Machiavellianism and its relationship with Theory of Mind, Emotional intelligence and Emotion recognition

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Abstract- The manipulative strategy of Machiavellianism is often considered to be successful despite the poor emotion recognition abilities of the person with high Mach scores. The better we recognize others' emotions, the easier it gets to understand them – for a manipulator, it means the easier it would get to take advantage of them. However, with worse emotion recognition skills and lower level of emotional intelligence, Machiavellianists must develop other abilities to understand others, and with the lack of empathy, exploit them without hesitation or repentance. Previous findings suggest this ability is the Theory of mind, but evidences are unconvincing and vary with each research. In this paper we look into the relationship of Machiavellianism, emotion recognition, emotional intelligence and Theory of mind, using not only self-report questionnaires, but performance tasks for more legitimate results.

Index Terms- Emotional intelligence, emotion recognition, Machiavellianism, Theory of Mind

I. INTRODUCTION

Machiavellianism is known to be a behavioral strategy rather than a personality trait. People with high score of Machiavellianism ('high Machs') tend to be manipulative and cynical, characterized by the remorselessexploitation of others [8].

Machiavellianism tends to be associated with low emotional intelligence [1][2][3] and pervious findings suggest that high Machs are worse at recognizing emotions [2]. If they cannot classify basic facial emotions, they are unable to tell what the other person is feeling, whether he or she believes them or not. Also, they will not empathize with the other person and the opportunity rises to scam this person without feeling guilt or shame. But since studies [2] showed evidence that Machiavellianists are not any better at emotion recognition tests than others, they must rely on their other abilities to successfully understand and mislead other people. One of these possible abilities is the Theory of mind ('TOM') or mindreading, which is the cognitive capacity to attribute mental states – beliefs, desires, etc. - to oneself and others. Results of previous researches vary, some suggest Machiavellianism is unrelated to higher mindreading abilities [3][4][5], yet others claim there is not enough evidence, and the opposite is plausible [6][7].

This current paper focuses onthe relationship between Machiavellianism, emotion recognition, emotional intelligence and Theory of mind, in order to better understand the abilities and the limits of the manipulative minds.

II. METHOD

A.Participants

Participants were 85 people (45 female) recruited from universities' mailing lists and social media pages. Their ages ranged from 18 to 49 years (M: 22.9, SD: 5.1) and volunteered to participate in the study anonymously. Subjects were not paid for participating and all gave their informed consent prior to their inclusion in the study.

B. Materials and Procedure

More than two hundred people were contacted, and using an online survey tool, they answered questions concerning their demographic data, and then filled out two self-report questionnaires. If they gave us their address, we contacted them for further participation. These remaining 85 people became the actual sample. We conducted the tests individually with each participant. Their personal appearance was required for the last two tasks, but since they also took more than 45 minutes each, it happened in two sittings – not more than two weeks apart from each other.

Mach-IV

In order to measure Machiavellianism, we used the Mach-IV self-report questionnaire developed by Christie and Geis in 1970 [8]. The test consist of 20 items, participants have to indicate their level of agreement with each statement on a seven-point Liker scale ranging from 1 (completely disagree) to 7 (completely agree). Sample item: 'Anyone who completely trusts anyone else is asking for trouble'.

SSREI

To investigate the participants' emotional intelligence, we used the 28-items Schutte Self-Report Emotional Intelligence Scale (SSREI) [9], which comprises subscales for 'appraisal and expression of emotions','utilizing emotions in problem solving' and 'emotion regulation'.The instructions requests that individuals rate on a 5-point Likert scale (where 1 means 'not at all' and 5 means 'very much') to what extension the items describe them.

Theory of Mind

We tested the mindreading ability with story-comprehension tasks [10]. There are multiple versions of this test for different population; the present study used a selection of the original Kinderman stories and some from of Paál and Bereczkei's own version [6]. Permission was obtained from the test developers, and they were all administered to young and older adults.The test consisted of eight brief stories describing interpersonal conflicts in real life scenarios of various level of complexity. They contained intended or accidental deception or misleading of the other. Each story was followed by a set of statements in pairs (one true and one false), and participants had to decide which one is the right answer.The test consisted of memory and mindreading items, measured separately. The TOM stories were read out in randomized order and projected on a large screen at the same time, then,after each story was finished, its answer sheet was given to the participants, where they had to mark the statement they considered corresponding to the events heard. While giving their answers on the sheets, participants were not able to see the projected stories on the screen.

MERT

Participants completed the Multimodal Emotion Recognition Test (MERT) developed by Geneva Emotion Research Group [11] to measure their ability to recognize emotion from four different modalities (voice recording only, video clips only, video clips with voice recording, and still picture). In each case, an actor or an actress preformeda short simulation of an emotion, followed by a list of ten emotions, where the participant had to choose the term describing the emotion expressed earlier by the actor. The ten possible answers were five basic emotions paired in two different level of intensity (sadness – despair, happiness – elated joy, etc.). The language used by the performing actors was pseudo-linguistic (i.e., without meaning), and with the permission and help of the original developers, the answers were in the participants' native language. The test was filled out online, but the participants were present (one by one) and used the research lab's computer.

III.RESULTS

Gender differences

As Table 1 shows, absolutely no gender differences were found. It is somewhat contradictory to previous studies, where women perform well on emotional intelligence and emotion recognition [2][3][7], but worse in Machiavellianism, [3][4] or mindreading [4]. Despite there are no significant results, a tendency shows in the scores, which fits the previous findings.

Table 1. Descriptive statistics, means, standard deviations, t scores, Cronbach's alphas of variables and effect sizes

	Male				Female
	M (SD)	Cohens's d (effect size)	t score	Cronbach's alpha	M (SD)
Mach-IV	100 (19.98)	0.31	1.58	0.82	94.42 (14.59)
SSREI	101.73 (11.9)	0.15	-0.7	0.79	103.62 (12.88)
MERT	13.6 (3.31)	0.53	-2.0	0.78	15.38 (3.29)

TOM	7.6 (2.8)	0.34	1.58	0.8	6.53 (3.33)

Note: none of the t scores were significant

Though the table does not show it, but gender differences were not found in subscales of the tests either.

Correlations and Linear Regression

When controlling for age and gender, partial correlation showed that Mach IV and SSREI appraisal subscale are significantly related (r=-.31 p<0.05), also TOM memory subscale with MERT audio subscale(r=-.24 p<0.05), TOM mindreading subscale with MERT audio(r=-.31 p<0.05), video (=-.33 p<0.05) and picture subscales (r=-.311 p<0.05). Machiavellianism was not significantly correlated with any other variables. Naturally, all the subscales of the same test showed correlations with the whole test.

We performed an Enter-method linear regression in order to determine whether emotion recognition, emotional intelligence or Theory of mind can be a predictor of the Machiavellianism, while controlling for gender. For results, see Table 2.

Table 2.Correlations and regression coefficients (in brackets) between the Mach-IV, the MERT, the SSREI and the TOM.

		r (β)
Block of predictors		Mach IV
1	SSREI	-.243 (-.255*)
	SSREI – appraisal	-.372** (-.46**)
	SSREI – problem solving	-.199 (-.086)
	SSREI – regulation	-.064 (.203)
2	MERT	.084 (.085)
	MERT – audio	.08 (.046)
	MERT – audiovideo	.103 (.205)
	MERT – video	.008 (-.254)
	MERT – picture	.084 (.045)
3	TOM	-.023 (.077)
	TOM – memory	-.002 (.179)
	TOM – mindreading	-.027 (-.134)
4	age	-.004 (-.277)
	R^2(for each block)	.255**
		.268
		.277
		.322

Note: R^2 is for R-squared effect size for regression analysis. All regressions were controlled for gender.
*p< .05   **p < .01*

Appraisal and expression of emotions seemed to be the only significant predictor for Machiavellianism. (See Figure 1.)The higher someone's score was on Appraisal of emotions and expression subscale of SSREI was, the lower their Mach-IV turned out. In other words, people who are better at recognizing and expressing their emotions, are worse manipulators.
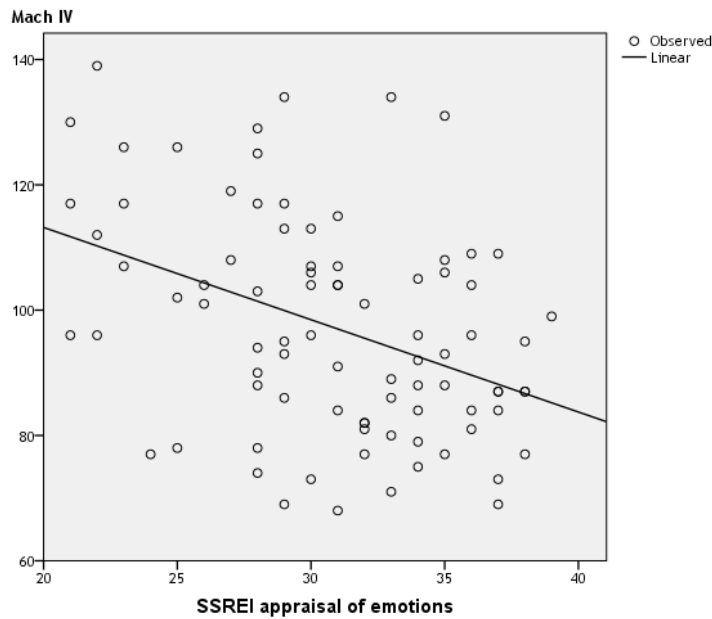
Figure 1: Mach IV and the SSREI appraisal of emotions

Cluster Analysis

We wanted to classify our homogenous groups of variables, therefore we used a dimension reduction technique and performed a hierarchical cluster analysis with Euclidean distance determination. The aim of the procedure was to examine a potential relationship between the variables. The result of the clustering is presented in a dendogram (Figure 2).
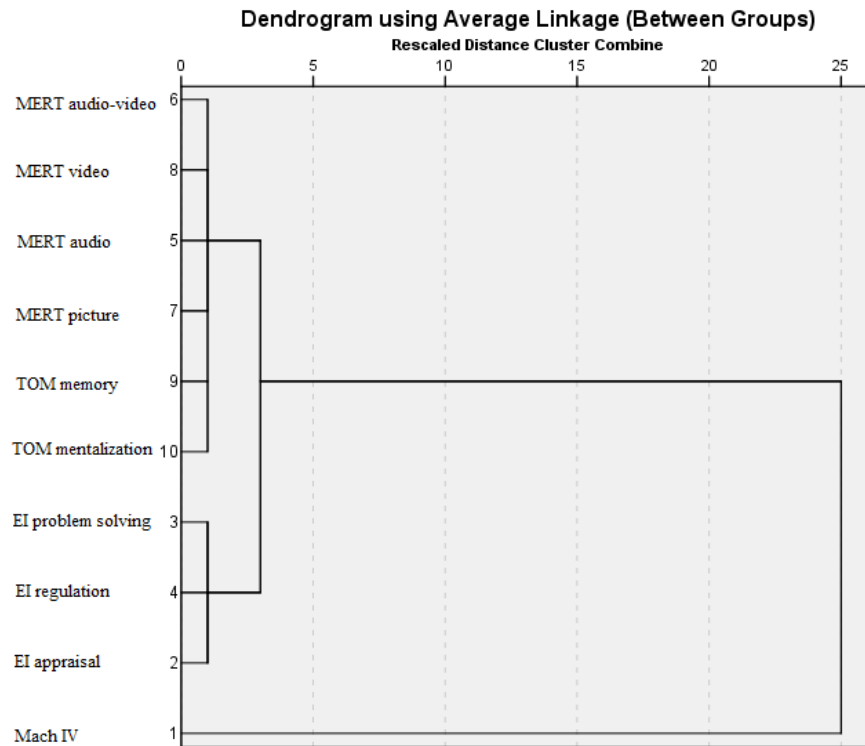

Figure 2: Dendogram for the Cluster Analsysis of Mach IV, MERT, SSREI (on the picture: EI) and TOM

As we can see, Machiavellianism (measured with Mach-IV) is far from the other variables, also the MERT and the TOM are

closer than the MERT and the EI. In other words, emotion recognition and emotional intelligence are not as strongly related than the Theory of mind and emotion recognition.

IV. CONCLUSION

Our study showed no gender differences between Machiavellianism, Theory of Mind, emotional intelligence or emotion recognition. Since the number of male and female participants did not differ significantly (40 and 45), also their demographic background was approximately similar, this result was not caused by a sampling error, rather than a small sample size. By increasing the number of participants in our study, the gender difference would probably be significant and not only tendentious.

Participants with higher Mach scores did not perform well on the Theory of Mind test, although previous findings may suggest the same [6][7] orthe opposite [3][4][5]. Also high Machs did not perform worse on any of the emotion recognition tasks, nor did they score lower on the emotional intelligence questionnaire, that goes against the results of other studies [1][2][3].

With the results of the Linear regression analysis, we can assume that Machiavellianism is not convincingly predicted by any of the other variables examined. It is a strategy that can be used when the circumstances are convenient, at the same time it does not necessarily mean that a person with lower skills of emotional intelligence or with lack of empathy will surely be a Machiavellianist.

We cannot conclude that Machiavellianism, or the ability of deception, facilitates mindreading or recognition of emotions. On the contrary: participants with higher Mach scores reached lower scores on the Appraisal and expression of emotions subscale of the SSREI. According to this result, Machiavellian people struggle recognizing and defining their own emotions, but they can determine others' emotions just as well as anyone else. This might explain whyhigh Mach people can also distance themselves from the emotional side of the ongoing situation, giving the impression of a task-oriented, clear-minded problem solver in need. Also, this is probably why they can take advantage of anyone: they do recognize when the other person believes them, yet they don't recognize or acknowledge their own negative feelings such as guilt or shame in these situations.

The cluster analysis revealed that Machiavellianism is not strongly connected to any of the other examined variables. However, it also revealed that Theory of Mind and the Multimodal Emotion Recognition Test are closer, than the MERT and the SSREI. This could happen becausethe first two are more performance-based tests, leaning on different modalities, while the SSREI is a simpler paper-pencil test. It also shows that sometimes the self-report questionnaires and the performance tests measuring something similar have different results.

The importance of this study is to reveal that previous findings suggesting strong relationship between Machiavellianism and better mindreading abilities [7] are not always permanent. The reason why previous studies' findings and ours might differ is because of the diversity of the methodology, since we insisted using not only self-report questionnaires but a wider variety of performance tasks.

We also concluded people with higher Mach scores do not have difficulties recognizing others' emotions from different modalities, which explains why can they successfully mislead people and take advantage of them.So, manipulative skills are not related to the mindreading ability, but emotion recognition.Meanwhile Machiavellians do have difficulties with their own emotions, thus they might repress and ignore them.

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