UNIVERSITY OF PÉCS

FACULTY OF HUMANITIES

EVOLUTIONARY AND COGNITIVE PSYCHOLOGY DOCTORAL PROGRAM

BEHIND THE MASK OF MANIPULATION
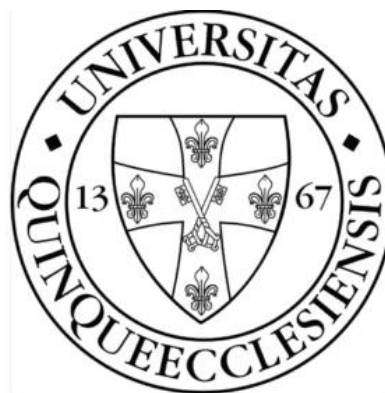
Unique features underlying manipulation among the Dark Triad

Theses of Doctoral (PhD) Dissertation

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1   General introduction

Theoretically speaking, being unpredictable in social interactions, and thus, applying multiple tactics of manipulation might be adaptive. Thus, in other words, a protean behavior might be advantageous for cheaters in order to avoid detection. In line with this theory, a recent study has demonstrated that traits of the Dark Triad (DT; Machiavellianism, subclinical narcissism, and subclinical psychopathy; Paulhus & Williams, 2002) chose a different variety of tactics of social influence, and therefore, making up a diversity of means to manipulate others (Jonason & Webster, 2012).

As a consequence, each DT member might exploit others in a unique social way, hence, in such a way wherein their unique type of exploitation fosters reproductive or survival success (Baughman, Jonason, Lyons, & Vernon, 2014; Furnham, Richards, & Paulhus, 2013). In this sense, behavioral similarities emerge despite different evolutionary adaptations. Therefore, it is possible that manipulation styles of the DT reflect to the unique emotional, cognitive, and behavioral characteristics of each trait.

Since manipulation is one of the core features of all members of the DT, a crucial empirical question concerns the relationship between social cognition and Machiavellianism, psychopathy, and narcissism (Jones & Figueredo, 2013; Jones & Paulhus, 2009; Jonason & Webster, 2010). More specifically, different theoretical implications emerged on whether or not manipulation requires advanced abilities in predicting another person's emotional and mental states (e.g. Hawley, 2006; Lyons, Caldwell, & Schultz, 2010; McIlwain, 2003; Paal & Bereczkei, 2007).

In an attempt to test these implications a series of studies have been conducted. These studies were aimed to investigate the human ability for social cognition and, more specifically, emotional intelligence, empathy, and mental state attribution—i.e. mindreading or theory of mind (Apperly, 2010; Premack & Woodruff, 1978)—among dark personality traits. In this investigation, a special

focus was put on methodological considerations and the long versus short-term orientation in manipulation.

Prior research on theory of mind (ToM; Premack & Woodruff, 1978) applying traditional methods has found mixed evidence for the relationship between mindreading and the DT traits. In particular, research on the relationship between mindreading and manipulation has not found a positive link when applying methods for the assessment of "general" or prosocial ToM abilities (e.g. Ali, Chamorro-Premuzic, 2010; Esperger & Bereczkei, 2012; Lyons et al., 2010; Paal & Bereczkei, 2007; Vonk, Zeigler-Hill, Ewing, Mercer & Noser, 2015). However, it is possible that such ToM tests have failed to activate the specific cognitive processes that normally serve manipulation.

Thus, inconsistency between theory and empirical studies created a need for the establishment of a more specific measure of ToM. In the followings, a novel measure will be introduced. This measure was developed for mental state assessment in manipulation and conflict-related scenarios by engaging different perspectives in the service of mindreading.

2 Study 1: Sounds Like Manipulation

Introducing The Conflict Stories Task

2.1 Aims and Predictions

The purpose of this research is to examine mental state assessment in relation to conflict and manipulation. For this purpose, the *Conflict Stories Task (CST)* was used. The *CST* is a new ToM assessment that enables the detection of manipulation by modeling real social interactions.

The structure, reliability, and validity of the *CST* was examined in two samples (N = 591). In both samples theory-driven Confirmatory Factor Analyses revealed that a three factor model with eight stories was the best fit to the data.

Based on prior theoretical assumptions and research that applied different types of story stimuli (i.e. descriptive and scripted stories; Dodell-Feder, Lincoln, Coulson, & Hooker, 2013; O'Grady, Kliesch, Smith, & Scott-Phillips, 2015), the *CST* is expected to clearly differentiate between groups of stories (Basic Conflict Stories and Manipulative Conflict Stories). Further, the frequency of chosen cynical statements is predicted to positively correlate with performance on the mental tasks of manipulative conflict stories.

2.2 Method

2.2.1 *Participants*

All participants were recruited from the student population of two universities in the United States. Participants were screened to ensure that they were native English speakers. All participants gave informed written consent and received course credit for their participation.

Sample 1. Initially, 411 participants were recruited. After conducting attention checks, 56 participants were excluded from Sample 1 (N = 355; women = 251, men = 104; Mean age = 21.50; SD = 3.74).

Sample 2. Another 273 participants were recruited. After conducting attention checks, 37 participants were excluded from Sample 2 (N = 236; women = 126, men = 110; Mean age = 21.50; SD = 3.37).

2.2.2 *Materials*

The stimulus material consisted of fifteen stories. Stories involved complex social situations of conflict and required listeners to understand the perspectives and intentions of the characters. While listening to each audio story, participants could see only the list of characters of the current

recording on a screen. Questions concerning story facts and characters' mental states were asked after each audio story.

The *Conflict Stories Task (CST)*. The *CST* is a newly developed story task that measures social cognition through audio stimuli (*see Table 1*). It was developed for research in Hungarian language, and exists in the same format in English and in Hungarian.

The *CST* is based on narratives that provide realistic presentations of story characters' actions and communication. Stories of the *CST* were written in dialogues with no mental state markers. In this way, no description is provided of characters' mental states. Story scenes of different complexity present interactions of two to five characters.

In addition to the inclusion of the scripted story format, stories of manipulative scenarios are also included. Such manipulative stories provide explicit manipulation tactics specifically serving the exploitation of others. Thus, they present situations of manipulation involving tricks and tactics which typically lead to successful deception.

All stories were audio-recorded to create the stimulus materials for the task. In recordings, no distracting stimuli, such as music or background noise were included.

Tasks were designed to assess three modalities (*Table 1*): 1. comprehension of story events (i.e., non-mental state content; in particular, factual control questions and factual memory questions), 2. explicit mental state reasoning regarding story characters' relationships (in particular, recursive mental questions and reasoning mental questions), and cynical versus naïve mental state reasoning regarding participants' attitude to story characters (i.e. cynical mental questions). Further, tasks differed in complexity.

Descriptive Control Stories. Five stories were used for comparison purposes, taken from previous studies in their original form (Happe, 1994; Kinderman, Dunbar, Bentall, 1998; Paal & Bereczkei, 2007). These stories are presented in a descriptive format, thus, they are based on narration. Descriptive stories contain no or only occasional dialogues. These stories, however,

include several mental state markers (Malle, 1999). Thus, narration explicitly describes characters' thoughts, feelings, and intentions (e.g. "*Esther did not believe this excuse*"; "*They knew that the prisoner did not want to betray his fellows*").

With the application of mental state markers, descriptive stories directly reveal the mental states of story characters describing their specific roles in every situation. Descriptive control stories were also recorded and related tasks were presented with additional mental questions (reasoning and cynical questions) to match the questions of the *CST*.

2.2.3 *Procedure*

For Sample 1, data collection was conducted both in a lab and via online as part of larger ongoing studies investigating social cognition in neuro-typical student samples. After these tasks, participants completed general demographics and personality questionnaires. After completing all procedures, participants were debriefed and compensated for their time.

Each participant listened to, and was tested on, all fifteen stories in Sample 1 and on all ten *CST* Stories in Sample 2. Thus, Sample 2 consisted only of dialogue-based stories. Participants were first presented with the audio stimuli. The stories were presented in randomized order. For each question, two statements were shown on the screen, presenting the two forced choice options for that question.

2.2.4 *Data Analysis*

Descriptive Stories (Stories 1, 7, 9, 12, 15) served for comparison purposes only, given that they are the established and most frequently used story approach to ToM assessment. Stories of the *CST* were hypothesized to fall into one of two categories: Basic Conflict (Stories 2, 3, 5, 11, 14), and Manipulative Conflict (Stories 4, 6, 8, 10, 13). Thus, the primary interest was in differentiating manipulative from basic conflict stories. As a result, descriptive stories were not included in the Confirmatory Factor Analysis (CFA) approach.

Table 1. Stories and Tasks in the CST

	Type	*Subtype*	*Description*
Stories	Basic Conflict	--	Stories are based on dialogues with the minimum required descriptive narration. Consequently, narration objectively describes the settings alone. No mental state markers are used. In particular, stories inform subjects only about characters' communication and their accompanying behavior, similar to everyday experiences.
	Manipulative Conflict	Easy/Hard	Stories are based on dialogues. Descriptive narration only refers to the setting. Stories include a typical tactic of purposeful manipulation. The presented manipulative tactics include flattery, offensive defense, self-victimization and/or rationalization, all of which served the purpose of deception within story characters. Manipulative tactics tap various levels of difficulty ranging from explicit lies to multi-level swindles.
Tasks	Factual	Control	A baseline measure for general comprehension (e.g. "A) *Lily and Ann were cousins.* B) *Lily and Ann were friends.*").
		Memory	Tasks designed to assess memory of factual relationships. They require increased attention to story details. Thus, they place higher demands on memory. (E.g. "A) *Katie, from what she said, had seen Grace with Paul on Thursday.* B) *Katie, from what she said, had seen Grace with Paul on Friday.*").
	Mental	Recursive	Tasks specify characters by name and present their mental states by revealing their individual perspectives. Multiple characters' perspectives are combined and embedded into each other in recursion. (E.g. "A) *John thought that Penny knew what Sheila wanted to do*. B) *John thought that Penny did not know what Sheila wanted to do.*").

Reasoning	Tasks created to assess reason explanations. Reasoning statements refer to story characters' mental states that lie behind their observable behavior. They only name the protagonist. Other characters are specified by their role played in the situation. (E.g. „A) *Andrea was relieved because her mother did not punish her severely for damaging her car.* B) *Andrea was relieved because her mother did not come to realize that she had damaged her car.*")
Cynical	Tasks designed to assess participants' willingness to exonerate or forgive the manipulator. One of the statements reflect a sincere attitude, whereas the other statement represents a suspicious view. However, either choice may be seen as valid according to the presented story. (E.g. "A) *Andrea was threatening and accusing her mother because she wanted to get a smaller punishment.* B) *Andrea was threatening and accusing her mother because she wanted her mother to pay more attention to her.*").

2.3 Results

The two-factor model was directly tested using a CFA with the predicted two-factor solution (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Schmitt, 2011). The fit of two items were low and non-significant. Specifically, Story 4 in the manipulative set, and Story 2 in the basic conflict set. Further, the loadings of Stories 6 and 10, although significant, loaded sub-optimally (i.e., less than .32) on the manipulative factor. Modification indices suggested that Stories 6 and 10 belonged on a separate factor. Thus, the model was re-run with three factors.

The resulting model was a fit, with four Basic Conflict and four Manipulative Conflict Stories. Each two of the manipulative stories shared a common core of difficulty, and were placed on separate factors: Easy Manipulative (Stories 8 & 13) and Hard Manipulative (Stories 6 & 10). Thus,

the results indicate that *CST* Stories broke into distinctive factors that, although correlated, tapped different aspects of mindreading, with further distinctions between manipulative stories by difficulty.

The two samples were then merged. Performance on the factual and mental questions of the three types of stories were correlated with each other, with the strongest relationships between the mental questions of Easy Manipulative and Basic Conflict Stories ($r = .58$, $p < .001$). Further, frequencies of cynical answers were analyzed in relation to mental performance. The strongest relationships were found between cynical answers and mental scores of the two types of manipulative stories (Easy Manipulative: $r = .43$, $p < .001$; Hard Manipulative: $r = .26$, $p < .001$).

2.4 Discussion

In the present study, the descriptive and psychometric properties of a new assessment of mindreading were demonstrated. Unlike previous descriptive story approaches, the *CST* measure includes voice recordings of scripted stories that provide realistic stimuli, including those with explicit manipulation.

Results from the present study confirmed the proposed prediction showing that *CST* Stories systematically fell into discrete categories that are theoretically coherent: Basic Conflict Stories and Manipulative Conflict Stories. In factor analyses it was further demonstrated that stories imply different levels of complexity with regard to manipulative intentions. This addition of manipulation assessment further expands our knowledge of ToM by expanding it into the realm of detecting intentional deception.

The current data provide evidence consistent with the prediction that individuals who have a cynical attitude towards story characters perform better on conflict-related ToM tasks. Those who approach conflict situations with a cynical attitude might be able to recognize others' selfish and manipulative intentions more readily. In sum, the present study demonstrated that the *CST* is sensitive

to individual differences, and correlates with other well-established measures—descriptive story tasks and recursive tasks—of ToM ability.

3 Study 2: Who Knows Who Is Being Manipulated?

Mindreading and Manipulation – Research of the Dark Triad

3.1 Aims and Predictions

Manipulation and callousness are core elements underlying the DT. However, an important question concerns the role of mindreading, i.e. an understanding of others' mental states, in manipulation. Prior research applying traditional methods has found mixed evidence for the relationship between mindreading and the DT traits. However, a critical issue with such methods is that they may not capture the settings in which manipulative individuals are best conditioned to operate: conversations.

The purpose of the following studies is to examine the relationship between manipulation and mindreading. In these studies, the *Conflict Stories Task (CST*; *see Study 1*) was applied for mental state assessment. Across three studies (2 lab, 1 online), participants listened to dialogue-based, e.g. scripted stories that presented various situations of conflict and, among them, manipulation. Thus, the present studies investigated how traits high in DT understand others' intentions in manipulative and conflict scenarios by using the *CST*.

Given that strategic manipulation takes planning and anticipation, Machiavellianism is predicted to have no deficits in mindreading. However, due to their indiscriminate and aggressive manipulation style, individuals high in psychopathy should have mindreading deficits. Thus,

Machiavellianism and psychopathy should have a different relationship with mindreading. Finally, I make no strong prediction about narcissism.

3.2 General Method

3.2.1 *Materials*

3.2.1.1 *Story Tasks*

Mental state attribution was assessed with the *CST* (*see Study 1*). Besides *CST* Stories, in Study 1 and Study 2 Descriptive Stories (N = 5) were also included for comparison purposes. Conflict-related descriptive stories were used taken from previous studies that assessed mindreading ability (Happe, 1994; Kinderman et al., 1998; Paal & Bereczkei, 2007). These stories were also recorded, read by a storyteller narrator. Both *CST* and Descriptive Stories were followed by the same types of tasks (*Table 1*).

3.2.1.2 *Dark Triad Assessments*

Standard Measures. Machiavellianism was assessed with the *Mach-IV* questionnaire (Christie & Geis, 1970). Subclinical psychopathy was measured by the *Levenson Self-Report Psychopathy Scale (LSRP*; Levenson, Kiehl, & Fitzpatrick, 1995) and subclinical narcissism was assessed by the *Narcissistic Personality Inventory (NPI*; Raskin & Hall, 1979)

Short Dark Triad. In Studies 2 and 3, the *Short Dark Triad (SD3*; Jones & Paulhus, 2014) assessment of the DT was also included. The *SD3* is a 27-item inventory that measures individual levels of Machiavellianism, narcissism, and psychopathy (9 items per factor).

3.2.2 *Procedure*

Data collection was conducted in the lab or online. Participants were first presented with the audio stories. After listening to each audio story, participants moved on to the related tasks. For each question, two statements were shown on the screen, presenting the two forced choice options for that

question. Performance in the factual and mental tasks was measured by the number of correct answers.

3.3 Experiment I

3.3.1 *Participants*

Participants were 123 student volunteers who were recruited from the University of Pécs, Hungary (51% women; Mean Age = 21.57, SD = 3.56, 100% European Heritage). Inclusion criteria was fluency in Hungarian.

3.3.2 *Materials and Procedure*

Participants performed all measures in person within a laboratory setting. After consent, participants listened to the ToM stories (*CST* and Descriptive Stories) as part of larger ongoing studies investigating social cognition in a neuro-typical student sample. Each participant listened to, and was tested on, all *CST* and Descriptive Stories. Participants completed questionnaires with the Standard Measures of Dark Triad (*Mach-IV, LSRP, NPI*).

3.3.3 *Results and Discussion*

Replicating previous research, Machiavellianism and primary psychopathy were negatively but not significantly correlated with the traditional descriptive approach of assessing ToM. Further, narcissism and secondary psychopathy were uncorrelated with the traditional descriptive approach to ToM. None of the DT traits had a significant raw correlation with the *CST*.

Next, two separate regressions were conducted on mental questions of Descriptive Stories and *CST* Stories with Machiavellianism, psychopathy, and narcissism as predictors. The results demonstrated that Machiavellianism and narcissism had positive and significant relationships with the mental tasks of the *CST* ($\beta = .30$, *95%CI* = .05, .54, $p < .05$; $\beta = .23$, *95%CI* = .02, .45, $p < .05$;

respectively), but not of the Descriptive Stories. Further, and consistent with prediction, primary psychopathy showed a significant negative relationship with the mental tasks of the *CST* (β = -.34, *95%CI* = -.62, -.05, *p* < .05). Secondary psychopathy was unrelated to ToM ability.

The findings of the first study are consistent with both theoretical implications on the relationship between manipulation and mindreading. Thus, Machiavellianism (and narcissism) had positive associations with mental state assessment of realistic conflict-related scenarios, whereas primary psychopathy had a negative association.

3.4 Experiment II

3.4.1 *Participants and Procedure*

Participants were 355 students at a medium sized southwestern university. A total of 21 participants were removed for failing attention checks within the survey, leaving a total of 334 (70% women, Mean age = 20.86, SD = 3.73, 87% Latinx; 13% other). Among all participants, 42% were run through the study in a laboratory setting, and the other half were run online. Finally, to reduce participant fatigue, the validated *NPI-13* (Gentile et al., 2013) was used rather than the full 40-item *NPI* (Raskin & Terry, 1988).

3.4.2 *Measures*

Like in Study 1, Standard Measures of DT were applied: *Mach-IV α* = .75, *LSRP1 α* = .82; *LSRP2 α* = .71; *NPI-13 α* = .70). For Study 2, the *Short Dark Triad* (*SD3*) (Machiavellianism *α* = .77; narcissism *α* = .67; psychopathy *α* = .70) was added.

3.4.3 *Results and Discussion*

Given the overall comparable correlations across measures of the DT, the two separate indices of each DT trait were combined into an average composite score (i.e., one overall measure of

Machiavellianism, narcissism, and psychopathy). Recall that one of the predictions of this study is that psychopathy will differ from Machiavellianism in mindreading. However, primary psychopathy overlaps more with Machiavellianism than does secondary psychopathy (Jones & Figueredo, 2013). Thus, in order to provide a more rigorous test of our hypothesis, secondary psychopathy was not included in the psychopathy composite.

Composite measures were standardized before and after forming the composites. Mental tasks of the *CST* were then regressed on the three DT traits. The total model accounted for approximately 8% of the total variance (adjusted R^2 = .08, p < .001). Machiavellianism had no association with the *CST* (β = .04, *95%CI* = -.05, .13, p = .405). However, both narcissism (β = -.10, *95%CI* = -.17, -.04, p = .002), and psychopathy (β = -.13, *95%CI* = -.22, -.03, p = .02) were negatively related to mindreading in *CST*.

One key factor in whether ToM can be properly assessed is whether individuals understand the factual information accuracy about the stories on which they were assessed. Some individuals may lack the attention or working memory necessary to retain such information, but that attention does not necessarily mean that their mindreading is poor. Because of these cognitive constraints, it was tested whether accuracy in information retention (i.e., information), moderated the effect of the DT traits in predicting ToM tasks.

For *CST* stories, although there was a marginally negative main effect of Machiavellianism on mindreading performance, this was qualified by a significant positive interaction with information accuracy (*see Figure 1*). In contrast, narcissism and psychopathy both had a significant negative main effect for mindreading in the *CST*. For the Descriptive Stories, Machiavellianism had a marginally significant and positive association with mindreading. Both narcissism and psychopathy were negatively associated with mindreading in the Descriptive Stories.

Simple slopes analyses revealed that the effect of Machiavellianism marginally improved (p = .08) when factual accuracy was high. Moreover, the effect of Machiavellianism was significantly

worse when factual accuracy was low. In contrast, both psychopathy and narcissism had negative main effects with mindreading, both for the *CST* and Descriptive Stories. Further, these negative effects were not qualified by interactions.
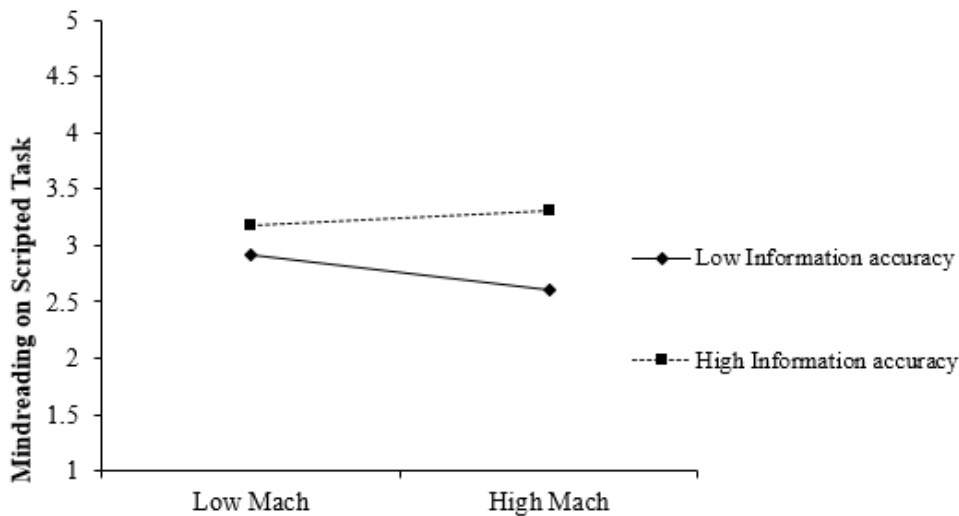

Figure 1   *Machiavellianism*Information Accuracy in Predicting Mindreading in CST Stories in Study 2.*

3.5 Experiment III

3.5.1 *Participants*

229 students were recruited at a mid-sized northwestern university. A total of 36 participants failed attention checks leaving a final sample of 193 (51% women; Mean Age = 21.57, SD = 3.56, 61% White/Euro, 17% East Asian, 22% Other).

3.5.2 *Measures*

Similar to Study 2, both the *SD3* (Machiavellianism $\alpha = .79$, narcissism $\alpha = .61$, psychopathy $\alpha = .71$), and the standard measures of the DT (*Mach-IV; $\alpha = .76$; LSRP1; $\alpha = .87$; NPI-13; $\alpha = .70$*) were used.

3.5.3 *Results and Discussion*

Again the D3 measures were combined into composites of each trait (i.e., *Mach-IV* with *SD3 Machiavellianism*, *NPI-13* with *SD3 narcissism*, *LSRP1* with *SD3 psychopathy*). Mindreading in *CST* was regressed on the three DT traits. The total model accounted for 8% of the total variance (adjusted $R^2 = .08$, $p < .001$). Machiavellianism had no association with mindreading ($\beta = .04$, *95%CI* $= -.05$, .13, $p = .405$). However, narcissism ($\beta = -.10$, *95%CI* $= -.17$, .04 $p = .002$), and psychopathy both had a negative association with *CST* mindreading ($\beta = -.13$, *95%CI* $= -.22$, $-.03$, $p = .010$).

Next, interactions were computed with each DT trait and factual accuracy. In the full model, psychopathy had a significant and negative main effect on the *CST* mindreading tasks. Although no other DT main effects emerged, Machiavellianism had a significant interaction with factual accuracy.

Three separate regressions were then run predicting *CST* mindreading. Each regression contained one DT trait, information accuracy, and the interaction between the two. This time, all three DT traits had a significant and positive interaction with factual accuracy in predicting *CST* mindreading. Simple slopes analyses revealed that all three DT traits were associated with worse mindreading at 1 standard deviation below the mean on information accuracy. However, Machiavellianism was positively associated with mindreading at one standard deviation above in the mean in information accuracy, this was not the case for the other DT traits.

In sum, the findings from Study 2 were replicated by demonstrating positive relationships between Machiavellianism and the *CST* and a negative relationship with primary psychopathy. The exploratory findings from Study 2 were also replicated with a preregistered study, and the

information*Machiavellianism interaction emerged once again. This finding demonstrates that information comprehension matters in the relationship that Machiavellianism has with ToM in understanding conflict situations.

3.6 General Discussion

Previous research on dark personalities and ToM has shown inconsistent results that may reflect the application of general ToM methods in examination of the relationship between mindreading and the DT traits. One potential explanation is that previous research applied tasks that are not appropriate for assessing how deception and manipulation actually takes place.

In sum, the above three experiments demonstrated that ToM can be more sensitively assessed in neuro-typical adults, and that the DT traits show nuanced relationships with ToM as measured with the *CST* as opposed to more traditional description-based approaches. Across all studies, negative relationships were found with primary psychopathy in relation to ToM performance.

In contrast, Machiavellianism had a positive relationship with ToM, although in the USA samples, this relationship was moderated by information retention such that high levels of information led to increased ToM scores in individuals high in Machiavellianism.

Thus, we are beginning to understand how individuals high in dark personality traits are able to manipulate in spite of scoring traditionally law or average on ToM tasks. It appears that with the application of scripted stories of the *CST*, research is able to better capture ToM abilities of those high in DT, providing clues into a long-standing conundrum about the relationship between mindreading and manipulation.

4 Study 3: How Can You Hurt if You Can't Feel?

Emotional Capacities of Traits and Facets of the DT

4.1 Aims and Predictions

Multidimensional measures were applied in the present study to investigate the links between empathy, trait emotional intelligence (EI), and the DT in order to better detail the emotional motivations of dark personalities. The goal here was to expand previous research by providing more focus on the multi-faceted nature of these constructs. Therefore, cognitive and affective dimensions of empathy were assessed (Davis, 1980; Kulcsar, 2002). In terms of EI, a four-factor model of trait EI was applied that contained appraisal, regulation, and utilization of emotions (Nagy, 2010; Schutte et al., 1998).

Besides, a two-factor model was also included (O'Connor & Athota, 2013) in order to investigate whether emotional deficits of all DT traits appear only in relation to positive, pro-social aspects of EI but not in relation to neutral aspects. By applying such a distinction this study was aimed to determine whether emotional deficits of all DT traits appear in relation to positive, pro-social aspects of EI but not in relation to such neutral aspects as perceived emotional competence. Further, the different facets of DT traits were expected to reveal unique emotional profiles.

4.2 Method

4.2.1 *Participants and Procedure*

Students of the University of Pecs were recruited as participants ($N = 143$; 103 female) aged 18–33 years ($M = 21.89$, $SD = 2.77$). Participants completed an online survey with a series of self-report questionnaires that assessed the variables of interest. Questionnaires were answered anonymously. All participants volunteered to participate in the study. After being directed to the survey webpage, participants could complete the survey at their own pace.

4.2.2 *Materials*

Dark Triad. Subclinical narcissism was assessed with the *Narcissistic Personality Inventory (NPI;* Raskin & Hall, 1979; Hungarian translation by Bandi, 2014; Kelemen, 2010). For analyzing the subscales of the NPI the three-factor structure was used (Ackerman et al., 2011) that consists of the dimensions of Leadership/Authority, Grandiose Exhibitionism, and Entitlement/Exploitativeness. As the third subscale had unacceptable internal consistency (Cronbach's alpha = .33), it was omitted from further analyses. Machiavellianism was measured with the *Mach-IV* (Christie & Geis, 1970; Hungarian translation by Paal & Bereczkei, 2007). The *Levenson Self-Report Psychopathy Scale (LSRP;* Levenson et al., 1995; Hungarian translation by Kokonyei, 2004) was used to assess subclinical psychopathy.

Emotionality Questionnaires. Empathy was assessed with the *Interpersonal Reactivity Index (IRI*; Davis, 1980; Hungarian translation by Kulcsar, 2002). The scale measures four dimensions of empathy: perspective-taking (cognitive), fantasy (affective), empathic concern (affective), and personal distress (affective). A modified Hungarian translation was used of the *Self-Report Emotional Intelligence Test* (*SREIT/EIS;* Nagy, 2010; Schutte et al., 1998) to measure EI. The subscales of the measure cover the appraisal of emotions in the self (*AES*), the appraisal of emotions in others (*AEO*), emotional regulation of the self (*ERS*), and the utilization of emotions in problem solving (*UEPS*). Two subscales were left out of the Hungarian validation of the questionnaire (Nagy, 2010), emotional expression (*EE*) and emotional regulation of others (*ERO*) respectively, due to a low level of internal consistency. A two-factor model of SREIT (O'Connor & Athota, 2013) was also applied that contained the factors of perceived emotional competence (*PEC*) and positive emotional functioning (*PEF*).

4.3 Results

At first, correlations were tested for the relationships between the DT traits and the subscales of empathy and EI. The shared variance was controlled for among the traits through multiple regressions to unveil the unique effects of each trait in their links with empathy and trait EI (e.g., the effect of narcissism controlling for Machiavellianism and psychopathy).

Narcissism was positively ($\beta = .33$, $t = 4.08$, $p < .001$), whereas secondary psychopathy negatively ($\beta = -.33$, $t = -4.09$, $p < .001$), associated with global trait EI. Machiavellianism correlated negatively with ERS and PEF, but these associations disappeared in regression analysis. Primary psychopathy was negatively related to PEF.

In their relationship with global empathy, with the exception of secondary psychopathy, all DT traits had negative correlations. However, after controlling for the shared variance, only primary psychopathy ($\beta = -.45$, $t = -4.24$, $p < .001$) and the Leadership/Authority facet of narcissism ($\beta = -.30$, $t = -3.52$, $p < .01$) predicted lower overall empathy.

4.4 Discussion

Results from the present study provide support for the proposed hypothesis that each DT trait, moreover, each facet of each trait, reflect a unique pattern of emotional deficiencies. Consistent with predictions and previous research, narcissism was associated with enhanced trait EI and with low levels of personal distress. Primary psychopathy showed an overall empathy deficit, while secondary psychopathy was linked to an overall trait EI deficit. As for Machiavellianism, the only significant relationship that remained after controlling for the other DT traits was a weak positive association with perspective-taking.

In this study, no link has been found between Machiavellianism and the positive/neutral dimensions—positive emotional functioning/perceived emotional competence—of trait EI. The present study extended previous work of O'Connor and Athota (2013) by utilizing their two-factor

model, employing the measure to all dark personalities. Although Machiavellianism was unrelated, primary psychopathy showed a deficit in the positive component but not in the neutral component, indicating that primary psychopathic individuals did not have major difficulties in emotion recognition (Ali, Amorim, & Chamorro-Premuzic, 2009; Del Gaizo & Falkenbach, 2008).

In contrast, secondary psychopathy affected both components of trait EI negatively, whereas narcissism positively. These findings clearly demonstrate different patterns between the emotionally confused secondary psychopaths and the emotionally (over)confident narcissists. Taken together, the current research provides support for the theory that the various DT traits manage their interpersonal relations in different socially aversive ways.

5   Study 4: Giving in to the Impulses

Gender Differences in Impulsivity among the DT

5.1 Aims and Predictions

Although psychopathy is consistently associated with poor impulse control, the relationship between other DT traits and impulsivity is inconsistent. Previous research has revealed gender-related differences among the DT, which may partially account for mixed findings (Crysel, Crosier, & Webster, 2013; Jonason & Tost, 2010). For these reasons, the following research attempted to examine separate relationships between impulsivity and the DT based on gender.

The present research tested how gender differences might affect the relationship between impulsivity and the DT (especially Machiavellianism) using the SD3. Specifically, it was predicted that the SD3 Machiavellianism would have no relationship with impulsivity. Further, this Machiavellianism-impulsivity relationship will be especially attenuated among men. For narcissism and psychopathy, however, consistent relationships were predicted with impulsivity across men and

women. Finally, it was predicted that psychopathy would have the strongest and most positive correlations with impulsivity of all DT traits, regardless of gender.

5.2 Method

5.2.1 *Participants and Procedure*

The participants were 898 students (women = 618, men = 268; Mean age = 20.67, SD = 4.51; 85% Latin American heritage, 7% European Heritage, 8% Other) who volunteered to participate in a large prescreen measure for course credit at the University of Texas at El Paso (UTEP) in the United States.

5.2.2 *Materials*

The DT personality traits were measured with the *Short Dark Triad* scale *(SD3*; Jones & Paulhus, 2014), a 27-item inventory measuring individual levels of narcissism, Machiavellianism, and psychopathy.

The *Barratt Impulsiveness Scale (BIS-11*; Patton, Stanford, & Barratt, 1995) is a 30-item self-report questionnaire designed to assess the construct of impulsivity. The *BIS-11* was chosen because of its ability to assess non-planning and other sub-facets. Patton and colleagues identified six sub-components found in three over-arching factors. Recently, Spinella (2007) reduced these items to five per factor, for a short-form of 15-items (i.e., *BIS-SF*).

5.3 Results

The bivariate correlations revealed that Machiavellianism and psychopathy both had positive and significant correlations with the overall index of the *BIS-SF*. However, when examined by factor, Machiavellianism had no relationship with non-planning, whereas psychopathy had a positive and significant correlation.

To test the moderating impact of gender on the relationship that each DT trait has with impulsivity, several moderated regression models were conducted. The results indicated that Machiavellianism interacted with gender such that high levels of Machiavellianism were only associated with impulsivity among women (*see Figure 2*). Breaking down this interaction further, driving this interaction was the non-planning factor. When separating the correlations by gender, both narcissism and Machiavellianism were negatively related to non-planning among men, and both of these correlations were different, ($t \geq 5.70$, $p < .001$), from that of psychopathy (which was significantly positive with non-planning in men).
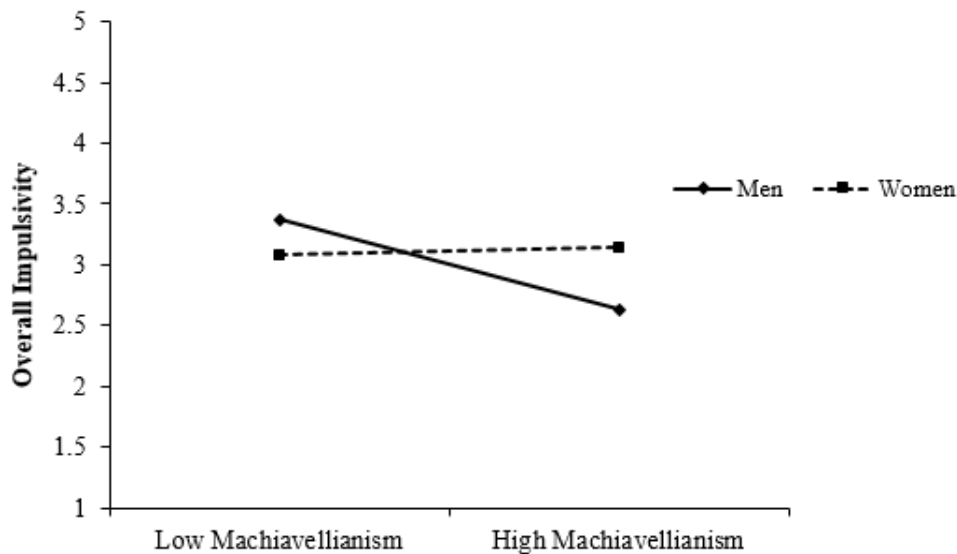

Figure 2   *Machiavellianism*Gender in predicting Impulsivity.*

5.4 Discussion

It was predicted that gender would moderate the relationship between impulsivity and Machiavellianism, such that men high in Machiavellianism would exhibit less impulsivity. Not only did this interaction emerge, non-planning impulsivity and Machiavellianism were negatively related with each other in men.

By using the *SD3* operationalization of the DT, it was demonstrated that gender differences have an impact on the impulsivity of those high in narcissism and Machiavellianism. Specifically, narcissism had different relationships based on gender, with men high in narcissism also showing less impulsivity than did women high in narcissism. Psychopathy, however, was consistent across men and women, and still had the strongest overall correlations with impulsivity.

In contrast, Machiavellianism was shown to be significantly associated with more planning in men high in Machiavellianism. Consequently, in conclusion, the calculating, planning, strategic, and manipulative aspect of Machiavellianism might be a characteristic feature only of Machiavellian men, but not of women.

6 Final Summary

Taken together, these findings on social cognitive characteristics of those high in Machiavellianism, narcissism, and psychopathy have implications for diverse manipulation styles inside the DT personality. Thus, in evolutionary terms, it is possible that diverse manipulation styles derive from different roots creating more than a single cheater strategy. As a consequence, each DT member exploit their environment with unique tactics of social influence which may stem from their unique features such as emotional capacities, cognitive abilities, and self-control. Thus, evidence supports the theory that manipulative behavior common to the DT may originate in different personality features.

The observation that Machiavellians apply long-term, strategic, and calculating forms of manipulation seems to be related to their above average performance in certain social contexts. This observation has additional implications. Machiavellians may have unique capacity to understand others' mental states in assessing their potential targets and use this knowledge in their exploitative behavior. Further, gender differences may have an impact on the long-term planning aspect of Machiavellianism. Thus, it appears that long-term planning is more characteristic to men than to women high in this trait. These findings may guide future predictions for Machiavellianism based on gender.

In terms of self-control, narcissism appears to be the least impulsive trait among the DT. Thus, narcissistic individuals are able to inhibit their impulses, however, their superior ego and overconfidence makes them reckless and uncaring in social interactions. This may be one important reason why they cause harm to others. In addition, narcissistic individuals may use their emotional understanding and high trait emotional intelligence when manipulating others. However, it is also possible that they do not accurately assess emotional information of others. Instead, they (consciously or unconsciously) believe their self-enhancing stories.

In contrast to Machiavellian and narcissistic persons, those high in psychopathy do not seem to be able to properly assess the emotional or mental states of others, even if the task requires the detection of manipulative intentions characteristic to all DT individuals. Further, psychopathy shows consistent positive associations with all aspects of impulsivity that clearly reflect a short-term focus in the manipulative behavior of these individuals. Besides impulsivity, the lack of empathy facilitates the harmful behavior of primary psychopaths. In secondary psychopathy, however, elevated levels of personal distress suggest a more reactive and hostile type of manipulation. Thus, evidence supports that manipulation styles of primary and secondary traits are uniquely related to their emotional capacities.

Further, findings of these studies have implications for how ToM should be tested, especially among dark personalities in scenarios that provide settings for detecting various types of conflict. Therefore, future application of the *CST* can serve as a basis for further investigations in the field of social cognition. For example, it can serve to discover further characteristics of individuals with manipulative tendencies.

In sum, results of the empirical studies proposed in this dissertation highlight important differences among the DT for diverse social cognitive functioning in relation to manipulative behavior.

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