



## Short Communication

## Validating the four components of Mimicry Deception Theory from the victim's perspective



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## ARTICLE INFO

## Article history:

Received 30 November 2015

Received in revised form 5 February 2016

Accepted 7 February 2016

Available online 16 February 2016

## Keywords:

Mimicry Deception Theory

Deception

Fraud

Temporal orientation

## ABSTRACT

Mimicry-Deception Theory (MDT) states that deception falls along a temporal continuum, where individuals who engage in long- vs. short-term deception differ on four key characteristics: complexity of deception, resource extraction rate, community integration, and detectability. If these assertions of MDT are true, then these four components should be inter-correlated and predict unique variance with respect to key outcomes of deception (such as post-deception doubt and monetary loss). Participants were asked to describe a major deception they experienced at the hands of someone they personally knew. Findings indicated that all four components of MDT were significantly correlated and that the long-term deception composite of these four MDT components significantly predicted post-deception doubt (Study 1) and amount of money lost (Studies 1 and 2). Further the MDT components predicted these outcomes above and beyond how long they knew the perpetrator or how skilled the perpetrator was perceived to be. These results suggest that MDT may be useful in profiling long- vs. short-term deception and may have practical implications for observing behaviors associated with dishonesty.

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## 1. Introduction

According to Jones (2014) organisms across different kingdoms deceive in similar ways. These methods of deception fall along reliable long- vs. short-term patterns. For example, the HIV virus deceives host immune systems in more complex, host-specific, and undetectable ways than the influenza virus. Similar patterns have been found in animal models of deception, like an Australian jumping spider (*Aelurillus m-nigrum*; see Jackson & Pollard, 1996) that infiltrates specific colonies of ants by using complex behavioral and chemical deception, and lives undetected as it feeds on the ants (Cushing, 2012). This long- vs. short-term distinction in deception forms the basis of Mimicry-Deception Theory or MDT (Jones, 2014).

Book et al. (2015) examined deceptive mimicry among psychopathic individuals and found that they engaged in superior affective mimicry when compared to others. Jones and Paulhus (2010) suggested that Machiavellianism and psychopathy may parallel long- vs. short-term deceptive profiles (respectively). However, to date, the evidence is mixed (e.g., Birkás, Csathó, Gács, & Bereczkei, 2015; Poythress & Hall, 2011).

Personality parallels notwithstanding, according to MDT, there are four key components that differentiate long- vs. short-term deception:

Deception complexity, resource extraction rate, community integration, and detectability. In long-term organisms, deception requires more complexity given that it needs to be sustained for a longer period of time. Similarly, rapport needs to be built in order for the individual to be accepted into the group they seek to exploit, which is sometimes referred to as “affinity fraud” (Perri & Brody, 2011). Further, resources are extracted slowly so as to avoid detection or to maximize final profits. Thus, according to MDT, long-term deceptions should result in a greater cost per victim than short-term deceptions, given that long-term deceptions are longer-term. Further, the victims of slow and sustainable resource loss are more often blamed for their loss and find it more difficult to fight back (Cullen, Clark, Mathers, & Cullen, 1983). Finally, individuals who engage in long-term forms of deception generally avoid detection, because they are highly trusted members of a community or appear to be legitimate cooperators.

## 2. Purpose of the study

The purpose of the present study was to determine if the four key components of MDT are indeed correlated according to retrospective accounts of deception, and whether or not these components create a meaningful common score. Further, we examined whether or not this common score has consequences for the victim of deception in terms of doubts surrounding the deception and monetary loss (where applicable). Thus, the present study examined, from the victim's perspective, (a) whether or not these four components were correlated, and

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(b) whether or not they predicted critical outcomes such as post-deception doubt and amount of money lost.

### 3. Study 1 – student sample

#### 3.1. Methods

##### 3.1.1. Participants

Participants consisted of 750 students who took part in a prescreening survey for the Human Subject Pool at a large southwestern university. Among the 750 sampled, 582 answered “yes” to ever having been deceived by a close other. We further eliminated 87 participants who indicated that they had been deceived by family member, given that rapport building and community integration would not apply to someone’s family. This process left a final sample of 506 students (62% women; Mean age = 21.04, SD = 4.48; 84% Latino/Hispanic, 5% Black/African-American, 8% White/Caucasian, 3% other).

##### 3.1.2. Design & procedure

Participants were first asked the question: “Have you ever been deceived by someone you knew?” Participants then answered a series of questions about the deception they endured. Specifically, we asked four questions that focused on MDT which were: *How complex was the deception?* (1 = Not at all complex to 5 = Extremely complex) *For how long did the deception occur?* (1 = Just a few moments, 2 = A few hours, 3 = A day, 4 = Several days, 5 = A week, 6 = Several weeks, 7 = A month or two, 8 = Several months, 9 = About a year, 10 = Between 1 and 2 years, 11 = More than 2 years) *How much rapport did the individual build prior to the deception?* (1 = No rapport at all to 5 = A LOT of rapport) *How much did you trust the individual prior to the deception?* (1 = No trust at all to 5 = A LOT of trust). In addition, we asked a single question about how long they knew the person, which ranged from 1 h to over 2 years. All descriptive statistics on study variables can be found in Table 1. Among all participants, 98 indicated that monetary loss is involved, which ranged from \$1 to \$20,000. In order to avoid issues with skewness, we categorized the amount of money lost as follows: (\$1 through \$100 = 1) (\$101 through \$500 = 2) (\$501 through \$1000 = 3) (\$1001 through \$2000 = 4) (\$2001 to \$3000 = 5) (\$3000 to \$5000 = 6) (\$5001 and above = 7).

## 4. Results

As predicted, the four questions that were designed to tap the four components of MDT were all positively and significantly correlated (Table 2). We standardized each item and entered it into an Exploratory Factor Analysis (EFA) using Principal Axis Factoring (PAF). One factor emerged (Eigenvalue 1.84) explaining 46% of the total variance, and each MDT component (complexity .43, Length of deception .60, rapport building .59, Trust .50) loaded sufficiently on this common factor. We then saved this extracted common factor as an index of Long-Term

**Table 1**  
Descriptive statistics for all study variables.

Variable	Study 1				Study 2			
	Mean	SD	Skew	Kurtosis	Mean	SD	Skew	Kurtosis
Time known	9.29	2.93	−1.03	1.05	–	–	–	–
Wonder	2.02	1.31	0.99	−0.27	–	–	–	–
Trust	3.68	1.24	−0.51	−0.83	70.73	28.46	−0.99	−0.11
Length	5.37	2.77	0.03	−0.90	8.36	3.71	−0.78	−0.74
Complex	2.48	1.04	0.37	−0.23	49.23	29.66	−0.16	−1.07
Rapport	3.43	1.26	−0.37	−0.80	68.51	29.10	−0.77	−0.40
Intelligent	–	–	–	–	60.31	27.09	−0.53	−0.61
Smooth	–	–	–	–	67.69	26.25	−0.77	−0.09

Trust, complex, rapport, were on a 1–5 Likert scale for Study 1 and a 0–100 scale for Study 2. Length of deception ranged from just a few moments (1) to more than 2 years (11).

**Table 2**  
Correlations between four components of MDT.

	1	2	3	4
1. Complexity	–	.26*	.26*	.17*
2. Length	.35*	–	.35*	.28*
3. Rapport	.21*	.33*	–	.72*
4. Trust	.18*	.27*	.37*	–

Study 1 is below the diagonal, Study 2 is above.

\*  $p < .05$ .

Mimicry or (LTM). We then examined whether or not the LTM index would predict post-deception uncertainty (i.e., how much individuals still wonder if they were deceived) and money lost (in U.S. dollars). As predicted, the LTM index was a significant and positive predictor of post-deception uncertainty,  $r = .15$ ,  $p = .001$ , and money lost,  $r = .42$ ,  $p < .001$ . Further, we tested whether LTM predicted unique variance above and beyond simply how long they knew the perpetrator. First time knowing a perpetrator did not correlate with either post-deception uncertainty,  $r = .06$ ,  $p = .192$  or monetary loss,  $r = .06$ ,  $p = .567$ . Further, we conducted two regressions examining monetary loss and post-deception uncertainty. The first step of the regression controlled for age, gender, and time which they knew the perpetrator; the second step was the LTM index. For post-deception uncertainty, Step 1 of the regression ( $R^2 = .008$ ,  $F = 1.27$ ,  $p = .285$ ) was not significant. However, Step 2 ( $R^2 = .027$ ,  $F = 3.20$ ,  $p = .013$ ) was significant. Further, only the LTM index was a significant predictor ( $\beta = .15$ ,  $95\%CI = .09$ ,  $.25$ ,  $p = .003$ ). The second regression predicting monetary loss was significant at Step 1 ( $R^2 = .25$ ,  $F = 10.05$ ,  $p < .001$ ) with age being a significant predictor of monetary loss ( $\beta = .49$ ,  $p < .001$ ). Step 2 was also significant ( $R^2 = .35$ ,  $F = 12.05$ ,  $p < .001$ ), with the change in  $R^2$  being significant ( $F$  change = 13.84,  $p < .001$ ). Specifically, the LTM composite was significantly associated with monetary losses ( $\beta = .35$ ,  $95\%CI = .28$ ,  $.91$ ,  $p = .001$ ).

Study 1 provided some evidence that the MDT components cluster together as predicted. Further, Study 1 provided evidence that long-term deception does result in greater post-deception confusion and greater monetary losses for the victim. One key limitation to Study 1 was that only 98 participants suffered monetary loss. Thus, we sought to replicate Study 1 in a different sample drawn from a different population.

## 5. Study 2 – mechanical turk sample

#### 5.1. Methods

##### 5.1.1. Participants

Participants were 233 adults on Amazon’s MTurk (69% women; Mean age = 36.71; SD = 12.24; 80% White/Caucasian, 11% Black/African-American, 4% Latino, 5% other), which is a source of diverse participants (Buhrmester, Kwang, & Gosling, 2011). We excluded 38 participants who either were not deceived by someone they knew, or were deceived by a family member. Participants had an average education of a 4-year (i.e., Bachelor’s) college degree and had an average yearly income of \$35,000–\$45,000.

##### 5.1.2. Measures

Participants were given the identical prompt from Study 1 about a deception they endured at the hands of someone they personally knew. We included the same four questions to assess the four components of MDT. For the items assessing complexity, rapport, and trust, we used sliders that ranged from 0 (*not at all*) to 100 (*extremely*), instead of Likert scales. Further, we also examined two assessments of the perpetrator, “How intelligent was this person, in your opinion?” and “How “smooth,” charming, or charismatic was this person, in your opinion?” which were also assessed using 0–100 point sliders. In this study the length of deception ranged from “just a few moments” to “A year or

more.” Finally, we collected demographics of the perpetrator as well as the participant. Of the sample, 153 participants indicated that there was monetary loss involved in the deception, which ranged from \$5 to \$10,000. We categorized monetary loss in a manner identical to Study 1.

## 6. Results

The perpetrators were similar in demographics to the victims, with the exception that perpetrators were more likely to be men (60% men; Mean age = 33.45, SD = 11.96; 68% White/Caucasian; 14% Black/African-American; 6% Latino; 12% other mixed ethnicities). Further, there were no gender associations between the victim and perpetrators, which means that perpetrators were equally likely to prey on men and women equally.

First, we standardized the six perpetration items (e.g., complexity, rapport, trust, length, smooth, and intelligent). Next, we correlated the MDT items to determine if the predicted inter-correlations were all still significant, which they were (see Table 2). We then entered these six standardized items into an Exploratory Factor Analysis (EFA) with Principal Axis Factoring (PAF) and *Promax rotation*. Two factors with an Eigenvalue greater than one emerged (Factor 1 = 2.86, Factor 2 = 1.05), with the first factor accounting for 48% of the data, and the second factor adding an addition of 17%. However, a Parallel Analyses (PA; Horn, 1965) suggested that the second factor may have emerged by chance. An examination of the rotated matrix found that complexity (.32), trust (.71), rapport (.91), and deception length (.51), all loaded solely on the first factor. In comparison, smooth (.64) and intelligent (.89) loaded solely on the second factor. This procedure provided some evidence that the four MDT components are unique and cluster together. However, this factor solution should be interpreted with caution given that the second factor may have emerged by chance. Further, the two factors were correlated at .57.

The standardized LTM items of complexity, trust, rapport, and length were internally consistent ( $\alpha = .73$ ). Next, we conducted an EFA with PAF extraction on the four MDT components. One Factor (Eigenvalue = 2.23) emerged explaining 55.6% of the variance. Further, all four components loaded sufficiently on this common factor (Complexity = .41, Trust = .79, Rapport = .89, Length = .47). We then saved the factor score and treated it as our index of LTM. We also created a composite of “ability” to persuade from the two items of “smooth” and “intelligent” ( $\alpha = .76$ ). We then correlated ability and LTM with how much money was lost in the deception. The LTM composite was significantly correlated with more money lost,  $r = .36, p < .001$ . The ability composite, however, was only marginally correlated with money lost,  $r = .15, p = .060$ . We then regressed monetary loss on the LTM and ability scores. Specifically, we controlled for age, gender, and ability in Step 1 ( $R^2 = .04, F = 1.90, p = .132$ ) and the LTM index in Step 2 ( $R^2 = .12, F = 4.82, p = .001$ ). The  $R^2$  change was significant ( $F$  change = 13.09,  $p < .001$ ), and the results indicated that only the LTM index was a significant contributor ( $\beta = .33, 95\%CI = 0.34, 1.15, p < .001$ ) when controlling for ability ( $\beta = .02, 95\%CI = -0.37, 0.46, p = .835$ ).

## 7. General discussion

The results suggest that questions assessing the four components of MDT do positively correlate. Further, these four items were relatively distinct from related concepts such as how long they knew the

perpetrator, or whether the perpetrator was perceived as charming or intelligent. In addition, the MDT common factor correlated with outcomes such as post-deception uncertainty (Study 1) and monetary loss (Studies 1 and 2). Thus, the MDT perspective may help move profiling deception in a behavioral direction.

There were several key limitations. First, the present research involved retrospective deception accounts. These accounts may be biased in terms of both memory and interpersonal perception. Second, we used single item indicators of each MDT component. Although internally consistent, future research should expand the MDT questions so that each component can be assessed in a reliable fashion. Another limitation was that the two items of “smooth” and “intelligent” did not form their own factor according to a Parallel Analysis. Future research should include additional items to assess whether ability-related items such as smooth and intelligent separate from core components of MDT. Another limitation was that we did not define items like “complexity” and “rapport” for participants, which may have led to different interpretations of the questions. Finally, MDT assessments of perpetrators of deception may also have correlated due to response bias. Thus, individuals who are deceived may remember things in a way that artificially inflates the MDT correlations. To address this limitation, future work should examine laboratory manipulations of long- vs. short-term deception to determine if these components cluster in live deception attempts.

Future research on MDT should utilize peer or community reports. For example, cross-validating community integration within a particular area with victim accounts. Another approach could examine both the victim and perpetrator accounts of deception. Because deceptive personalities operate across a variety of situations, MDT may be applicable to more than financial behavior. For example, infidelity, sexual abuse, or drug trafficking may all parallel MDT distinctions. In sum, initial evidence supports the notion that the four components of MDT exist and predict critical outcomes.

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