The role of reading the mind and the need for reading the mind in non-clinical adult's social behavior

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The aim of dissertation and the circumscription of dissertation

The dissertation investigates the mentalizing ability and the need for mentalizing in non-clinical adult's social behavior.

The mentalizing ability or theory of mind/mindreading refers to the ability with which we are able to attribute distinct mental states to others, such as beliefs, thoughts, moods, feelings, intentions (Baron-Cohen, 2001; Slaughter, Repacholi, 2003).

Attributing mental states to others bonding human social interactions, because we do not have direct access to the cognition or beliefs of others, but we are shaving our behavior based on these beliefs.

So well-functioning mentalizing ability is key component of efficient social interactions.

The development and functioning of the ability was investigated first in the field of developmental and clinical psychology. These research revealed the that the children aged about 4-5 got to the relatively ripe stage that means to able to understand that other's beliefs of reality can differ from his own views (Wimmer, Perner, 1983). This based on a wit that the views about reality based on beliefs and the beliefs form differently and sometimes they are false.

The other part of studies demonstrated the disfunction of the mentalizing ability, and impaired theory of mind in definite clinical pictures. Firstly in case of Autistic spectrum disorders, later in case of paranoid and schizophrenic clinical pictures, and borderline personality disorders demonstrated impaired mentalizing ability (Baron-Cohen, et al., 2001). Symptoms in all cases manifested in the field of communication and social interaction.

Investigation mentalizing ability in non-clinical adult population appeared much more later. From the beginning of 2000's turned up studies about individual differences in mentalizing ability in non-clinical adult population. These studies demonstrated that individuals differ in identifying mental states in case of the absence of mental deficit, as well. Besides this, these studies presented that the higher level mentalizing ability one's has, the more willingness to cooperate others they show (Paal, Bereczkei, 2007), the more emotional intelligence (Ferguson, Austin, 2010) and empathy they have (Wakabayashi, Katsumata, 2011), and the more cooperativeness they show (Kepenek, Smith, 2010). Furthermore the less machiavellianism they have (Ali, Chamorro-Premuzic, 2010; Lyons, Caldwell, Shultz, 2010), that implicates that people with advanced theory of mind do not use this ability for fob somebody off or take advantage of somebody to reach own goals.

In sum, high level of mentalizing or mind-reading ability, go hand in hand with prosocial personality orientation in the light of studies so far.

The aim of the dissertation is to demonstrate a special aspect of the topic of mentalization, which has not been investigated so far, named the need for mentalizing and also the ability of mentalizing in social behavior.

The role of mentalizing ability was tested in a special situation where made test persons involved in a revenge spiral. We tested whether higher level of mindreading thus better information about the others' perspectives and mental states could indicate positive social response tendencies, specifically whether it went hand in hand with the revelation of quitting intention. This expectation was based on the results that revealed positive connections between mentalizing ability and forgiving tendency of harmed persons (Cavojová et al., 2011; Exline et al., 2008), because higher level of mindreading can reduce negative emotions, like the extent of anger (Mohr et al., 2007), as well.

Moreover our aim was to develop a scale, that measure not the ability of mentalizing, but the need for mentalizing. The purpose was to grab individual differences in the degree of a motivation for knowing others' mental states such as thoughts, feelings, intentions, among healthy adults.

Our target emerged from two sides.

First, we based on the results that reported more modality of human behavior, thus distinguished ability, motivation and behaviour (Maio, Essess, 2001). Second, we supposed that mentalization is a broad phenomenon, and has not narrow borders (Paal, 2011). Thus we distinguished different contents in the back of measuring the need for mentalizing. Our aim was to measure both affective (feelings, emotions), and cognitive (beliefs, intentions) motivational contents.

The role of the need for mentalizing was tested in special situations, where moderate conflict was manifested between participants.

With this, our aim was to examine whether the need for mentalizing could effect similar, like prosocial, cooperative reaction tendency to the ability of mindreading as research literature reported (see above).

In one of our experiments we created conflict situation with transgression and measured tendency to forgive in the function of need for mentalizing. In another experiment participants had to participate in a negotiation, where they had both cooperative and competitive interests.

Competitive because their aim was to maximize their own profit, but cooperative because they could only benefit in case of agreement. The task was an integrative negotiation exercise where participants negotiated in dyads and had the possibility to match their interests for reaching mutually beneficial agreements through logrolling.

Our aim was to measure the role of the need for mentalizing in such an integrative situation.

It was supposed that the higher level of need for mapping other's beliefs and perspectives could help reaching mutually beneficial agreements.

Furthermore the aim of the dissertation was to measure the relation between the need for mentalizing and the ability of mentalization. As it was mentioned earlier individual differences in behavior can be viewed from different points (Maio, Essess, 2001): ability, style and motivation. Emerged from it, mentalization can also be focused on three variables: ability to recognise mental states, motivation for mapping mental states, and mentalizing style as thinking about others in mental terms. Our aim was to examine whether it can be shown correlation between the ability to recognise other's mental states correctly and the need for mapping other's mental states.

In case of confirming linear connection between mentalizing ability and the need for mentalizing, it can be declared that the higher level of mentalizing ability the higher level the need for mentalizing is, otherwise individual's different aspects of behavior like motivation and ability connect poorly to each other (Cacioppo, Petty, 1982).

Applied methods

In our first study we investigated the role of mentalizing ability in escaping from escalated conflict situation.

To test our hypotheses we conduct a strategic laboratory game. In this game participants thought to play with a partner actual, while they played with a response pattern (answer schema) as part of a manipulation check. The game based on the revenge game conducted by Bolle, Tan, Zizzo (2013). We chose this game because this setting gave the possibility to display the revengeful and stressful nature of escalating conflicts. In the beginning participants informed to had 30 % odds to win a prize at the end of the game. They were also informed to get the chance to grease their winning skids in case of taking chance away from their partner. They could taking away from their partner in 5 % unit standard, which means 3% winning chance increasing.

According to a game scenario the „partner" (answer schema) took the first step and took chance away from the participant. Taking chance away from the participant happened continuously as far as the research participant also took away in response in the following two steps. Taking away in two rounds in a row functioned as a manifestation of getting involved into the conflict, in our view.

After observing that pattern, the „partner" (answer schema) did not take more chance away and the laboratory game ended that point when the research participant followed it and did not take chance away, as well. So when also the answer schema and participant stop taking chance away from each other.

Mentalizing ability was measured by an advanced test of theory of mind, called „Reading the mind in the eyes test" (Baron-Cohen et al., 1997). This test asks participants to choose one of the four words best describes what the person in the photograph is thinking or feeling.

A questionnaire after the laboratory game was also filled in by the participants to measure the validation of the manipulation check, whether they incrusted in the game, that was measure with brief statements and participants could respond using a 5 points Likert scale.

The main independent variables were the refused reconciliation and the mindreading ability. The main dependent variable was the acceptance of the reconciliation.

In our second study first we developed a scale measuring the need for mentalizing, and examined the relationship between need for and ability of mentalizing.

To measure participant's need for mentalizing, we generated 23 items involved the need for read affective and cognitive mental states either and participants could respond each of the items using a 7 points Likert scale.

The statements were developed to measure the extent of the need for reading other's mental states like thoughts, beliefs, feelings, intentions and perspectives.

Then we set it against with the mentalizing performance (mindreading ability) using the „Reading the mind in the eyes test", see above.

In our third study we demonstrated the connection between the need for mentalizing and forgiveness. We also settled a laboratory experiment, where participants experienced transgression.

The situation was the following: 12 participants arrived into the laboratory, waiting for a creative, funny task's competition among 3 groups with 4 person in each. Later realized that the competition could admit 3 groups with only 3 person in each. So then they were informed about a disqualification by the random choose captain's of the group's based on the performance of a former task. The participants could not communicate to each other, because

the laboratory game was computer mediated with the assist of z-Tree program. Each participants faced that she/he was the person who was going to be disqualified from the game. Then they either got compensation or not, and it was declared, that compensation come from the transgressor (captain's of the group's) or it had been ordered by the rule. The compensation was money and experiencing the funny tasks.

Forgiveness was measured in two levels; attitudinal and behavioral. The attitude about forgiveness was measured by a forgiveness attitude scale (based Rye and his colleagues, 2001 scale), where participants had to report negative feelings about the transgressor, the behavioral measure of the forgiveness was estimated by a dictator game. The attitude scale was a 7 points, Likert scale. The dictator game was the following: participants got certain sum of money and their task was to share it with the captain of the group (transgressor) anywise. The captain had to accept it as it was, whatever it might be. It is supposed that the more sum the participant give to the transgressor, the more forgiveness he/she displays.

The level of the need for mentalizing was measured by the need for mentalizing scale developed by the authors (see above, at second study).

In the fourth study we investigated the role of the need for mentalizing in negotiation situation.

The negotiation task was a laboratory experimental game actually and was consistent with the classical integrative negotiation exercise (described by Pruitt, Lewis, 1975).

The exercise was the following: participants had to negotiate in dyads in such a situation where they received instructions to imagine that they were either a head of zoo or a head of a butcher and need to negotiate to each other about three issues regarding the type of goods, time of delivery and term of payment.

Each terms had nine possible options associated with various levels of profit and had to make an agreement in each terms. The sum participants reached was paid. Both of the negotiators could only see their own schedule. The simulation allowed negotiators to achieve better than compromise agreements by conceding on their lowest priority issue in exchange for receiving concessions on their highest priority issue, as two of the three issues was supplementary one another but it was not declared explicitly. One of a three issues was constant, that means that the more profit one negotiator obtains, the less profit the other negotiator achieves in same extent. So the roles in the dyads were equivalent.

The need for mentalizing was measured by a scale developed by the authors (see above, at the second study).

After the negotiation we measured the representations about the structure of the negotiation task, about the partner and about the strategy applied by the negotiator with brief statements and participants could respond with a 7 points Likert scale or partly in writing sentences. Substantial questions measured whether the participants comprehend the structure of the negotiation task.

The study beside the measurement demonstrated before, contain content analysing to analyse the type-scripts to know more in connection with the need for mentalizing and three issues negotiation task.

Theses of the dissertation

1. Higher level of mentalizing ability could help quit from a revenge situation, go hand in hand with prosocial response tendency as participants with higher level of mindreading ability display higher distance from the revenge.

2. There are three different motivational contents in the field of the need for mentalizing. The first is the so called need for knowing one's beliefs, feelings and intentions; the second refers to the need for smooth social interactions, and the third refers to the motivation to engage in mentalizing.

3. The need for mentalizing does not show significant positive correlation with the affective mentalizing achievement based on the mindreading ability. The connection between the recognition of affective mental states (feelings, moods) and the need for mentalizing is probably not linear.

4. People with higher level of the need for mentalizing show higher extent of forgiving tendency after mortification that manifest in lower extent of negative representations about the transgressor and more positive responses in behavior.

5. Higher extent of the need for mentalizing facilitates reaching beneficial agreements. There is a significant positive connection between the higher extent of the negotiation dyad's need for mentalization and the higher joint outcome.

Furthermore, it is also proved that the higher extent of the need for mentalizing is not facilitate the comprehension of the structure of the integrative negotiation task. More profit is in connection with cooperative, prosocial tendencies that allow take partner interest into account and in such an integrative situation it is enhancing profit.

Based on the results of interconnected research, it should be noted that the direction of the future research in mentalization should operate the ability and the need for mentalizing together.

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