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Social Creativity in Primary-school Children: How to Measure, Develop and Accept it

Olga Chesnokova^{a*}, Eugene Subbotsky^b

^a*Moscow State University, Faculty of Psychology, Dept. of Developmental Psychology, Moscow, Russia*

^b*Lancaster University, Department of Psychology, LA1 4YF, United Kingdom,*

Abstract

In Experiment 1, 8- to 11-year-old children's social creativity was tested in a situation of conflict of interests. Results indicated that children are capable of inventing a secret code as a cunning strategy, through referrals to the past experiences, which are understood by both participants but not by the adult. Experiment 2 tested teachers' understanding of social creativity and teachers' attitude towards children's social creativity in a classroom. The findings demonstrated that the teachers' assessments did not correlate with children's socially creative behaviour in Experiment 1. Most teachers agreed that the proportion of socially creative pupils in an ideal class should be no more than 31.75 % from the total number of pupils, otherwise it would be difficult to control the class.

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1. Introduction

In this study we focus on social creativity (SC), which is an umbrella term of domain specific creativity encompassing a number of different forms applied in interactive situations [1][2]. SC is a part of the divergent

* Corresponding author. Tel.: +84956295752.

E-mail address: olgach1234@googlemail.com

thinking studies [3] [4] and multiple intelligence movement in the 1980s [5] [6], dating back to the social intelligence in the 1920s [7] and dating forward to social problem solving [8] [9], social intelligence and social knowledge [10], emotional intelligence [11] [12] [13] and practical intelligence in 1990s [14][15]. One of the significant and useful conceptual breakthroughs in creative studies were the concepts of domain specificity and Big-C/little-C [16][17]. Variations of this construct appear in the literature under such diverse labels as social creativity [1] [2], social giftedness [18][19], interpersonal /social flexibility [20][21], inventiveness in children's interactions [22], astuteness [23], heuristics in social domains [24], social talent [25] and other. We focus on developmental aspect of social creativity, in contrast to the earlier research, which analyzed mature forms of social creativity (i.e., social mobility) and ignored less sophisticated forms of SC that exist in younger children [26] [27]. Many research refer to children's creative abilities as measured by traditional tests on creativity and divergent thinking in hypothetical interpersonal situations [1]; however, these studies but do not explain the function of SC in real interpersonal situations. The study of animal social intelligence showed that within complex hierarchical groups some socially smart apes can use creative social manoeuvring to outwit more powerful companions, with the aim of getting access to resources while avoiding direct confrontation with other members of the group at the same time [28]. The tricksters' folklore tales depict a clever, mischievous man or creature, who tries to survive the dangers and challenges of the world using trickery and deceit as a defense [29]. For example, Br'er Rabbit represented the enslaved Africans who used their wits to overcome adversity and exact revenge on their adversaries - the White slave-owners [30]. These tales show how it is possible to overcome a system of oppression from within tweaking authority figures. In some current studies SC of lying has been analysed [14]. All these examples showed that not each communicative situation demands SC [31].

In order to partially fill the gap in research on children's SC, in this study we focussed on one form of SC – cunning (the ability to outwit a competitor), by modelling a specific interaction situation that would evoke this form of SC. SC as cunning may be defined as a creative re-active/pro-active ego-defensive adaptive coping strategy in an interpersonal situation where obstacles are set up to disrupt the direct way of gaining one's own goals. This kind of interpersonal situations stimulate in children creating new ways of indirect interpersonal influence. We named this type of social situations as the “clash of interests situations” (CIS) [32] [34]. In the CIS the direct way of reaching individual or group goals is not possible. It is therefore necessary to find outflanking indirect way of gaining an advantage over another person or a group in an imaginative and smart manner, and without direct physical confrontation or breaking the existing social rules.

Consequently, in Experiment 1 of this study, we examined primary schoolchildren's behaviour in the CIS, with the aim of classifying the ways that children find in order to achieve their goals. In Experiment 2, we examined the teachers' attitudes towards this form of SC in primary school children.

2. Experiment 1

2.1. Participants

Eighty three Russian 6- to 8-year-olds (mean age = 7.3 years, $SD = .051$) (of which 43.1% boys and 56.9% girls), and sixty eight 9- to 11-year-old (mean age = 10.5 years, $SD = .056$) primary school children 9 (of which 43.5% boys and 56.5% girls) participated in interaction situation involving three participants (a target child, a child partner from another class and a teacher).

2.2. Procedure

For measuring children's SC we used a task, which was a modified version of the task employed in our previous study [33] [34] and inspired by the instrument to measure creativity in young children using geometric forms [35]. A target child was asked to hide a certain object in one of 7 boxes that differed by colours and shapes when another child and the adult were out. When they returned, a target child should invent a way to convey the object's location to another child without revealing the location to the adult. All participants should follow the

rules: direct pointing and direct verbal indication as to where the object is hidden were forbidden, and the indication of a hidden object to the partner should be done without revealing the location to the adult.

2.3. Results

Results indicated, that three distinctive patterns covered the children's behaviour in this situation: successful (i.e., SI) solutions, unsuccessful solutions, and acknowledgement that the task is impossible (Table 1).

Table 1. Percent of children who displayed this kind of behavior as a function of age

Behavior type	6-8 years	9-11 years	chi-square
Successful (SI) solutions	6.6	24.1	12.18**
Unsuccessful solutions (direct indication or deception)	69.1	34.0	29.02***
Acknowledging the task's impossibility	24.3	42.1	14.01***

*** $p \leq .001$, ** $p \leq .01$

For the successful SI solutions, secret code was invented by the children through referral to the past experience which are understood by both participants but not by the adult. For example, the boy would say to his child partner "The box is the colour of the ball we had played yesterday" (both children know the colour of the ball, but the teacher doesn't). Unsuccessful strategies were deceiving the adult (diverting his attention while indicating the hidden place by gestures) or whispering the colour of the box to another child so that the adult could hear. Finally, some children, after having tried to solve the task, acknowledged that the task was impossible to solve. As Table 1 shows, 9-11-year-olds displayed successful SC solutions significantly more frequently than did 6-8-year-olds, whereas 6-8 year-olds significantly more frequently applied deception than did 9-11-year-olds. It is also evident that older children, when they were unable to solve the problem in the SC way, preferred to acknowledge that the task was impossible, rather than apply deception.

2. Experiment 2

2.1. Participants

Eleven teachers were involved to discuss the experiment from the school who knows the children participated in Experiment 1.

2.2. Procedure

The teachers were asked what kind of solution, in their view, each particular child had displayed in the task employed in Experiment 1: *acknowledged that the task was impossible, invented socially creative strategies, or used deceptive strategies by breaking the rules*. Next, each teacher was individually asked to imagine the ideal class consisting of 30 pupils and one fresh teacher and indicate, how many children with SC abilities (displayed in Experiment 1) they would regard as an optimum.

2.3. Results

Results are shown in Table 2.

Table 2. Percent of teachers who displayed this kind of assessment as a function of children’s behavior (SI versus not SI)

Assessment type	SC children	Not SC children (t)
Say that this kind of children were socially creative in Experiment 1 (teachers of 6-8-year olds)	48	42
Say that this kind of children were socially creative in Experiment 1 (teachers of 9-11- year olds)	31	54
Say that this percentage of this kind of children is desirable in an ideal classroom (teachers of 6-8-year olds)	39	61
Say that this percentage of this kind of children is desirable in an ideal classroom (teachers of 9-11 year-olds)	24.5	75.5
Say that this percent of this kind of Children is desirable in an ideal classroom (all teachers)	31.75	68.25

The findings demonstrated that teachers’ assessments of each individual child’s SI strategy in everyday situations did not correlate with children’s behaviour in Experiment 1 ($r=.104, p<=0.11$). This mismatch between teacher’s opinions and children’s real behaviour was reflected in the fact, that children who were able to invent successful SI solutions in Experiment 1 were not always classified by the teachers as socially creative (Table 1, upper line). Teachers of 6-8-year-olds assessed the children as more capable of inventing SC strategies (48% of the total number of children) than the data of Experiment 1 showed (6.6% of the total number of children). In contrast, teachers of 9-11-year-olds adequately assessed their students' behaviour in Experiment 1, as SC or not SC.

Interestingly, the teachers did not think that most of the children in an ideal classroom should be socially creative in the way they had been in Experiment 1. The teachers justified their opinion by the assumption that socially creative children would be more difficult to discipline and control. As follows from Table 1, teachers are more tolerant towards SC in younger children (39 % of the total number) than in older children (24.5%).

The teachers of 6-8 year-olds had a more positive attitude towards children’s social creativity than teachers of 9-11 year-olds. On average, teachers thought that the proportion of SC pupils with the SC abilities displayed in Experiment 1 in an ideal class should be no more than 37.75% from the total number of pupils.

3. Discussion and conclusions

Most researchers acknowledge that cunning creative abilities as one of the form of SC plays significant role in children's personal and social development, by making the children more adjustable, flexible and socially mobile. As Experiment 1 indicated, children's ability to apply SC strategies in the situations of conflict of interests grows with age. At the same time, traditional school culture in Russia prefers to develop in children academic skills and stimulate creativity through art and science lessons. Stimulation of SC in schoolchildren, especially as social; creative strategies like outwitting opponents in conflict of interest situations, despite their useful and adaptive role, has less support from teachers and is viewed as an educational policy that can undermine the teachers' ability to control the students' behaviour in a classroom (Experiment 2). This result is in concordance with the data reported in some earlier studies [36] [37] [38] [39]. It is interesting that the tendency to display only moderate tolerance towards SC in children is shown in different types of cultures: the one which has been traditionally oriented towards collectivistic values in education (i.e., Russia) and those, which promote individualistic approach towards child development (i.e., Western Europe).

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