step out of the undesirable situation and consider possible resources to get success in the future.

Winning and losing are complex phenomena that happen in a social context, therefore it is necessary to investigate the social context, the relationship between competitors, especially between the winner and loser in order to understand profoundly the complex reaction patterns to winning and losing. Fülöp (2004) argues that rivals can be conceived as motivators, comparative parties, opponents to win over and enemies to be “destroyed”, moreover the attributed role of rival can determine qualitatively different ways of competitive processes. According to Sloman (2000), the relationship between the winner and loser is especially important in accepting defeat. If the winner permanently dishonours the loser or emphasizes his/her defeat, aggression and antipathy will be induced in the loser towards the winner which hinder constructive coping with losing. Although the stress and psychological literature overemphasize coping with losing, dealing adaptively with winning is also an issue (Brim, 1988). The reactions of others to winning and the winner and the fear of the anticipated negative reactions have a great influence on coping with winning. This kind of fear of the negative interpersonal consequences of being a winner was referred to as “social caution” by Fülöp and Berkics (2007).

Coping with winning and losing can be connected with one’s self-evaluation and self-esteem (Price, 2000). Although coping with different outcomes of competitive processes is highly important in personality development especially in early childhood and adolescence there are just a few studies investigating the affective, behavioural and cognitive reactions to winning and losing in a complex and systematic way.

In a study, Sándor (2010) revealed that winning and losing are highly emotionally loaded concepts for primary school students. Winning for 8-9 years old children is typically connected with positive feelings, including such complex emotions as pride and feeling of success. At the same time they even see the possible negative effect of winning on interpersonal relationships (e.g. fear of other's negative reactions like jealousy and social exclusion; feeling sorry for the loser). The concept of losing is also a complex phenomenon for 8-9 years old children; associated typically with negative feelings (e.g. sadness, disappointment), although they mentioned the positive aspects of losing as well (e.g. contribution to self-knowledge, emphasis on participating).

Different reactions to winning and losing couple with different coping strategies, and have different effects on cognitive processes. In a study of Baker-Ward and her colleagues (Baker-Ward, Eaton, Banks, 2005), members of losing and winning soccer teams were interviewed about their final game. The 10 years old children reported different aspects of the competition depending on the outcome. Members of winning teams mentioned more frequently central information about the play which were linked directly to the final outcome of the game, moreover provided more cohesive narratives about the competition and discussed the events twice as often with others than did members of losing teams. Children who lost the game included more emotional appraisals (e.g. *"It was a really hard loss, because we had done so good, and we had one shot that like missed the goal by like a foot"*) and reflective, interpretative comments in their narratives (e.g. *"They were really a good team"*).

In a study, Fülöp and Berkics (2003) compared English and Hungarian secondary school students according to the reactions to winning and losing. The findings showed that Hungarian students mentioned more positive emotions related to winning and more often reported about the motivating and self-esteem enhancing aspects of winning than did their English counterparts. In case of losing, the Hungarian students mentioned more deactivating emotions (e.g. sadness) contrary to the English students who reported more activating feelings to losing (e.g. frustration). According to Harter (1999), there is a correlation between one's attitude toward failure and depression. In her study, students who attributed failure to a deficit in the self reported more frequently low self-esteem and hopelessness contrary to those who considered failure as a stepping stone to changes and took responsibility for failure without blaming themselves. Fülöp (1992) named "pathfinders" those gifted children who referred to failure as a mean to progress.

In another study with 360 Hungarian secondary school students, Fülöp and Berkics (2007) used a close-ended questionnaire to identify possible reactions to competitive processes. Four different factors were revealed as reactions to winning:

1. joy and activation (e.g. being enthusiastic, elevated, feeling successful and competent and being energized);
  2. Narcissistic self enhancement and devaluation of others (also malicious joy, looking down upon the loser, feeling superior etc.);
  3. Social caution (having negative emotions related to winning, like embarrassment, shame and fear of reactions of others and being cautious about winning);
  4. Contentment (relaxed feelings after winning).
- In case of losing a four-factor solution was found:
1. Self-devaluation (e.g. I am a bad person, I am useless, I am stupid, I am afraid of not being loved etc.);
  2. Sadness and frustration (e.g. I am sad, I am angry at myself, I am nervous, I hate losing etc.);
  3. Aggression towards the winner (e.g. hates the winner, gets mad, envious etc.);
  4. Denial of losing (e.g. does not care, tired, bored etc.).

## 2

### The aim of the study

Despite intense research interest in competition in childhood there is a relative gap in the competition literature; just a few studies intended to investigate children's representations and understandings of winning and losing, more-over the representation of the relationship between the winner and loser (e.g. Fülöp, Sándor, 2008; Sándor, 2010). The present study is part of a broader research project focusing on 8-9 years children's representations of competition, winning and losing. In order to understand profoundly the investigated phenomena the authors used triangulation, so three different but complementary methods – drawing technique, associative method, and clinical interview – were applied to reveal the conceptual framework that 8-9 years old children develop regarding competition. In a previous study (Sándor, Fülöp, 2007; Fülöp, Sándor, 2008) the authors analyzed the drawings focusing on the areas of competition; the persons on the drawings; the depicted symbols of competition; as well as the represented emotions. The results showed that most typical area of competition was sports, especially individual sports like running contrary to team sport situations. In terms of the competing parties children typically drew same-sex competition. This previous analysis focused mostly on the thematic aspects of the drawings, while the interpersonal aspects of competition, the relationship between the winner and the loser were not in the focus of analysis. The goal of the present investigation is to reveal the representation of the interpersonal characteristics of winning and losing. For this purpose the PAIR method (Pictorial Assessment of Interpersonal

Relationship) (Bombi, Pinto, Cannoni, 2007) was used, which research instrument is an appropriate tool to investigate pictorial representations of dyadic relationships in a systematic and complex way.

### **3 Method**

#### **3.1. Participants and procedure**

Altogether 67 second grade primary school children – 33 boys and 34 girls – participated in the study; their average age was 8.6 years. Participants were recruited from two schools in downtown Budapest.

Children were asked to draw a picture about each of the investigated topics in a group situation in the class in two separate sessions. The order of the topics was fixed; in the first session drawings of winning, then drawings of losing were completed. All of the children were provided with an A4 white paper (cm. 21 × 28.7) and the same set of 6-pieces coloured pencils by the researchers. Group settings could reduce the variety of topics by being influenced by each other's work, therefore children were encouraged to individual work via instruction and children who sat side by side were split by a book to prevent copying each other.

The children received the following instruction:

I am going to tell you a word. Please, prepare a drawing in relation to this word (*winning/losing*). Do not think too much; draw something which comes first into your mind. There are no wrong or right pictures. We want all of you to draw by yourselves; we are interested in your drawings not your classmates'. You have 45 minutes to complete your picture. If something is not clear or you have any questions, please raise your hands and we will help you. Good work!

When the drawings were finished they were collected and the researchers first applied an association task and then carried out a clinical interview with all of the children individually in order to get the necessary information in relation to the pictures (naming persons, acts etc. on drawings). The clinical interview consisted of two parts. In the first part the child was asked about his/her drawing (what is the drawing about, who is who in the picture etc). The second part of the interview consisted of additional questions in order to get a better understanding of the children's views on winning and losing (e.g. children's attitudes, coping strategies and emotional reactions toward winning and losing; parents' and teachers' messages in relation to winning and losing). These questions went beyond and complemented the information extracted from the pictures. The analysis of drawings was based on the winner and loser identified by children themselves in the interview; this procedure was especially important in case of drawings depicting more than two figures.

The analysis of the children's drawings concentrated on four comparative aspects:

1. The representation of the relationship between the winner and the loser in the drawings of "*winning*";
2. The representation of the relationship between the winner and the loser in the drawings on "*losing*";
3. The comparison of the representation of the *winner* in the drawings of "*winning*" with the *winner* in the drawings of "*losing*";
4. The comparison of the representation of the *loser* in the drawings of "*winning*" with the *loser* in the drawings of "*losing*".

### 3.2. Research instrument

The PAIR method (Pictorial Assessment of Interpersonal Relationship) (Bombi, Pinto, Cannoni, 2007) was applied to investigate pictorial features of dyadic interpersonal relationships in a complex and coherent system. The method considers drawings as communicative tools, which can be used to reveal the children's understanding of social world, social phenomena and social emotions. PAIR can be reliably applied to detect how children understand interpersonal phenomena in general (e.g. friendship, competition, cooperation), social status (e.g. poor-rich), how they discriminate among different categories of relationships (e.g. siblinghood-friendship, winner-loser) and how they represent relationships under special circumstances (siblings in harmony- in conflict) (*ibid.*).

The research instrument can be applied to 6-14 years old children to analyze and compare drawings of interpersonal relationships along 6 main scales: Cohesion, Distancing, Similarity, Value, Emotions, Conflict (see TAB. 1). In the official coding system, the Similarity scale did not include the "Sex" subscale, nevertheless we added this aspect to the analysis because of its importance to the investigated topics (winning, losing).

In order to be able to apply the PAIR method we included into the analysis only those drawings that depicted two entire human figures. Therefore the analysis was carried out on a sample of 30 children (14 boys and 16 girls) who depicted both the winner and loser in both of their drawings. Consequently, PAIR was used in case of 30 drawings related to winning and 30 drawings related to losing. The drawings which were excluded from the final analysis mostly consisted of animals or human figures which were covered by something thus the entire body was not exposed in the drawing (e.g. sitting in a car).

The drawings were analyzed by two independent coders, and codings were compared for agreement. Any ambiguous detail or disagreement was discussed by the coders until they have reached an agreement.

TABLE I  
The structure of PAIR (based on Bombi *et al.*, 2007)

Main Scale	Subscales/Categories	Short description
Cohesion (C)	<ol style="list-style-type: none"> <li>1. Looking at</li> <li>2. Moving towards</li> <li>3. Coordinated activity</li> <li>4. Proximity</li> <li>5. Common area</li> <li>6. Unity</li> </ol>	Measures the degree of interdependence between figures.
Distancing (D)	<ol style="list-style-type: none"> <li>1. Looking away</li> <li>2. Moving away</li> <li>3. Independent activity</li> <li>4. Remoteness</li> <li>5. Individual area</li> <li>6. Separation</li> </ol>	Measures the degree of autonomy of figures.
Similarity (S)	<ol style="list-style-type: none"> <li>1. Height</li> <li>2. Position</li> <li>3. Body</li> <li>4. Attributes</li> <li>5. Colours</li> <li>6. Sex</li> </ol>	Measures the psychological affinity between figures.
Value (V)	<ol style="list-style-type: none"> <li>1. Space occupied</li> <li>2. Dominant position</li> <li>3. Number of body parts</li> <li>4. Number of attributes</li> <li>5. Number of colours</li> </ol>	Measures the comparative value of figures.
Emotions (E)	<p>Figure's emotions: (nominal categories)</p> <ol style="list-style-type: none"> <li>1. Neutrality</li> <li>2. Contentment</li> <li>3. Hostility</li> <li>4. Discontent</li> </ol> <p>Emotional climate: (nominal categories)</p> <ol style="list-style-type: none"> <li>1. Opposite emotions</li> <li>2. Unilateral emotions</li> <li>3. Shared neutrality</li> <li>4. Shared emotions</li> </ol>	Measures the emotions displayed by each figure and the emotional climate
Conflict (CT)	<p>Ordinal categories:</p> <ol style="list-style-type: none"> <li>1. No conflict</li> <li>2. Disagreement</li> <li>3. Opposition</li> <li>4. Aggression</li> <li>5. Breaking-off</li> </ol>	Measures the degree of conflict in the relationship.

## 4 Results

### 4.1. Scales of cohesion and distancing

Because each subscale of Cohesion has a corresponding subscale of Distancing it is reasonable to introduce their scores together and interpret the results in connection with each other (see TAB. 2). Both scales are dichotomous and consist of 6-6 subscales, so the main scores of scales can range from 0 to 6. Higher scores indicate higher interdependence between figures on Cohesion and higher autonomy of figures on Distancing.

TABLE 2  
Mean scores on the scales of Cohesion and Distancing

	Winning		Losing	
	Cohesion (c) mean (S.D.)	Distancing (d) mean (S.D.)	Cohesion (c) mean (S.D.)	Distancing (d) mean (S.D.)
All (n = 30)	3,73 (1,05)	3,13 (1,43)	2,77 (1,19)	3,10 (1,18)
Boys (n = 14)	3,79 (1,05)	3,36 (1,44)	2,64 (1,21)	3,14 (1,36)
Girls (n = 16)	3,69 (1,07)	3,00 (1,43)	2,88 (1,20)	3,06 (1,03)

There were no significant differences between the scores of Cohesion and Distancing either on “winning” or on “losing” drawings (winning:  $t [29] = 1,649$ ;  $p > 0,05$ ; losing:  $t [29] = -1,170$ ;  $p > 0,05$ ).

However, comparing the winning and losing situation there was a significant difference: Cohesion received significantly higher scores on drawings of winning than on drawings of losing ( $t [29] = 3,537$ ;  $p < 0,05$ ). When the children drew from the winner’s perspective the winner and the loser were more engaged with each other than in the drawings of losing when the loser’s perspective was taken.

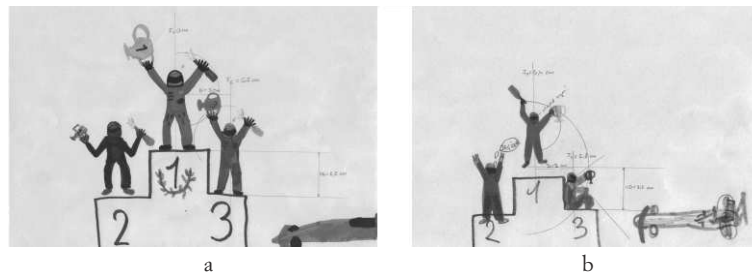
In the official coding system CI-“Looking at” and DI-“Looking away” subscales do not investigate the figures according to their roles in the situation (in our case: winner, loser)<sup>1</sup>. Because of the studied topics (winning, losing), however, it is essential to explore the direction of social interaction represented in gaze-direction, namely to reveal which figure looks at the other figure and which one does not. Addressing this issue an additional measurement was applied.

According to CI-“Looking at” subscale, in 88 percent of the drawings of winning and 71 percent of the drawings of losing, the winner keeps the loser in his/her visual field. According to DI-“Looking away” subscale however, in 71 percent of the drawings of winning and 57 percent of the drawings of losing the winner is out of the loser’s field of view. Consequently, it is the winner who keeps the loser

in his/her visual field and not vice versa regardless of situation. The common patterns of gaze-direction in connection with winning and losing are illustrated in Drawings 1.a and 1.b.

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DRAWING 1  
Winning (a) and Losing (b)



*Note:* 8 years old boy's drawing on winning (1.a) and losing (1.b). In both outcome-contexts (winning and losing) the winner keeps the loser in his/her field of view while the loser is not able to see the winner in neither case because he stands or sits on the lowest step of the podium. In the drawing on losing the loser's "escape", turning his back towards the winner therefore looking in different direction is more significant.

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In the Scale of Cohesion boys drew the figures significantly closer to each other in drawings of winning than in drawings of losing ( $t [28] = 2,402; p < 0,05$ ).

Considering the CI and DI subscales gender differences were found as well: in both contexts boys' figures look at each other less frequently; they typically "look out" the situation instead of looking at each other. Girls' figures look at each other more frequently in both types of drawings (Winning: boys [29%], girls [62%]; Losing: boys [43%], girls [56%]).

#### 4.2. Scale of Similarity

Scores on each subscale of Similarity range from 0 to 2. The sum of the scores on the 5 subscales constitutes the overall Similarity score ranging from 0 to 10. Higher scores indicate higher similarity between the winner and the loser. Results are seen in TAB. 3.

The winner and the loser were depicted to be somewhat more similar to each other in the drawings on losing than in the drawings on winning, although the difference was not significant regarding the total sample size. Boys' figures however showed an opposite tendency: their winners and losers were more similar to each other in the winning context than in the losing context (marginally significant:  $t [13] = -1,883; p < 0,1$ ).

In addition to the scale of Similarity, the sex of the competing figures was compared as well. In 75 percent of the drawings on winning and in 78 percent of

drawings on losing the sex of the depicted figures was identical with the drawer's sex, meaning that both boys and girls drew figures of their own sex in most of the cases. Drawings in which the sex of the figures was not identical to the sex of the drawer were drawn exclusively by girls (5 drawings of winning and 4 drawings of losing). Among these drawings in case of winning two girls depicted both the winner and the loser as boy; three girls drew girls as winners and boys as losers. In case of losing the girls depicted boys as winners and girls as losers in all of the four drawings. In sum, drawings depicted mixed-sex competition were produced by girls alone and those figures were drawn identical with the drawer's sex whose perspective was taken; so the girls depicted girls as winners in drawings on winning and girls as losers in drawings on losing.

TABLE 3  
Mean scores on the scale of Similarity

Similarity (s) (overall scores: 0-10)	Winning Mean (S.D.)	Losing Mean (S.D.)
All (n = 30)	4,23 (1,77)	4,71 (1,96)
Boys (n = 14)	4,21 (1,84)	5,28 (1,63)
Girls (n = 16)	4,25 (1,77)	4,18 (2,13)

### 4.3. Scale of Value

In terms of Value, each figure's individual value is measured separately along the five subscales (each subscale ranges from 0 to 2 scores); the figure's Total Individual Value (TIV) is the sum of the scores on the various subscales (ranging from 0 to 10). The comparison between the figures' TIV scores will determine which figure dominates regarding Value (see TAB. 4.).

TABLE 4  
Total Individual Value (tiv) scores of losers and winners in drawings on winning and in drawings on losing

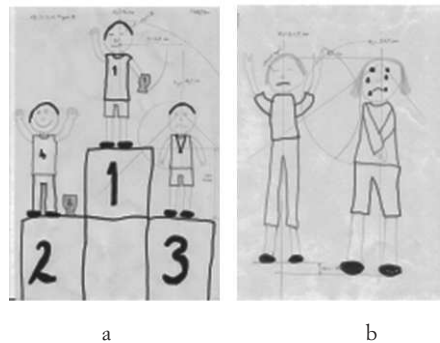
Comparing TIV scores of winners and losers in drawings on winning and losing	Winning		Losing	
	Winner's TIV score Mean (S.D.)	Loser TIV score Mean (S.D.)	Winner TIV score Mean (S.D.)	Loser TIV score Mean (S.D.)
All (n = 30)	5,73 (1,98)	2,40 (1,13)	4,33 (1,91)	2,43 (1,56)
Boys (n = 14)	4,71 (1,28)	1,71 (1,25)	4,07 (1,45)	2,07 (1,76)
Girls (n = 16)	6,63 (1,11)	3,00 (1,45)	4,56 (1,89)	2,75 (1,23)

In both contexts (winning and losing) children depicted winners as significantly more valued figures (winning:  $t [29] = 9,799$ ;  $p < 0,01$ ; losing:  $t [29] = 3,936$ ;  $p < 0,01$ ). The most valued figures were the winners on the drawings of “winning”. The common effect of the situation on Value is illustrated in Drawings 2.a-b. and Drawings 3.a-b.

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DRAWING 2

Winning (a) and Losing (b)

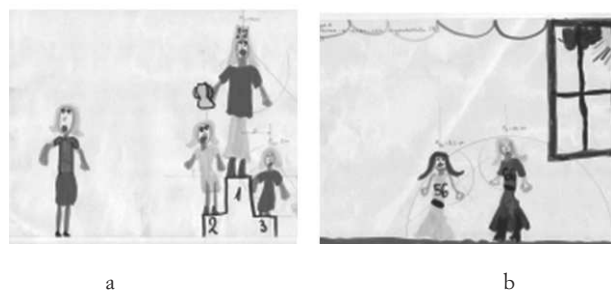


*Note:* 8 years old girl's drawing on winning (2.a.) and losing (2.b.). There is a high value-difference between winner and loser in the drawing on winning (winner is depicted in a more dominant position and with more attributes), while there is just a slight value-difference between figures in the drawing on losing.

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DRAWING 3

Winning (a) and Losing (b)



*Note:* 8 years old girl's drawing on winning (3.a) and losing (3.b.). There is a high value-difference between the winner and the loser in drawing on winning expressed in position, height and attributes. In her drawing on losing the value-difference between the figures is expressed only in the figures' height.

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Regarding gender differences, in the drawings on “winning” girls depicted winners significantly more valued than boys (winning:  $t [28] = -2,969$ ;  $p < 0,01$ ). Value-differences were emphasized using different visual signs and elements by boys and girls. In case of girls the value-difference manifested itself in putting the winner in a more dominant position (Dominance: marginally significant  $F [19,351] = -1,863$ ;  $p < 0,1$ ) while boys attached more attributes to the winner (Number of attributes: ( $F [28] = -3,729$ ;  $p < 0,01$ ) depicted the winner with more body parts (Body parts:  $F [16,341] = 2,368$ ;  $p < 0,05$ ).

Because there might be a psychological difference between winning from the winners’ perspective and winning from the losers’ perspective as well as losing from the winners’ and losing from the losers’ perspective the scale of Value was also used to compare figures with the same roles between the two contexts, namely winners in “winning” and winners in “losing” drawings and losers in winning and losers in losing drawings. In this case, the circumstances of comparison were altered; instead of comparing winners and losers in the same context (winning or losing), we focused on the same role (winner or loser) in both contexts (winning and losing). This new comparison generated new TIV scores.

The results are seen in TAB. 5.

TABLE 5  
Total Individual Value (TIV) scores of winners in drawings on winning and losing and those of losers in drawings on winning and losing

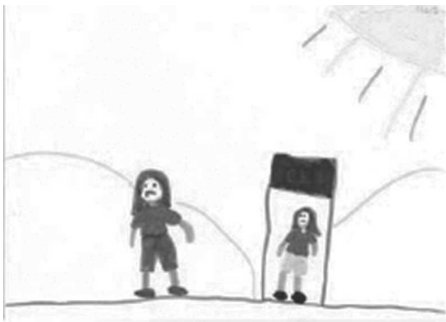
Comparing TIV scores of winners and losers along situations	TIV scores of winners		TIV scores of losers	
	Winning Mean (S.D.)	Losing Mean (S.D.)	Winning Mean (S.D.)	Losing Mean (S.D.)
All (n = 30)	5,40 (1,23)	3,70 (1,18)	3,53 (1,17)	3,70 (1,26)
Boys (n = 14)	5 (1,12)	3,36 (1,56)	3,36 (1,33)	3 (1,78)
Girls (n = 16)	5,75 (1,71)	4 (1,82)	3,69 (1,38)	4,31 (1,67)

TIV scores of winners in “winning” drawings were significantly higher than those of winners in “losing” drawings ( $t [29] = 3,061$ ;  $p < 0,01$ ). Considering losers there were no statistically significant differences between situations.

In terms of gender differences, both genders depicted winners in “winning” drawings as the more valued figures (boys:  $t [13] = 2,203$ ;  $p < 0,05$ , marginally significant in case of girls:  $t [15] = 2,098$ ;  $p < 0,1$ ). While there was a lack of significant value-differences in case of losers considering the whole sample, there were significant gender-differences found. Boys depicted losers in “winning” drawings more valued than in “losing” drawings if the difference

was not significant (winning: 3,36; losing: 3,03), while girls showed a reverse tendency: they depicted losers more valued in “losing” drawings (winning: 3,69, losing: 4,32) (see Drawing 4). Following this line, girls’ and boys’ losers in winning context were quite similar, while in the losing context girls’ losers were depicted in a more dominant position than boys’ losers ( $t [15] = 2,027$ ;  $p < 0,1$ ).

DRAWING 4  
8 years old girl’s drawing on losing. The loser is depicted much taller than the winner



#### 4.4. Scale of Emotion

The scale of Emotion consists of four mutually exclusive categories referring to the mood of the figures (Neutrality, Contentment, Hostility, and Discontent). The results regarding the scale of Emotion are seen in FIGG. 1.a and 1.b.

FIGURE 1.a  
Losers’ emotions in relation to winning (left) and losing (right)

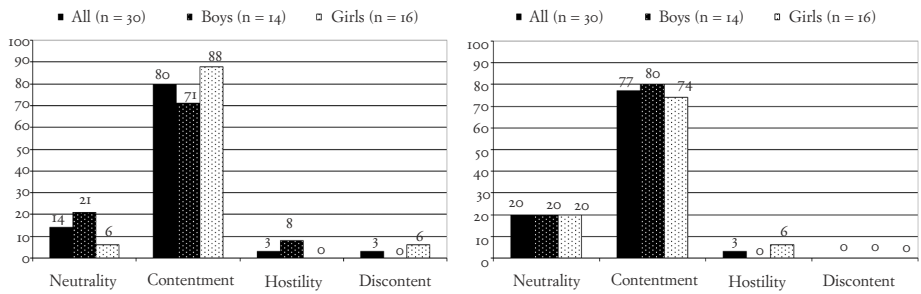
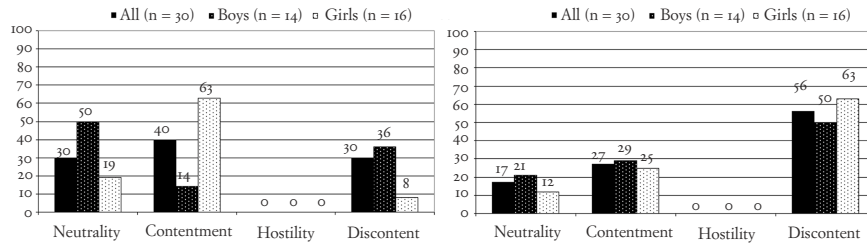


FIGURE 1.B

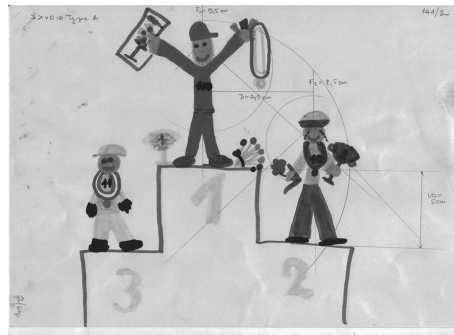
Losers' emotions in relation to winning (left) and losing (right)



In drawings on winning winners displayed in most of the cases (80%) contentment through visual signs of joy and happiness like smile and hands raised up (chi square [3] = 49,200;  $p < 0,01$ ) (see FIG. 1.a and Drawing 5). Depicting winners with no emotions (14%), hostility (3%) or discontent (3%) were rare. Regarding losing, winners were depicted in a similar way; in the majority of drawings on losing winners were content (77%), this was the most dominant emotion (chi square [2] = 26,600;  $p < 0,01$ ). Winners were neutral in one-fifth of the drawings (20%), while hostility was depicted just in a few cases (3%).

DRAWING 5

8 years old boy's drawing on winning. The winner in clearly happy (smile, hands raised up)

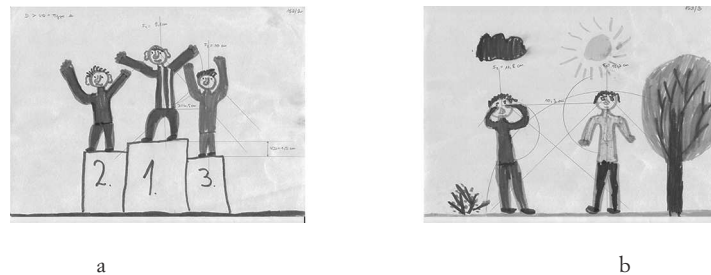


Losers' emotional reactions were more diverse. In the drawings of winning even the losers' most prevalent emotion was contentment (40%) and discontent appeared only in 30 percent of the drawings just like no emotions (neutrality, 30%). In the losing context, the most dominant emotion of losers was discontent (chi square [2] = 7,800;  $p < 0,05$ , 56%) and contentment was present only in 27 percent of

the drawings and losers showing no emotions were also less frequent (17%) than in the winning context. There were no visual signs for hostility against the winner in the representations of losers. The emotional displays in the winning and losing contexts are illustrated in Drawings 6.a and 6b.

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DRAWING 6  
Winning (a) and Losing (b)



*Note:* 9 years old boy's drawing on winning (5.a) and losing (5.b). In the winning context both of the figures display positive feelings (winner: smile, hands in the air, loser-3, place-hands in the air). In the "losing" drawing loser is depicted clearly sad and discontent (hands wiping tears), winner is without feelings.

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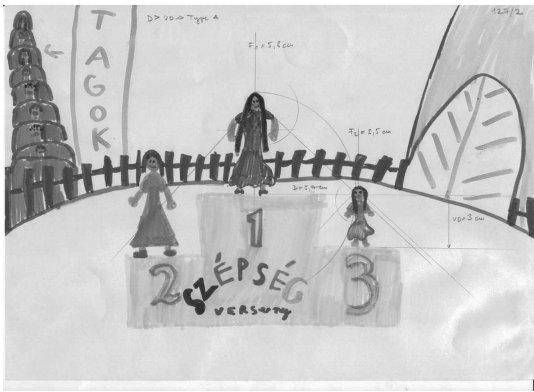
In terms of gender differences, boys depicted losers in the winning situation more often with neutral emotions (Goodman-Kruskal tau = 2,86;  $p < 0,05$ ), while girls drew them with more positive feelings (Goodman-Kruskal tau = 2,44;  $p < 0,05$ ). Moreover girls depicted losers more content in winning context than them in losing context (Goodman-Kruskal tau = 3,01;  $p < 0,05$ ).

#### 4.5. Scale of Conflict

The subcategories of Conflict refer to the intensity of conflict regarding the relationship. The original coding system of the PAIR identifies four categories (No conflict, Opposition, Aggression, Breaking-off). In order to provide a more sensitive analysis of the relationship we divided the category Opposition into two: Disagreement between the winner and the loser (there is no open conflict in the drawing, but the topic and emotions depicted suggest disagreement) and Opposition (e.g. the winner looks down upon the loser and the loser expresses shame or anger over it). That way, five categories were identified and each category received a specific score (0-4). If there was no visual sign of conflict presented in the relationship, the drawing fell into the subcategory "No conflict" (0 score), if there was any visual sign of conflict

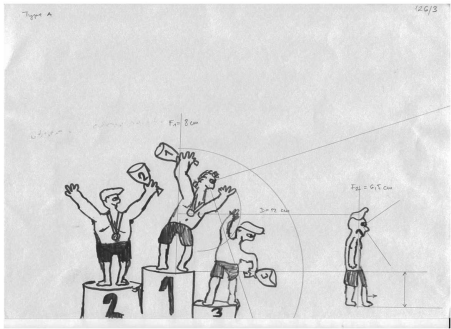
between figures the drawing could be assigned to four possible subcategories depending on the intensity of conflict: Disagreement (1 score), Opposition (2 scores), Aggression (3 scores), Breaking-off (4 scores). Subcategories in relation to winning and losing are illustrated in Drawing 7 and Drawing 8. Based on the possible minimum and maximum scores of the 30 drawings a scale of 0 to 120 was developed referring to the intensity of conflict (see FIG. 2). Higher scores indicate higher intensity.

DRAWING 7  
Winning



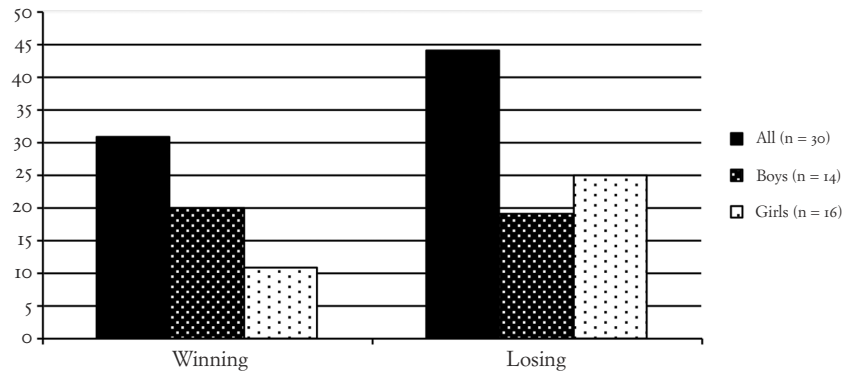
Note: 8 years old girl's drawing on winning. There is no sign of conflict between the figures, thus this drawing falls into the subcategory "No conflict".

DRAWING 8  
Losing



Note: 8 years old boy's drawing on losing (black and white picture). Winner leans towards the loser with threatening gesture, while the loser moves away. This picture is placed to the subcategory "Aggression".

FIGURE 2  
Intensity of conflicts in relation to winning and losing



More conflict was illustrated in drawings of losing than in drawings of winning (marginally significant  $t [29] = -1,783$ ;  $p < 0,1$ ). This difference can be attributed to girls, because boys depicted equal amount of conflict in the winning and losing drawings but girls presented significantly more conflicts in relation to losing ( $t [15] = -2,671$ ;  $p < 0,05$ ).

## 5 Discussion

The aim of the present study was to investigate 8-9 years old primary school children's representation of the interpersonal relationship between competitive parties: the winner and the loser using the PAIR method (Bombi *et al.*, 2007). On one hand the study focused on exploring whether there are any general characteristics of the relationship between winner and loser regardless of perspective (i.e. winner, loser). On the other hand there was a question addressing the potential effect of perspective (winner, loser) in the pictorial representation of the relationship, namely whether taking the winner's or the loser's perspective can alter the way winners, losers and their relationships are depicted.

The children clearly differentiated between the figures of winner and loser on drawings in both contexts. The participants of the competition were placed in a hierarchical relationship; winners in both situations (winning and losing) were depicted more valued and in a more dominant position than losers. As a further sign of dominance winners were portrayed with having a larger visual field that contained the loser, thus being able to control or monitor him/her. Losers on the contrary were typically depicted in a less dominant position with no chance to

look at and control winners. Children often portray the winners and the losers during e.g. in an award ceremony standing on a podium (Fülöp, Sándor, 2008). The hierarchical podium arrangement that is a common structural element of an award ceremony organizes the situation in a way that allows winners standing on the highest step on the podium to “look down” on losers standing on lower steps. Consequently winning and losing are framed culturally in a hierarchical way offering the dominant position to the winner. Furthermore, in line with previous research (Baker-Ward *et al.*, 2005; Sándor, 2010), winners were depicted more contented, while losers were pictured dissatisfied regardless of situation.

The results showed that beside the universal characteristics of the relationship between winners and losers (i.e. winners are more valued and satisfied regardless of situation) there were differences in the representations between situations as well. Just as in Baker-Ward and her colleague’s study (2005), which found that members of winning and losing teams had quite different emotional experiences related to the same event and focused on different parts of the competition they participated in, the recent study also revealed the modifying role of different perspectives of winner and loser. In drawings related to winning the figures were drawn closer to each other, while in drawings related to losing the loser was rather isolated and placed at a larger distance from the winner. Our previous analysis of the drawings focusing on thematic aspects (Fülöp, Sándor, 2008) also revealed that “winning” was typically depicted with audience and competitors indicating the possible greater need for social context in the winner in order to be possible to present his/her success.

Although figures were placed closer to each other in drawings related to winning, the value-differences between winner and loser were also more significant in the winning context. Winners were depicted as the most valued figure in drawings related to winning. The smaller value-difference between figures in drawings related to losing suggest that in case of losing, when children might identify with the loser, there is an increased motivation in the loser to reduce the hierarchical difference between the figures and at the same time display his/her negative feelings and discontent with the outcome. Reducing value-difference between the winner and the loser tends to be an adaptive strategy for losers supporting effective coping with the negative outcome of competition. In case of winning, when children might identify with the winner, the winner is motivated to consider him/herself more valued and expect that even the loser is content with the outcome.

Winning and losing are clearly differentiated in the 8-9 years children’s drawings considering emotional aspects as well. Winning is a typically positive event associated with positive emotions and feelings. Identification with the winner and taking the perspective of a winner can alter how losers and their emotional state are perceived. Even losers’ emotional expression changes from the perspective of the winner; losers show less discontent in drawings related to winning than in the context of losing. Consequently winning seems to be an emotionally

homogenous event with predominantly positive emotional displays. At the same time there is an assumption that focusing on the winner's perspective, that might be the case in drawings related to winning, can reduce sensitivity to recognize accurately the emotional state of losers. In a study with gifted children, Fülöp (1992) also found that basking in happiness over victory can reduce empathy toward losers. In the context of losing the focus shifts to the loser's negative feelings. Losing contrary to winning was depicted with more conflicts and perceived as an emotionally more ambiguous situation. A study using associative method on winning and losing (Sándor, Orosz, Fülöp, 2010) also showed that both concepts were strongly saturated and emotionally loaded; winning was associated with positive (e.g. happiness), and losing with negative (e.g. sadness) emotional content. In another study, that aimed to investigate secondary school students' reactions to winning and losing, Fülöp and Berkics (2007) also found that "joy and activation" appeared among reactions to winning and "sadness and frustration" in case of losing.

There were some gender differences as well. Both boys and girls typically drew as competitors figures who were the same sex as they are. Girls however depicted mixed-sex competition as well and in these cases the sex of winners and losers depended on the activated context. Girls typically drew winners as girls in "winning" drawings, and losers as girls in "losing" drawings. Girls differentiated more between winning and losing situations. Losing was an emotionally more ambiguous and loaded concept for girls depicting more conflicts than boys. Other studies (Fülöp, Sándor, 2008; Fülöp *et al.*, 2010) also showed that losing is emotionally more challenging for girls, more difficult to cope with the negative outcome of competition in their case. The stress literature also emphasizes gender differences related to vulnerability to negative life events; women react to negative events more sensitively and give more severe stress reaction than men (Dalgard *et al.*, 2006; You, Conner, 2009).

Further interesting finding was related to the expression of value-differences. The girls tended to differentiate between figures in a less explicit way drawing winners higher and placing them in a more dominant position while the boys applied more explicit strategies depicting winners with more attributes (e.g. crown, cup, medal) and body parts. These results might be connected with gender differences regarding competitive strategies, namely women tend to compete in a more latent, indirect way, while men apply more direct, open strategies (Pepitone, 1980; Tracy, 1991; Fülöp, 2005).

In summary, the study revealed that 8-9 years old children can clearly differentiate between winning and losing; the figures (the winner and the loser) and their relationship were differently represented in the context of winning and losing. It shows that the interpersonal relationship of the winner and loser is characterized by different emotions and interpersonal motivations depending on which perspective (the winner or the loser) is activated. The distinction was expressed almost on every scale of the PAIR that indicates the complex and multi-

dimensional conceptualization of winning and losing among primary school children. However, it is important to state, that the sample size was relatively small, we investigated drawings of only 30 children, and therefore findings should be interpreted with caution.

## Notes

<sup>1</sup> Only subscales C1 and D1 are presented here taking into consideration the required length of the article and the special importance of these subscales in relation to the studied topics.

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### Riassunto

Nonostante le molte ricerche sulla competizione in infanzia, pochi sono gli studi sistematici circa la comprensione e rappresentazione delle relazioni interpersonali tra parti in competizione in differenti condizioni come il vincere ed il perdere. Il disegno è un modo per esaminare tali rappresentazioni. Lo scopo del contributo è quello di indagare le rappresentazioni pittoriche circa la vittoria e la sconfitta in bambini di scuola primaria (8-9 anni) con particolare attenzione alla relazione tra vincente e perdente. Disegni di 30 bambini di scuola primaria (età media: 8,6) sono stati analizzati utilizzando il metodo PAIR (Pictorial Assessment of Interpersonal Relationship) (Bombi, Pinto, Cannoni, 2007) che indaga le relazioni interpersonali in riferimento a 6 scale principali: Coesione, Distanziamento, Somiglianza, Valore, Emozioni, Conflitto. I risultati mostrano come i bambini di 8-9 anni riescano a differenziare chiaramente nei loro disegni gli stati emotivi e le prospettive del vincitore e dello sconfitto. Le raffigurazioni (il vincitore e il perdente) e le relazioni di tra loro sono diversamente rappresentate rispetto al contesto della vittoria o della sconfitta. Si rileva che le relazioni interpersonali tra vincente e perdente sono caratterizzate da differenti emozioni e motivazioni interpersonali in relazione a quale prospettiva (del vincente o del perdente) è attivata. I risultati indicano che il *realm* personale ed interpersonale tra vincente e perdente è percepito e rappresentato in modi differenti a seconda della posizione (di vincitore o perdente) esperita dal bambino.

Parole chiave: *competizione, vincere, perdere, disegni infantili, metodo PAIR, bambini di scuola primaria.*

*Articolo ricevuto nell'aprile 2012, revisione del febbraio 2013.*

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