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MÁRTA FÜLÖP

Institute of Cognitive Neuroscience and Psychology, Research
Centre of Natural Sciences, Hungarian Academy of Sciences and
Eötvös Loránd University

SZABOLCS TAKÁCS

Károli Gáspár University

The cooperative competitive citizen: What does it take?

ABSTRACT

1. *Each human group and each society is a complex system of cooperative and competitive relationships. These two relations are intertwined, however, it is not indifferent in what way and to what extent. The present research has aimed at revealing the requirements of cooperative competition which is a competitive process with a high degree of cooperation among the competing parties. The Critical Incident Technique was applied. This procedure is based on the direct observation of human behaviour and was elaborated in order to examine complex interpersonal phenomena and to provide ecological validity. Altogether 483 critical incidents were described by teachers and university students of education. They were instructed to recall competitive relationships that have certain characteristics (e.g. high degree of cooperation among the parties vs no cooperation among the parties; high degree of trust among the parties vs high degree of distrust among the parties, etc.) After the free description of the incident, the participants had to characterize the competitive event along different dimensions on a Likert-scale, for instance intense/not intense competition; rules kept or violated, applying principal component analysis, four different scales were constructed: the Cooperation Scale (i.e. the relationship among the competitors, cooperation, trust and communication), the Motivation Scale (i.e. motivation, the*
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KEYWORDS

competition
cooperation
constructive and
destructive
competition
cooperative
competition
critical incidents
fairness
motivation

importance of the goal, development and learning), the Fairness Scale (i.e. rule keeping, no aggression and no manipulation) and the Enjoyment Scale (i.e. enjoyment and positive stress). The correlation analysis of the interrelations among the scales and individual variables has indicated that the high degree of cooperation among the competitors was positively related to fairness, the clarity of rules of competition, enjoyment and motivation. Less cooperation among the competitors was related to higher level stress and more intensive competition among them. If competitive processes are characterized by high degree of cooperation, i.e. they are cooperative competitions that have no detrimental but only beneficial effects, then they combine the constructive aspects of both cooperation and competition.

INTRODUCTION

Cooperative and competitive activities are significant aspects of social behaviour, and as such, should be an important consideration for educators, social theorists and those concerned with social and educational policy and citizenship (Fülöp et al. 2007; Ross 2008). The concept of the good citizen has at least two aspects: his or her relations to the state and to his or her fellow citizens (Heater 1990). Interpersonal cooperation and competition are fundamental ways citizens in a particular society relate to each other. In spite of this, citizenship research does not devote any significant attention to them, especially not to competition, even though it is a crucial aspect of the economic and political life in a capitalist market economy and in a pluralistic democratic society. Economics is defined as the study of efficient allocation of scarce resources among competing users (Casler 1992). Competition is also an inherent component of a democratic society. Already in the ancient Athenian democracy, debate and argumentation among citizens and group of citizens competing for getting through their often opposing ideas about what the best is for their societies, constituted one basic element of democracy (Trapp et al. 2005). Competition and cooperation are also present at different levels of the society: among individuals, groups, regions and nations (Henrich and Henrich 2007; Tyler 2011). Although competition is as prevalent as cooperation, more emphasis is put on those behavioural requirements of citizenship that imply cooperation among members of the society. For example, according to D. Heater (1999), one of the most important characteristics of a good citizen in a liberal democratic state is being cooperative and helpful to his or her peers. Heater places participation in public affairs, integrity, honesty and law abiding attitude only after these requirements. In I. Davies et al.'s 1999 study, English teachers ranked the so called social concern characteristics, for instance participation in community or school affairs, that might require cooperation, and concern for the welfare of others, that might imply pro-social, helping behaviour, among the most important assets of a good citizen. The concept of citizenship and the good citizen both imply the necessity and importance of cooperation as a kind of civic virtue. D. Oliver and D. Heater (1994) emphasize that citizens should be persons who want to behave in such a way that brings benefit to the community. However, competition or being competitive are mentioned in connection to capitalism and market economy, leading to personality traits like egoism, greed and selfishness (Heater 1990), features that are contradictory with the ideal of the good citizen. It seems that in the citizenship discourse it is difficult to reconcile the socially responsible, moral and cooperative citizen with the traditional liberal notion of the

1. individual citizen who follows his or her self-interest and who is competitive
2. (Fülöp 2009a, 2009b). However, society needs both competitive and collaborative
3. initiatives and efforts, thus citizens must interact in both of these modes
4. (Pepitone 1980). Therefore, it should be important to foster citizens who are
5. competent to manage these two basic interpersonal relationships and processes
6. (Fülöp 2009a, 2009b).

8. COOPERATION AND COMPETITION AS OPPOSITES

9. While both competition and cooperation are present and required in social
 10. interactions, they have long been presented as dichotomous. They have been
 11. conceptualized as two extremes of a single behavioural dimension or polar
 12. opposites (Van de Vliert 1999; Fülöp 2004). However, after the American
 13. experimental social psychologist Morton Deutsch (Deutsch 1949a, 1949b)
 14. published his studies on competition and cooperation in 1949, these phenom-
 15. ena have been symbiotically treated in social and educational psychology
 16. (Fülöp 2008a, 2008b). Deutsch (1949a, 1949b) characterized cooperation by
 17. positive interdependence between the parties meaning, that one side attaining
 18. its goal is *increased* by the probability of the other side successfully attaining
 19. it. Competition, however, was characterized by negative interdependence
 20. meaning, that one side attaining its goal *decreases* the probability of the other
 21. side successfully attaining it. In addition, cooperation and competition were
 22. placed along a moral dimension and cooperation was considered moral and
 23. superior in comparison to competition that has gained an immoral connota-
 24. tion, being a destructive force in interpersonal relationships and in society
 25. (Kohn 1986). This has established what M. Fülöp (2008a, 2008b) called the
 26. 'Beauty and Beast' Paradigm. In Deutsch's (1990) view, effective communica-
 27. tion among the parties, trust, friendliness, helpfulness, no obstruction of the
 28. other's ideas, coordination of effort, division of labour and high productivity,
 29. mutual enhancement, growing capabilities all belong to the 'beauty' i.e. coop-
 30. eration. Referring to D. W. Johnson and R. T. Johnson's (1989, 1999) work
 31. Deutsch also emphasized that cooperative goal structures facilitate learn-
 32. ing, lead to greater group productivity, more favourable interpersonal rela-
 33. tions, better psychological health, and higher self-esteem. In contrast to this,
 34. a competitive process is the 'beast' and has the opposite effects: communica-
 35. tion is impaired and misleading, there is no trust in one another, there is
 36. obstructiveness, lack of helpfulness, suspicion of one another's intentions,
 37. there is no division of work, the competing parties seek to enhance their own
 38. power, reducing the power of the other, they use coercive tactics and engage
 39. in power struggle and finally, they behave in a hostile manner. The dichotomic
 40. conceptualization of competition and cooperation resulted in the evident call
 41. to bring up cooperative and not competitive citizens. Alfie Kohn's 1986 book
 42. *No Contest: The Case Against Competition*, a national best seller in the United
 43. States, served this purpose very well. He advocated a radical position by reject-
 44. ing all forms of competition and suggested replacing them with cooperation
 45. (Fülöp 2008a, 2008b).

47. COOPERATION AND COMPETITION BEING RECONCILABLE

48. From the beginning of the 1990s, there has been a paradigm change towards
 49. a less dichotomic concept of competition and cooperation, i.e. these notions
 50. have no longer been seen as mutually exclusive. In 1990, Deutsch claimed that
 51. he viewed cooperation and competition as idealized, separate psychological
 52.

processes that are rarely found in their 'pure' form in nature, but found more typically mixed together. Most forms of conflict can be viewed as mixtures of competitive and cooperative processes. Furthermore, the course of a conflict and its consequences are heavily dependent upon the nature of the cooperative-competitive mix (Deutsch 1990).

Increasingly, research results have been accumulated proving that competition and cooperation are not mutually exclusive and can harmoniously coexist (e.g. Van de Vliert 1999; Tauer and Harackiewicz 2004; Fülöp 2004). Such dichotomization is irreconcilable with biosocial theories of human behaviour that emphasize the subtle interweaving of cooperation and competition as strategies used by individual primates and humans (Chapais 1996; Charlesworth 1996). Baumard et al. (2013) in their 'partner choice model' confirm these previous results that cooperation may be the most successful competitive strategy. According to this model, actors will choose to cooperate with those who reciprocate cooperation, therefore those who defect will be excluded from mutually beneficial exchanges. This is a special kind of social selection and those who are competitive in being cooperative, i.e. compete to be selected as partners in cooperation, are in the winning position. According to P. H. Hawley's 'resource control theory' (Hawley 1999, 2008), the most successful resource control strategy that leads to social dominance is the double one that applies both pro-social and coercive means. She emphasizes that competitive forces give rise to both. Instead of placing these social relations on the opposite ends of a single continuum serving opposite functions, she considers them as either independent or as positively related.

Competition and cooperation are no longer considered mutually exclusive in the business world (Brandenburger and Nalebuff 1998) or in political life either. Public debate for instance is an essential activity in democratic societies and it is both a cooperative and a competitive undertaking (Trapp et al. 2005). As R. Trapp puts it, 'Cooperative and competitive debates serve different but equally vital functions in a democratic process, so an engaged, proactive citizenry must be skilled in both' (Trapp et al. 2005: 6). Since the nineties, new research results have appeared proving that cooperation combined with competition leads to the highest level of task enjoyment and also to a higher level of performance than pure cooperation or competition (Tauer and Harackiewicz 2004). Carnevale and Probst (1997) found that competitive people are highly cooperative with members of their own group, whenever competition takes place with an out-group. In the conflict resolution literature, the collaborating style is characterized by high assertiveness (competitiveness) and high cooperativeness and this style is considered to be the most effective in solving conflicts (Lewicki et al. 1999).

The tendency to compete and cooperate may not only be present in the same individual, but occurs in most group activities (Ross 2008). In order to carry out a group task in the most successful way, it is by necessity the interests of all the members to cooperate. During such processes of cooperation, they can also compete for the role of being the best collaborator or the best contributor to the common task (Fülöp 2003; Sheridan and Williams 2006). The ability to combine competition and cooperation varies in each culture. For instance Japanese people appear to be able to combine cooperation with competition, in other words to 'compete under the umbrella of cooperation' (Shwalb et al. 1995; Fülöp 2004, 2009b).

Parallel to the conceptual change of the relationship between cooperation and competition, researchers started to call attention to the multidimensional

1. nature of competition (Fülöp 1992; 2004; Schneider et al. 2006) and identified
 2. qualitatively different competitive processes. Based on their harmful or
 3. beneficial effects, they were called constructive or destructive (Fülöp 1992;
 4. Tjosvold et al. 2003, 2006). In Fülöp's (1992, 2004) definition, a competitive
 5. process is considered constructive if the competing parties are not enemies
 6. wanting to destroy the other, but opponents who establish respectful relationships
 7. with each other as rivals and who bring out the best from themselves
 8. and each other, thus contributing not only to their own development but also
 9. to the development of the group and the society, too. Constructive competition
 10. was defined by D. Tjosvold et al. (2003) as a positive and enjoyable
 11. experience that results in increased motivation, more positive interpersonal
 12. relationships and greater psychological health and well-being. In 2012, in his
 13. summary of his lifelong work on the study of cooperation and competition
 14. (Deutsch 2012), Morton Deutsch finally differentiated between constructive
 15. and destructive competition. He described unfair, unregulated competition as
 16. destructive; the fair, regulated competition being somewhere in between, and
 17. the constructive competition being at the positive end. According to Deutsch
 18. (2012), in a constructive competition the parties can improve, learn and the
 19. process is enjoyable, while even the losers are better off after the competition
 20. than before the competition. However, he associated serious problems with
 21. competition when it does not occur in a cooperative context and if it is not
 22. effectively regulated by fair rules.

23. RESEARCH ON CONSTRUCTIVE COMPETITION

24. As a result of this paradigm change, the main question of research is not posed
 25. anymore within the framework of the competition vs cooperation dichotomy.
 26. The focus today is the constituents of constructive vs destructive competition
 27. and the requirements of cooperative competition. Fülöp (1992) based on her
 28. study carried out with secondary school the first time described the dimensions
 29. along which a competitive process can be categorized as constructive
 30. or destructive. The following dimensions appeared to define or influence
 31. the nature of competition manifested in a situation: the perceived resources
 32. (limited or unlimited) i.e. the scarcer the resources the competition is being
 33. more destructive; the competitors' perceived control over the result of the
 34. competition; the equality of chances; the time perspective (short or long term)
 35. of the competitive process; intensity (high, medium or low); the energy that
 36. competitors invest or gain; spontaneous vs structured competition; the relationship
 37. between competitors (from friendly to hostile); the applied means
 38. and orientations (directed at the self, at the partner in a negative way, at
 39. each other in a positive way); the morality of the process (fair-unfair nature,
 40. clarity of rules, clarity of the criteria of evaluation); the norms concerning
 41. competition (group, cultural); and finally the reward structure of competition
 42. (Fülöp 2004).

43. Tjosvold et al. (2003) carried out research in business work groups in Hong
 44. Kong and used the Critical Incident Technique (Flanagan 1954, see later) to
 45. identify the conditions that lead to constructive competition. Similarly to
 46. Fülöp (1992, 2004, 2008b), they have found that one of the most important
 47. determinants of the constructive or destructive nature of competition is the
 48. fairness of the process (fairness of the rules, clarity of the rules, obeying the
 49. explicit and implicit rules of competition and fairly enforcing the rules). It
 50. was also found that in a business environment, the quality of the relationship
 51.
 52.

between the competing parties, the importance of winning and the equality of chances also contribute to the constructiveness of the competitive process. A later study carried out among company employees in mainland China, Tjosvold et al. (2006) also found that constructive competition is related to the degree of respect among the competitors. G. Orosz et al. (2013) also examined the predictors of constructive competition in an organizational environment, applying mainly Fülöp's (1992, 2004) dimensions and the Critical Incident Technique (Flanagan 1954). They found that the factors predicting constructive competition among salespersons were the enjoyment of competition, the motivation to compete and improve, helpfulness and cooperation among the rivals and no scarce resources. Both Tjosvold et al. (2003, 2006) and Orosz et al. (2013) came to the conclusion that constructive competition does exist in the real world and that this type of competition contributes to task efficiency, personal benefits (such as social support), strong positive relationships, the enjoyment of the experience, the desire to participate and the confidence in working collaboratively with competitors in the future.

COOPERATIVE COMPETITION

Because competition and cooperation can be found in different combinations in any kind of human interaction (Van de Vliert 1999) and they may take place simultaneously in the same activity (Ross 2008), competitive relationships can be characterized also by the amount of cooperation among the competitive parties. According to Tjosvold et al. (2006), constructiveness of competition may be reflected in increased ability to collaborate with competitors in a series of studies based on Fülöp's (1992) description of the constructive and destructive competition, S. Sheridan and P. Williams (2006, 2011) and Williams and Sheridan (2010) have found that to some extent cooperation and constructive competition seem to share similar characteristics. The aim of their study was to gain knowledge about the necessary conditions for collaborative learning and constructive competition to develop among pupils at school. They collected data among Swedish pre-school children, pupils and teachers. The data consisted of video-observations, individual and group interviews as well as children's drawings. As a result of their research, they had described the correlation between constructive competition and children's involvement in individual and collaborative activities and came to the conclusion that cooperation and constructive competition exist simultaneously. Constructive competition is a dimension that can motivate children to achieve better and at the same time it makes activities more exciting when children cooperate (Sheridan and Williams 2006).

The notion of cooperative competition emerged in writings on business already from the beginning of the last century. To express the interwoven nature of cooperation and competition in the business world, the term 'co-opetition' was created (Cherington 1913). This expression mainly refers to companies being 'complementors' in creating markets and competitors in dividing up markets (e.g. Brandenburger and Nalebuff 1998). S. McGovern and Z. Mottiar (1997) studied cooperative competition among firms and have attempted to define the conditions that make possible this type of competition. They found that if no one firm or group of firms has the power to dominate, there is a power balance among them, in addition, cooperative competition becomes a norm. This norm is maintained by the social and commercial relationships and firms follow the established norm. They also emphasize the role

1. of trust in cooperative competitiveness. They argue that those cooperations
 2. that depend solely on self-interest will not survive conflicts that inevitably
 3. arise in a competitive context.

4. Instead of cooperative competition, R. Park and E. W. Burgess (1921/1969)
 5. write about 'competitive cooperation' meaning that economic agents recog-
 6. nize that cooperation serves their own self-interest, therefore they cooperate
 7. while competing with each other. In their research on the role of cooperation
 8. in the competitive business life, Fülöp and Szarvas (2012) have found that
 9. more than half of the interviewed business people reported to apply coopera-
 10. tion as a competitive strategy. In his 2004 book entitled *What Price the Moral*
 11. *High Ground? Ethical Dilemmas in Competitive Environments*, the economist
 12. Robert Frank argues that honest individuals often succeed, even in highly
 13. competitive environments, because their commitment to principle makes
 14. them more attractive as trading partners. He calls attention to the paradoxi-
 15. cal phenomenon that people can often promote their own self-interest more
 16. effectively if they abandon the direct pursuit of it. Frank's analysis reveals
 17. that socially responsible companies can survive in competitive environments
 18. because social responsibility can bring substantial benefits. Another expres-
 19. sion also appearing in the related literature is 'responsible competitiveness'
 20. (Zadek 2006). It refers to companies that enhance productivity by shaping
 21. the business strategies and practices and the context in which they operate,
 22. to take explicit account of their social, economic and environmental impacts.
 23. A. Tencati and L. Zsolnai (2010) apply the expression 'collaborative enter-
 24. prise'. They argue that positive financial and competitive performance derives
 25. from the strong attention given to social relationships and effective environ-
 26. mental management.

27. The expression 'cooperative competition' has also appeared in a very
 28. different context. In one of his speeches entitled 'Cooperative competition',
 29. Martin Luther King Jr also called it 'noble competition':

30.
 31. If you must use the power of competition, if you must compete with one
 32. another, make it as noble as you can by using it on noble things. Use
 33. it for fine unselfish things Use it for human good. Who shall be the
 34. most useful Use it, but use it for higher and higher purposes ...
 35. (King 1948–1954 in Carson et al. 2008: 583)

36.
 37. In a previous study (Fülöp and Szarvas 2011), prominent professionals such
 38. as economists, legal experts, scientists, media personalities, sociologists, lead-
 39. ers of non-profit organizations and politicians in the Hungarian society were
 40. interviewed about their views on the cooperative competitive citizen in order
 41. to reveal in what way different experts conceptualize cooperative competition.
 42. The overwhelming majority of the interviewees agreed that the combination
 43. of high degree of cooperation with a high degree of competition (i.e. coopera-
 44. tive competition) leads to social success.

45. In the field of psychology, another concept expressing that cooperation
 46. and competition can be simultaneously present in the very same action is
 47. 'competitive altruism' (Roberts 1998; Van Vugt et al. 2007). This describes
 48. how being altruistic becomes a competitive advantage and pays off as a
 49. competitive strategy. C. Hardy and M. Van Vugt (2006) have found that altru-
 50. istic individuals receive more social status and are selectively preferred as
 51. collaboration partners as well as group leaders. N. Henrich and J. Henrich
 52. (2007) had carried out an anthropological case study among the Chaldeans

of metropolitan Detroit and demonstrated how being cooperative and trustworthy functions has a clear competitive advantage and contributes to being chosen for personal and business transaction over rivals who have no reputation of being cooperative.

In our definition, cooperative competition refers to the type of constructive competition when individuals compete to reach their goals, but at the same time they cooperate in keeping the explicit and implicit rules of competition, they may share resources and help each other during the process, communication is open between them and makes knowledge transfer possible and the participants/partners are able to maintain a trustful relationship. Cooperative competition can be also a competition in cooperation, pursuing goals that are valuable for the society, serve public good and sustainable development (Fülöp and Szarvas 2012).

COOPERATIVE COMPETITION AND CONSTRUCTIVE COMPETITION

Cooperation is one of the key components of constructive competition. On the one hand, the higher the cooperative element in a competitive process is, the bigger the possibility is that it is a constructive process. On the other hand, it is not indifferent in exactly what people compete cooperatively about or for, that is: what the 'content' of cooperative competition is. People can cooperate or compete cooperatively in areas that are not constructive from the point of view of the society, for instance cooperating and competing while committing a criminal act. Therefore it is important to emphasize that in case of cooperative competition we mean processes and not the value of these processes for the society. Consequently, cooperative competition is not identical with constructive competition. Constructive competition is a wider and at the same time narrower concept. It clearly takes the content into consideration as well and considers constructive only those processes that are truly beneficial not only for the participants but for the community, too.

THE GOAL OF THE RESEARCH

Although it is necessary to maintain both competition and cooperation/solidarity in the context of the globalized world, world economy, politics, sustainable development, countries in the EU, multicultural societies and of any human group, it is not clear what conditions make them possible to be both competitive and cooperative, and when they are beneficial for the competing parties and the wider social context. Therefore the goal of the research presented here was to identify the critical requirements of cooperative competition in any life setting, i.e. to reveal the conditions that influence how cooperation and competition are interwoven.

THE STUDY

The method

In the present research, the Critical Incident Technique (Flanagan 1954) has been applied. Previous research on the constructive competition in the business world applied this technique, too (Tjosvold et al. 2003, 2006; Orosz et al. 2013). This research method aims to collect direct observations of human behaviour that meet systematically defined criteria and it was developed to study complex interpersonal phenomena. In J. C. Flanagan's (1954) definition, an incident is an observable human activity that is sufficiently complete

1. to permit inferences about the critical feature of the situation. 'Critical' means
 2. that the incident is a clear example of the predefined situational characteristics.
 3. S. Brookfield (1995) argues that the critical incidents methodology provides an
 4. experiential commentary of meaningful events and reactions to those events.
 5. A description of a critical incident can track down processes and experiences
 6. at various times not only single 'snap-shots'.

8. **The sample**

9. The contributors of critical incidents included 31 M.A. students of education
 10. and 34 kindergarten and elementary school teachers who participated in an
 11. educational social-psychology M.A. course at a major university in Budapest,
 12. Hungary. There were 58 female and seven male respondents of an average age
 13. of 29.4. The youngest respondent was 21 and the oldest 57 years old. Teachers
 14. and future educators were chosen because in an educational context there are
 15. many situations that bear an element of competition, therefore they are famil-
 16. iar with competitive situations and are in the very position to make necessary
 17. observations and evaluations of others who are engaged in the given activity.

20. **The procedure**

21. Contributors were randomly assigned to describe some competitive incidents
 22. that met a particular criterion. As part of their course work, they generated
 23. altogether 483 critical competitive incidents and filled in the closed-ended
 24. questionnaire related to those. The critical incidents were classified along nine
 25. dimensions and there were altogether 25 varieties of them. They derived from
 26. some previous research indicating? their role in the nature of the competitive
 27. process (Fülöp 1992, 2004; Tjosvold et al. 2004, 2006; Orosz et al. 2013). In the
 28. following list (see Table 1), the numbers indicate the number of incidents that
 29. were written with that particular critical feature in mind.

30. Since the main goal of the study was to reveal the requirements of coop-
 31. erative competition, the majority of critical incidents were those in which the
 32. competitive process was characterized by a high degree of cooperation among
 33. the parties (altogether 116, see Table 1).

34. The instruction asked the participants to report such incidents observed by
 35. them that involved behaviour that met the critical criterion. They could make
 36. a new observation with the critical feature in mind or recall an incident from
 37. memory. For example:

- 39. • *Please recall a competitive situation and describe it as precisely and detail specif-
 40. ically as you can in which the competitive parties Strongly Cooperated with each
 41. other.*
- 42. • *Please recall a competitive situation and describe it as precisely and detail
 43. specifically as you can in which the competitive parties considered each other
 44. as Enemies.*
- 45. • *Please recall a competitive situation and describe it as precisely and detail
 46. specifically as you can in which the competitive parties Broke The Rules of the
 47. competitive process.*

49. Furthermore, the contributors were asked to give a detailed description about
 50. the participants (age, sex, characteristics) about the physical and social envi-
 51. ronment, the antecedents and the consequences of the incident. The written
 52. critical incidents were approximately two to three pages long. Two examples

Dimensions and critical features	Number of critical incidents	
1. <i>Chances:</i>		1.
• Equal	16	2.
• Unequal	15	3.
2. <i>Rules:</i>		4.
• Observed	15	5.
• Transgressed by one or both of the parties, i.e. they cheated	16	6.
3. <i>Relationship among the competitive parties:</i>		7.
• Friendly	16	8.
• Hostile/enemies	17	9.
4. <i>Goal of competition:</i>		10.
• Very important	19	11.
• Non-important	15	12.
• Very important yet the competitive parties sustain a good relationship	16	13.
• Very important yet the parties sustain a hostile relationship	18	14.
5. <i>Cooperation:</i>		15.
• Strong	116	16.
• Avoidance of cooperation	18	17.
6. <i>Intensity:</i>		18.
• Very intensive	18	19.
• Moderately intensive	18	20.
• Not intensive	16	21.
7. <i>Reward:</i>		22.
• Big	16	23.
• Small	16	24.
• No reward	14	25.
8. <i>Time perspective of the relationship between the competitive parties:</i>		26.
• Short, temporary	13	27.
• Short, temporary and the goal is very important	11	28.
• Short, temporary and the goal is not important	13	29.
• long-term relationship	13	30.
9. <i>Focus:</i>		31.
• The self i.e. to develop, improve, be motivated work etc.	12	32.
• The partner in a negative way i.e. aggression, manipulation, denigration	12	33.
• Both parties i.e. motivate each other, develop each other etc.	12	34.
Total	483	35.
		36.
		37.
		38.
		39.
		40.
		41.
		42.
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		52.

Table 1: The dimensions and critical features of competitive incidents applied in the study.

1. of a description are presented here in a shortened version due to spatial
2. constraints.

3.
4. • Critical incident 1: strong cooperation within competition

5.
6. *In a fourth grade class, the arts and crafts teacher organized a competition and set
7. the rules. The children had to work in groups and build a fictitious village, design
8. and prepare houses, trees, roads, etc. It was announced that at the end of the lesson
9. that the class would vote for the most beautiful village. The most important rule
10. was that each group has its own idea and should not imitate the other group. Two
11. groups worked side by side in the classroom. When the children in group A noticed
12. that group B stopped working since they had run out of ideas, they suggested a way
13. forward for instance that they could set up a statue in the park. Members of group
14. B happily accepted the advice and offered their set of coloured pencils in case Group
15. A needs more pencils. Both groups concentrated on their own work, they were aware
16. that they are in competition and wanted to build the most beautiful village but when
17. the other group needed any kind of help, they still did help and did this in a cheerful
18. and friendly way. Finally, Group A won the competition. They were proud of their
19. achievement, because their classmates evaluated their work as the most creative.
20. Members of Group B also acknowledged that Group A designed the most beautiful
21. village.*

22.
23. • Critical incident 2: competitive parties do not cooperate

24.
25. *The observed situation took place in the dormitory of a secondary school between two
26. teachers. This was a long process that consisted of a series of events. Teacher A is
27. a young male person, who established very good relationships with students. He is
28. confident, with a good sense of humour, very strong moral values represented in a
29. straightforward way. Teacher B is a young female person who also has a good rela-
30. tionship with students. She always tries to put the students' interests forward and
31. stands for those even if it takes to fight with the management of the school. Teacher
32. A and B share a history of disagreement about several issues related to the students
33. and dormitory life. This time the conflict arose around a 17-year-old male student
34. who started to advertise openly racist and Fascist/Nazi ideas among the students.
35. Teacher A considered this absolutely unacceptable and suggested that the boy should
36. be expelled from the dormitory. The school board tended to agree with this. However,
37. Teacher B argued that instead of expelling the student, he should be provided with
38. proper help and guidance. Both teachers tried to convince other teachers to support
39. their views. As a result, the principal put the decision on hold. The two teachers
40. competed around who is able to get his or her educational opinion through. The stake
41. was what happens to the racist adolescent: whether he stays or leaves the dormitory.
42. The teachers became enemies. They both tried to convince and manipulate others to be
43. on their own side. What happens to the given student became no longer too important,
44. instead who wins the competition of educational ideas was the big issue. One day
45. Teacher A noticed that the student not only tries to distribute his unacceptable ideas
46. among the students in the dormitory but also on Facebook. The instructor reported this
47. immediately to the principal, who decided about the expulsion of the student. Teacher
48. B learned about this after the decision was made. It had not been consulted with her
49. and thus she became furious. All along this competitive conflict, Teacher A and B had
50. never sat down to discuss the situation face to face, they only expressed their ideas to
51. their fellow teachers and to the principal behind the other's back.*

52.

The original technique asks only for the description of the critical incident and identifies the defining characteristics of the investigated phenomenon and their relationships with each other by content analysis. However, Flanagan (1954) emphasizes that this technique is flexible and can be modified and adapted to meet the specific topic at hand. Tjosvold et al. (2003) emphasize that when respondents describe specific events and re-live the experience, they are able to rate the incidents on a number of variables with less distortion. Following the full account of the incident, similarly to Tjosvold et al. (2003) and Orosz et al. (2013), in our study the respondents had to fill in a closed-ended questionnaire that consisted of 23 aspects of the described situation. Contributors had to indicate their agreement on a Likert-scale (varying from 3 to 7 point). Obviously, when the critical feature to be described was 'high degree of cooperation', there was no statement in the following questionnaire in which the respondent had to indicate the degree of cooperation. However, after those descriptions of incidents that did not have the level of cooperation in their focus, there was such a scale. This enabled us to get information about all the relevant characteristics of the competitive situation irrespective of the critical feature placed into the focus of the description, while it also made possible the statistical analysis of the data. A principal component analysis as well as different factor analyses were conducted (Maximum Likelihood, Varimax [orthogonal] and Oblimin [oblique] rotation). The results were very similar. The principal component analysis was applied in order to keep the biggest number of variables within the analysis so as to make it possible to compose scales.

FINDINGS

The structural investigation of the variables resulted in seven principal components (results for the Kaiser–Meyer–Olkin measure and for the Bartlett's test of sphericity: $KMO=.819$; $\chi^2(253)=2990.928$, $p=0.000$, see Table 2). The principal components explained 69.8 per cent of the variance. Varimax rotation was applied to reach a more interpretable structure (in an orthogonal model). A variable was considered to belong to a particular principal component in case the absolute value of its factor load was at least one and a half time bigger than the absolute value of its loading in any other component. The variables that stayed within one component were put together in order to compose a scale. As a result of this procedure, the following scales were set up: Cooperation Scale, Motivation Scale, Fairness Scale, Transparency Scale and Enjoyment Scale.

The Cooperation Scale consisted of six items that all characterize the relationship between the competitors: their relationship before, during and after the competition (7-point scale from very hostile to very friendly), the level of cooperation among them (4-point scale from no cooperation at all to strong one), the level of trust (4-point scale from the lack of trust to strong trust) and the level of communication (4-point scale from no communication to the continuous exchange of information).

The Motivation Scale consisted of four items that all characterize the personal involvement of the competitors in the competitive process: their level of motivation (6-point scale from losing their motivation to compete to being strongly motivated), the importance of the goal/victory (5-point scale from not important at all to very important), how much the competitive parties were able to improve due to competition (5-point scale from no improvement at all

	1	2	3	4	5	6	7
<i>Cooperation Scale</i>							
• Relationship among the competitive parties before the competition	0.73	-0.02	0.13	0.15	-0.01	-0.20	-0.04
• Relationship between the competitive parties during the competition	0.73	0.00	0.49	0.27	0.01	0.02	0.02
• Relationship between the competitive parties after the competition	0.72	0.03	0.39	0.28	-0.03	0.01	0.02
• Cooperation between the competitors	0.75	0.08	0.15	-0.01	0.04	0.26	0.07
• Trust between the competitors	0.79	0.12	0.24	0.23	0.10	-0.01	0.05
• Communication between the competitors	0.82	-0.02	-0.19	-0.04	-0.08	0.12	0.01
<i>Motivation Scale</i>							
• Motivation	-0.02	0.72	-0.15	0.22	-0.13	-0.07	0.16
• Importance of the goal/winning	-0.08	0.72	-0.13	-0.26	-0.08	-0.22	0.15
• Improvement	0.22	0.74	0.23	0.17	0.17	0.28	-0.18
• Learning	0.22	0.72	0.24	0.10	0.19	0.28	-0.24
<i>Fairness Scale</i>							
• Observing the rules	0.13	0.03	0.73	0.14	-0.01	0.09	0.22
• Aggression	0.30	-0.01	0.76	0.23	-0.04	0.03	-0.09
• Manipulation	0.10	0.00	0.71	0.07	0.17	-0.04	-0.03
<i>Transparency Scale</i>							
• Clarity of evaluation criteria	-0.04	0.02	0.13	0.03	0.81	-0.07	0.16
• Control over the outcome	-0.11	-0.03	-0.04	0.05	0.68	-0.12	-0.36
<i>Enjoyment Scale</i>							
• Enjoyment	0.15	0.12	0.13	0.86	0.15	-0.03	0.01
• Positive stress (excitement)	0.21	0.02	0.27	0.80	0.06	-0.02	0.05
<i>Individual items</i>							
• Equality of chances	0.04	0.04	0.05	0.04	0.04	0.04	0.81
• Intensity of competition	-0.46	0.44	-0.37	0.18	-0.01	-0.28	0.03
• Clarity of rules	0.07	0.12	0.02	0.43	0.58	0.15	0.31
• Amplitude of the reward	0.01	0.48	0.20	-0.18	0.22	-0.47	0.24
• Scarcity of the reward	0.07	0.02	0.08	-0.04	-0.06	0.80	0.11
• Stress	0.35	-0.38	0.33	0.43	-0.06	0.15	-0.14

Note: Factor loadings in bold indicate which item belongs to which factor.

Table 2: The result of the principal component analysis and scales.

to strong one), and how much they were able to learn due to participating in the competition (5-point scale from no learning at all to substantial learning).

The Fairness Scale consisted of three items that characterize the way the competitors compete with each other: if they keep the explicit and implicit rules of the competition (4-point scale from not at all/cheat to fully observe the rules), if the competitive parties applied any kind of aggression, verbal, physical or indirect one against each other (5-point scale from no aggression

Scale	Cronbach's α
Cooperation Scale	0.819
Motivation Scale	0.731
Fairness Scale	0.74
Transparency Scale	0.419
Enjoyment Scale	0.823

Table 3: Reliability of the scales.

implied to applying strongly aggressive means), and if the competitive parties applied manipulation strategies against each other (5-point scale from not at all to highly manipulative means). In this scale, aggression and manipulation were reverse scored.

The Transparency Scale consisted of two items: first, the clarity of evaluation criteria, that is: how much the competitive parties were aware of what decides who the winner or loser is (3-point scale from there wasn't any objective criterion to having clear objective criteria) and second, the competitive parties' level of control over the competitive process i.e. how much the result of the competition was under their control, related to their own achievement (3-point scale from no control at all to complete control).

The Enjoyment Scale characterizes the competitive process in terms of emotions. It consists of two items: one is about how much the competitive parties enjoy the competition (6-point scale from causing displeasure to enjoying it very much), and the other is about the level of positive stress, the level of positive arousal and excitement (7-point scale from very unpleasant arousal to very pleasant excitement).

The individual variables were the following: the *equality of chances* (3-point scale from unequal to equal), the *intensity of competition* (6-point scale from not intensive at all to very intense), the *clarity of rules* (3-point scale from unclear to clear), the *amplitude of the reward* (5-point scale from no reward to very significant reward), the *scarcity of the reward* (4-point scale from all competitors could get a reward to only the first one could be rewarded), and finally the *level of stress caused by the competition* (4-point scale from no stress at all to a highly stressful process).

The internal consistency and the reliability of the scales (Cronbach's α) were examined. Four of the five scales had reached the Cronbach's α 0.7, therefore has proved to be satisfactory. Only one, the Transparency Scale had low reliability (0.419), therefore it had to be excluded from further analysis. Internal consistency results are shown in Table 3.

Design indicators were checked in order to examine if there is high inter-cluster correlation in the sample because the same contributor provided several critical incidents. The design indicators were lower than two so the research design was well-planned and there was no need for hierarchical analysis for corrected forms in our methods.

After establishing the scales, we examined their relationships with each other and with the variables that were not included in scales. The correlations are shown in Table 4 and Figure 1.

- The Cooperation Scale correlated significantly positively and strongly with the Fairness Scale ($r(377)=0.4$; $p=0.000$) and with the Enjoyment

Pearson correlations (r)	Cooperation Scale	Motivation Scale	Fairness Scale	Enjoyment Scale
Cooperation Scale	1.00	0.14*	0.49**	0.42**
Motivation Scale	0.14*	1.00	0.11*	0.18**
Fairness Scale	0.49**	0.11*	1.00	0.36**
Enjoyment Scale	0.42**	0.18*	0.36**	1.00
Intensity	-0.48**	0.30**	-0.34**	-0.05
Clarity of rules	0.17**	0.19**	0.25**	0.38**
Reward	-0.01	0.39**	0.04	0.02
Stress	-0.46**	0.23**	-0.41**	-0.42**

Note: *= $p < 0.05$; **= $p < 0.01$. Correlations in bold indicate the strongest relationships among the scales and variables.

Table 4: The relationship among the scales and individual variables. Pearson correlations.

Scale ($r(323)=0.42$; $p=0.000$). A significant but weak positive correlation was found between the Cooperation Scale and the Motivation Scale ($r(384)=0.14$; $p=0.01$). The Cooperation Scale correlated significantly strongly and negatively among the individual variables with the intensity of the competition ($r(405)=-0.48$; $p=0.000$) and with the stress level of the competitive process ($r(392)=-0.46$; $p=0.000$). The Cooperation Scale also correlated significantly and positively but weakly with the clarity of rules ($r(420)=0.17$; $p=.000$).

- In the case of the Motivation Scale, there were only weak and moderate significant correlations. Apart from the weak significant positive correlation with the Cooperation Scale ($r(384)=0.14$; $p=0.01$), the Motivation Scale also correlated positively but weakly with the Fairness Scale ($r(374)=0.11$; $p=0.03$) and the Enjoyment Scale ($r(334)=0.18$; $p=0.00$). The Motivation Scale correlated significantly moderately and positively among the individual

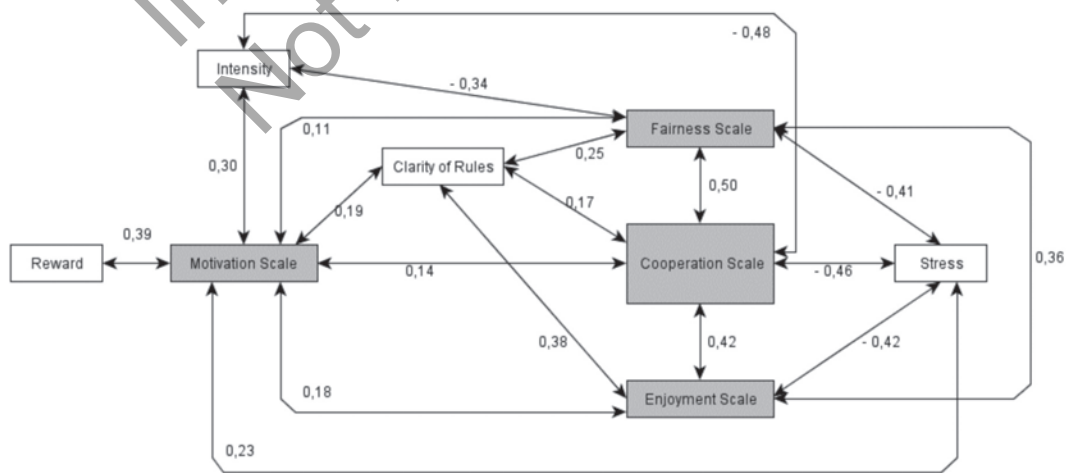


Figure 1: The correlations of the scales and individual variables.

- variables both with the intensity of the competition ($r(415)=0.3$ $p=0.000$) and with the amplitude of the reward that can be gained by winning in the competition ($r(424)=0.39$; $p=0.000$). There was a significant but weak positive relationship with the stress level of the competition ($r(401)=0.23$; $p=0.000$) and with the clarity of the rules ($r(424)=0.19$; $p=0.00$).
- The Fairness Scale correlated significantly strongly and positively with the Cooperation Scale ($r(377)=0.4$; $p=0.000$), moderately and positively with the Enjoyment Scale ($r(315)=0.36$; $p=0.000$). There was a significant weak positive correlation found with the Motivation Scale as well ($r(374)=0.11$; $p=0.03$). The Fairness Scale correlated among the individual variables significantly and strongly but negatively with the stress level ($r(380)=-0.41$; $p=0.000$) and moderately and negatively with the intensity of the competitive process ($r(390)=-0.34$; $p=0.000$). However, there was a significant and positive but weak relationship between the Fairness Scale and the clarity of rules ($r(409)=0.25$; $p=0.000$).
 - The Enjoyment Scale correlated significantly, strongly and positively with the Cooperation Scale ($r(323)=0.42$; $p=0.000$), significantly, moderately and positively with the Fairness Scale ($r(315)=0.36$; $p=0.000$), and weakly and positively with the Motivation Scale ($r(334)=0.18$; $p=0.00$). There was a significant, strong and negative correlation among the individual variables with the stress level of the competitive process ($r(345)=-0.42$; $p=0.000$) and a significant, moderate and positive correlation with the clarity of rules ($r(355)=0.38$; $p=0.000$).

A crucial goal of this research was to define the requirements and conditions of the cooperative competition; therefore the critical incidents were compared along the dimension of cooperation. The critical incidents characterized by strong cooperation between the competitors (cooperative competition) were compared along the four scales to those critical incidents that the contributors characterized with low level or no cooperation between the competitors. The results were the following:

- The incidents describing *cooperative competition* had a significantly higher average on the Enjoyment Scale (enjoyment and positive stress/excitement), (average of cooperative competition: 0.69; average of non-cooperative competition: -0.19 using the Welch's t test [$t(354,24)=14.75$, $p=0.000$]).
- The incidents describing *cooperative competition* had a significantly higher average on the Motivation Scale (importance of goal, motivation, learning, improvement), (average of cooperative competition: 0.21; average of non-cooperative competition: -0.04, Welch's t -test: $t(218,45)=-3.36$, $p=0.000$).
- The incidents describing *cooperative competition* had a significantly higher average on the Fairness Scale (observing the rules, no aggression and manipulation), (average of cooperative competition: 0.27; average of non-cooperative competition: -0.09, Welch's t -test: $t(371,03)=-5.36$, $p=0.000$).

In sum, cooperative competitive incidents were more enjoyable, more motivating and fairer.

The critical incidents were also compared along the rule keeping variable. The critical incidents in which competitors observed the rules and those in which competitors broke the rules and cheated were compared. The results were as follows:

1. • The incidents describing a competitive process in which the competitors
2. *obeyed the rules* had a significantly higher average on the Relationship
3. Scale (friendliness, cooperation, trust and communication), (average of rule keepers: 0.17; average of those who broke the rules: -0.69, Welch's
4. t -test: $t(41,28)=7.304$, $p=0.000$).
- 5.
6. • The incidents describing a competitive process in which the competi-
7. tors *obeyed the rules* had a significantly higher average on the Enjoyment
8. Scale (enjoyment and positive stress/excitement) (average of rule keep-
9. ers: 0.1; average of those who broke the rules: -0.66, t -test: $t(324)=4.139$,
10. $p=0.000$).
11. • There was no such difference found along the Motivation Scale. This
12. means that the level of motivation is not decisive in rule keeping (aver-
13. age of rule keepers: 0.05; average of those who broke the rules: 0.17,
14. $t(384)=1.63$, $p=0.104$). However, there was a tendency ($p=0.104$) indicating
15. that higher motivation goes together with keeping the rules.
- 16.

17. In sum, competitive situations in which the competitors observed the rules
18. were more cooperative and more enjoyable and slightly more motivating.

19. A linear regression analysis was conducted in order to reveal what vari-
20. ables influence the relationship among the competitors during and after the
21. competition. In order to do this, the difference between their value was deter-
22. mined by the gap between two relations: (1) during and before the competi-
23. tion; (2) after and before the competition. If the result is negative, it implies
24. that the relationship between the competitors has improved as a consequence
25. of the competition.

26. The two linear regression models were set up by stepwise regression.
27. The determination coefficients were ($R^2=0.34$; $F(4,273)=36.07$; $p=0.000$), and
28. ($R^2=0.25$; $F(6,273)=16.74$; $p=0.000$), respectively. The parameters of the two
29. models are in Table 5.

The relationship among the competitive parties during competition	B	Standard error	β	t-value	p
Constant	4.87	0.40		12.14	0.000
Cooperation	-0.27	0.06	-0.23	-4.42	0.000
Rule keeping	-0.41	0.12	-0.20	-3.39	0.001
Positive stress, excitement	-0.13	0.05	-0.15	-2.69	0.008
Aggression	-0.32	0.08	-0.24	-3.90	0.000
The relationship among the competitive parties after competition					
Constant	3.72	0.52		7.18	0.000
Cooperation	-0.19	0.07	-0.16	-2.79	0.006
Rule keeping	-0.55	0.13	-0.25	-4.17	0.000
Positive stress, excitement	-0.13	0.06	-0.14	-2.28	0.024
Improvement	-0.16	0.07	-0.13	-2.21	0.028
Stress	-0.34	0.12	-0.18	-2.98	0.003
Manipulation	0.21	0.10	0.12	2.11	0.036

51. Table 5: The result of the stepwise regression analysis: The determinants of the relationship during and after
52. competition among the competitors.

During the competition: The first model shows that there are four variables that change in the relationship among the competitors *during the competition*. These are the following: First, the more the competitors cooperate, the better their relationship will be during the competitive process ($t(277)=-4.42$; $p=0.000$). Second, the more the competitive parties compete observing the rules (no cheating), the better their relationship will be during the competition ($t(277)=-3.39$; $p=0.001$). Third, the more exciting the competition is, the better the competitive parties' relationship will be during the competition ($t(277)=-2.69$; $p=0.008$). Finally, the more aggression the competitors apply, the more their relationship will worsen ($t(277)=-3.9$; $p=0.000$) (aggression was reverse scored).

After the competition: The second model shows that there are six variables that play some role in the change of the relationship among the competitors after the competition. Three of them are the same what were found to play role during competition: the more the competitive parties has been cooperating during the competition, the better their relationship is after the competition ($t(279)=-2.79$; $p=0.006$); the more the competitors has competed observing the rules (no cheating), the better their relationship is after the competition ($t(279)=-4.17$; $p=0.000$); the more exciting the competition has been, the better the relationship is among the competitive parties after the competition ($t(279)=-2.28$; $p=0.024$); the more the competition has contributed to the improvement of the competitors, the better their relationship is after the competition ($t(279)=-2.21$; $p=0.028$). However, the more stressful the competition has been, the worse the relationship is between the competitive parties after the competition (stress reverse scored) ($t(279)=-2.98$; $p=0.003$); the more manipulation the competitive parties have applied against each other during competition, the worse their relationship turns after the competition ($t(279)=2.11$; $p=0.036$).

All in all, a cooperative, rule keeping, exciting and not aggressive competition after which the parties feel that they improved results in better relationship between those who compete, than their relationship was before the competition. In addition, a cooperative, rule keeping and exciting competition that does not cause much negative stress, and the parties do not apply manipulation does not destroy the competitors' relationship but improves it.

SUMMARY

The main goal of our study was to reveal what kind of requirements are needed for a cooperative competition. The previous studies (Fülöp 1992, 2004; Tjosvold et al. 2003; 2006; Sheridan and Williams 2006, 2011; Williams and Sheridan 2011, Orosz et al. 2013) aimed at revealing the conditions of less the cooperative than the constructive competition. Fülöp's study (1992, 2002, 2004) was carried out with teachers in Hungary, Sheridan and Williams's (2006, 2011) and Williams and Sheridan's (2010) with pre-, primary and secondary school students and teachers in Sweden, Tjosvold et al.'s (2003, 2006) study in an organizational business environment in Hong Kong and mainland China, while Orosz et al.'s (2013) research focused on those in a Hungarian business environment. They all demonstrated the existence of constructive competitive processes and indicated that a cooperative relationship among the competitors was part of the constructive process.

The present study focused on cooperative competition and aimed at revealing the specific conditions that may contribute to have a high degree

1. of cooperation involved in the competitive relationship. It asked teach-
2. ers and future educationalists to provide critical incidents of competition
3. and did not specify the particular environment in which the described and
4. observed competition should take place. The study showed that a high level
5. of cooperation in the competitive process is the result of several interrelated
6. characteristics of the relationship between the competitors, their behav-
7. iour with each other during the competition and of the emotions evoked by
8. competition. Cooperation among the competitive parties is in strong connec-
9. tion (of the same factor and scale) with the quality of relationship between
10. them before, during and after the competition, their level of trust in each
11. other and their open communication. This cooperative relationship complex
12. is in the strongest connection with fairness, which characterizes the way of
13. competing and the means that the competitors apply. It is also a complex
14. of behaviours: rule keeping, being non-aggressive and non-manipulative. An
15. unfair competition means that the competing parties break the rules, apply
16. immoral means, cheat, lie, mislead, falsify results, sabotage rivals, etc. in order
17. to win over them. It is easier to cooperate with and to have trust in a competi-
18. tor who does not do all these. It was also found that it is easier to observe the
19. rules if they are clear and the clearer the rules the better and more coopera-
20. tive the relationship is. This result is in harmony with Tjosvold et al.'s studies
21. (2003, 2006). A cooperative competitive relationship between the parties is
22. also strongly related to enjoyment, which is also a scale composed of two
23. positive emotional aspects: the level of enjoyment and the level of being posi-
24. tively stressed, i.e. excited. This is also in harmony with Tjosvold et al.'s (2006)
25. study. If parties enjoy the competition, they may be more willing to cooper-
26. ate, and if competitors cooperate that combines the excitement and positive
27. feelings of both competition and cooperation. If competitive parties coop-
28. erate, that evokes not only more positive emotions, but less negative stress
29. as well. However, the worse the relationship among the competitive parties
30. is, the more negative stress is evoked. Cooperative competition is also more
31. motivating. The motivation scale is a combined scale, too, consisting of the
32. level of motivation, the importance of the goal, and the level of learning and
33. improvement due to competition. Motivation to compete contributes to social
34. bonding, since it relates positively to cooperation, trust and open communica-
35. tion among the competitors and it also relates positively to enjoyment, i.e. the
36. pleasure of taking part in a shared activity. On the contrary, the more coop-
37. erative competition there is, the more it motivates, contributes to learning and
38. improvement. In addition, it seems that if parties experience that due to the
39. competition, they become more motivated to reach a particular goal, they learn
40. and improve as a result of that competition, then they are willing to cooperate
41. more with the rival who contributes to all these positive results. In her study
42. on Japanese university students' concept of competition (2004, 2009a, 2009b),
43. Fülöp has arrived at the very same conclusion. Japanese respondents either
44. consider the competitor a *friend* with whom they mutually enhance each other
45. in the process of reaching the common goals, or a *stimulator*, a kind of imper-
46. sonal agent of the self-improvement process. Peers who fulfil this instrumen-
47. tal role are very precious and thus must be kept and not eliminated from the
48. competitive process, since they are the ones who guarantee that the person in
49. question does not stop the process of self-perfection (Fülöp 2004).

50. The model of cooperative competition indicates that the intensity of
51. competition is also a risk factor in cooperative and fair competition. With
52. growing intensity, fairness and cooperation are decreasing. This can result

in competition turning into something that is non-cooperative and unfair. When competitors compete very intensively, there may be less trust, less communication and more aggression and manipulation between them. This may further increase the intensity of the competition (the effect functions into both direction), because if the competition is threatening and potentially harmful, it becomes more important, a kind of 'life and death' question for the competitors to defend themselves and defeat their rival. The model also indicates that the more motivated the competitors are, the more intense the competition is. This means that the intensity of competition not only increases if the competition is less cooperative and less fair, but it also increases with the level of motivation. Based upon the model, we assume that the heightened motivation level is not responsible for the negative effect of increased intensity because it shows that higher level motivation not only relates to higher level of intensity but also to more cooperative, fair and enjoyable competition. It is an important question how to be in an intense competition, investing one's best effort, trying hard to be the best or win while still obeying the rules and keeping a positive, trustful relationship with fellow competitors. The way the intensity of competition varies according to other variables of the competitive process is a topic for further investigation.

The level of motivation to compete is in connection with the amount of reward. Extrinsic rewards had been traditionally considered external pressure to compete (Deutsch 1962; Johnson and Johnson 1989) contributing to lessened motivation and adversary effects. In our model, this is not the case. The bigger the reward of the competition is, the more motivated the competitive parties are. Extrinsic reward was found to be related to stronger relationship among the rivals and increased task effectiveness in case of Chinese employees investigated by Tjosvold et al. (2006) as well. In the view of our results, higher motivation is positively related to negative stress as well. Johnson and Johnson (1989) argued that the more important winning is, the higher is the anxiety level and the more negative emotions appear. In our model, higher motivation was related to positive emotions i.e. enjoyment as well as to negative emotions, i.e. negative stress. This may evince two different patterns. First, if competition is not cooperative and competitors cheat and are aggressive and manipulative, this may increase the intensity of the competition and the importance to defeat the rival, also entailing negative stress. However, if competition is cooperative and fair, then it may also come together with heightened motivation, but this elevated motivation evokes positive emotions and is enjoyable, too.

During the period when cooperation and competition were dichotomized by researchers, cooperation and not competition was considered to result in openness in communication, in trust and friendly attitudes (Deutsch 1990). The present research confirmed that this is perfectly possible in a competitive relationship as well. In harmony with Tjosvold et al.'s (2003, 2006) research, it was found that participating in a cooperative competitive process improves the relationship between the competitors both during and after the competition.

Earlier cooperation was also considered to bring about learning more than competition (Johnson and Johnson 1989). The present research shows that competition may also increase learning and may contribute to improvement. It was also found that when the competition leads to improvement, competitors have more positive feelings and better relationship.

CONCLUSION

In the above presented research, competition can be mutually supportive, serving both parties. It is not only being a winner or a loser that defines the costs and benefits in a competitive situation. Irrespective of the outcome, competitive parties can experience positive stress, learning, improvement, good relationship, trust, communication and fairness, among others. However, our study highlights those features of a competitive situation that destroy all these positive effects, for instance rule breaking and cheating, aggression and manipulation. Their effect is present irrespective of the actual outcome of the competition. They may destroy the engagement between the competitors and result in disengagement (Fülöp 2008b), or the parties being intensively motivated instead of improving themselves and each other to destruct and destroy the rival. Defection or cheating in a competition may lead to the competitive parties' cheating, too, and may turn the interaction into an unproductive series of defections (Baumard et al. 2013).

In a previous study, Hungarian primary and secondary school teachers were asked about their views on the role of the school in preparing students for future competitions in life. The majority of teachers expressed their conviction that competition is necessary in order to be successful in the society and they considered school a good arena for preparation for competition in life (Fülöp 2008b; Fülöp and Pressing 2012).

Williams and Sheridan (2010) found that the ways in which competition develops in school, either in destructive or constructive directions, is more a question of chance or coincidence than something evolving out of a conscious choice. To compete constructively in a conscious manner requires knowledge of how to control the situation and of the characteristics of this kind of competition.

Cooperative competition as a process is an example of constructive competition. Competition can be constructive even if it does not incorporate a high degree of cooperation among the parties. If competitors do not block each other and as a result of the competitive process, they bring out their best potential without compromising their and their rival's subjective well-being that is constructive as it is beneficial to them, to their group and to the society. Cooperative competition specifically refers to a relationship among the competitors that involves their active cooperation with each other. The present study has found that one of the key determinants of cooperative competition is rule keeping during the competitive process. Therefore the most important factors to control in a competition are the clarity and the observation of rules. One aim of the good citizen might be the effective participation in the development and application of the rules and procedures by which individuals and groups are assisted in achieving their various goals (Flanagan 1954), including those goals that can be reached only by competing with other citizens and social groups. Educators who wish to structure cooperative competitions may wish to emphasize the importance of acting fairly even if competition is very intensive. Our findings show that those who orchestrate competitive situations and wish to establish cooperative competitive relationships have to monitor the intensity of competition and especially pay attention to its effects on fairness and cooperation. Earlier studies did not include this variable in their investigation, therefore its role in the constructive or destructive nature of competition was not followed up. Improving communication and trust between the competitors also influences how much they take rules into

consideration. To structure competitive situations in which parties are able to experience that they learn and improve is also a way to facilitate cooperative competition, because competitors learn that a cooperative relationship with the rival contributes the most to obtain these effects.

To become able to educate the cooperative competitive citizen, teachers first have to be professionally informed about the different forms of competitive relationships and the way they can be influenced by interventions. If they themselves are aware of these processes, they can also clearly communicate this to their students and can help them see competition and cooperation in a more comprehensive framework. The present study shows that it requires complex forms of social skills to be able to compete and cooperate at the same time. Acquiring the skills necessary to compete effectively, constructively and cooperatively can be of considerable value. The present findings may provide guidelines and contribute to set effective interventions that may promote cooperative competitiveness among the members of social groups. If those who are in the position to influence group processes are aware of the critical requirements for competition to be cooperative, they can induce, monitor, control and regulate these processes.

Cooperative competition is a process that provides a solution to the tension between the self-interested competitor and the community-minded cooperator. The balance of competitiveness and cooperation, teamwork and individual initiative, self-assurance and deference are all part of the socialization to establish skills and attitudes to cooperate and compete. A competition that contributes to the development of those involved and brings out their best potential, while they are in a respectful and cooperative relationship is a significant requirement in a society that constructs competitive situations in many different realms from everyday community life to economics and politics (Fülöp 2008b). Therefore, in order society to function successfully it is imperative for citizens to be able to combine and integrate their commitments and interests and to be successful in cooperation, competition and in cooperative competition with fellow citizens. To conclude, it should be important to bring up and foster a new generation of cooperative competitive citizens.

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CONTRIBUTOR DETAILS

50. Márta Fülöp is the scientific director of the Institute of Cognitive Neuroscience,
51. Research Centre of Natural Sciences, Hungarian Academy of Sciences and a
52. professor of social psychology at Eötvös Loránd University, Budapest. She has

been a member of the Executive Committee of the Children's Identity and Citizenship in Europe SOCRATES Academic Network (CiCe) since 2000. She is also the Research and Publication Officer of the Children's Identity and Citizenship: European Association. She has been the chair of annual doctoral student conference of CiCe since 2007. Her main research field is the psychology of competition. She has more than 300 publications and around 900 citations to her work.

Contact: Institute of Cognitive Neuroscience, Research Centre of Natural Sciences, Hungarian Academy of Sciences, Budapest 1132 Victor Hugo utca 18-22, Hungary.

E-mail: fmarta@mtapi.hu

Szabolcs Takács, assistant lecturer in the Department of Cognitive Psychology and Methodology, Károli Gáspár University, Budapest, Hungary. He graduated from Eötvös Loránd University, Hungary, as applied mathematician. He is author and co-author of over ten articles on many different fields: operation research, statistics, psychology, economics and linguistics. He is a doctoral student of applied mathematics at the Faculty of Sciences, Eötvös Loránd University.

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