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# I Can't Remember: The Effects of Machiavellianism, Mental Effort and Lying on Memory

Isaac Simon

*Grand Valley State University, simoni@mail.gvsu.edu*

Todd Williams

*Grand Valley State University, willitod@gvsu.edu*

Michael Wolfe

*Grand Valley State University, wolfem@gvsu.edu*

John Hessler

*Grand Valley State University, hesslerj@mail.gvsu.edu*

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The Effects of Machiavellianism, Mental Effort and Lying on Memory

Isaac Simon

Todd Williams

Michael Wolfe

John Hessler

Grand Valley State University

Author Note

Todd Williams, Department of Psychology, Grand Valley State University.

Michael Wolfe, Department of Psychology, Grand Valley State University.

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### **Abstract**

Past research has demonstrated that lying about an event interferes with one's later recall of that event (Pickel, 2004; Zaragoza, Belli, & Payment, 2007). This study examined the extent that individual differences in Machiavellianism (Christie & Geis, 1970) moderated the effect of lying on event recollection. In a multi-session study, participants were asked to either truthfully recount or lie about the events depicted in a video clip that they had just viewed. One week later, participants verbally recalled the actual events of the clip. Participants did not differ in the amounts of correct inferences and correct details recalled from the clip. However, low levels of Machiavellianism were associated with less memory distortion of the inferable information after lying whereas higher levels of Machiavellianism was related to increased reporting of incorrect inferences after lying. These results also found that high Machiavellian individuals who lied are better able to differentiate between correct and incorrect details during recall than low Machiavellian individuals.

### I Can't Remember:

#### The Effects of Machiavellianism, Mental Effort and Lying on Memory.

Have you ever told a lie? Almost everyone would have to say yes to such a question, albeit reluctantly. A better question would be what effect does lying have on our ability to accurately remember the past. Indeed, research suggests that after an individual has lied they are unable to accurately recall the concealed truth (Pickel, 2004). Other research indicates that these types of memory errors can occur when interviewers use leading questions during interrogation (Zaragoza, Belli, & Payment, 2007; Loftus, 1992) or when people intentionally choose to be deceptive (Belli, Lindsay, Gales, & McCarthy, 1994; Pickel, 2004). While there is a considerable body of evidence documenting the prevalence and circumstances under which telling a lie can alter your memory for the truth (Chrobrak & Zaragoza, 2013; Niedźwieńska, 2002), there is no research examining the underlying psychological mechanism responsible for this type of memory distortion.

Previous research suggests that lying requires increased mental effort (Meek, Phillips, Boswell, & Vendemia, 2014; Gombos, 2006) because the individual must keep track of the truth while constructing a false, yet believable lie about what happened as well as attempting to inhibit expressing feelings of guilt or fear of being caught (Ekman, 2009; Zuckerman, DePaulo, & Rosenthal, 1981). It has also been shown that the memory for an original event becomes easily distorted by post event misinformation. Post event memory distortions have shown to occur as a result of being exposed to misleading information after having witnessed an event (Loftus, 1992). A misinformation effect has also been detected when an individual is forced to fabricate information that was not witnessed (Chrobrak & Zaragoza, 2013). Memory distortions have further been observed as a result of other-generated misinformation, in the form of a prepared lie

as well as self-generated misinformation, in the form of a freely produced believable lie (Pickel, 2004). An important question that has yet to be answered is whether the increased mental effort and emotional arousal involved in lying cause these memory distortions. Since there have been no experiments to test this idea it may be possible that some other factor, such as guilt or arousal, is responsible for this relationship. In order to observe differences in cognitive ability between individuals, we have incorporated the personality trait of Machiavellianism into our research design.

Machiavellianism refers to the extent that an individual sees the world around them as something that should be manipulated for their own personal gain (Christie & Geis, 1970). The concept of Machiavellianism is based on the writings of political philosopher Niccolò Machiavelli. In his book *The Prince* (1532), Machiavelli outlined a philosophical treatise endorsing actions taken by those attempting to gain and maintain power using immoral and dubious means as well as endorsing activities that ensure success in political actions. Drawing from Machiavelli's work, Christie and Geis were instrumental in bringing the concept of Machiavellianism into the social sciences by developing the Mach IV personality inventory (1970).

Research using this instrument has shown that those who are high in Machiavellianism implicitly interpret interpersonal interactions as an opportunity for personal gain whereas those are low in Machiavellianism perceive the value of social interactions as being an occasion for personal connection (Christie, 1970). High Machiavellians consider lying an acceptable behavior and are highly likely to engage in deception when they would directly benefit from the act. Conversely, low Machiavellians consider the act of lying to be deviant and unacceptable in almost all circumstances (Kashy & DePaulo, 1996; McLeod & Genereux, 2008). Those high in

Machiavellianism are able to effectively lie with little cognitive effort when compared to their low Machiavellian counterparts who tend to be less effective at lying and find it mentally taxing (Geis & Moon, 1981). Individuals high in Machiavellianism have also shown to adopt emotionally distant tactics while engaging in strategic social manipulation (Christie, 1970; Wilson, Near, & Miller, 1996). A Machiavellian's inherent manipulative ability has been suggested to be the result of improved working memory and visual-spatial skills, as research shows that high Machiavellians perform significantly better than their counterparts when tested on visual-spatial organization, quantitative reasoning, and assessments of working memory (Bereczkei, & Birkas, 2014).

If these differences in cognitive abilities and emotional attachment lead to differing levels of memory distortion among high and low Machiavellian individuals, it would provide evidence indicating that individual differences further moderate this effect. Furthermore, the possibility that the strength and prevalence of these errors may vary depending on the personality characteristics of the liar has not been examined. In order to test this idea, we designed a study in which participants that have completed the Mach IV were given incentive to effectively lie in a face to face interaction. Participants were then invited to return one week later and asked to recall what they previously concealed with their lie. The enhanced cognitive abilities and emotional objectivity displayed by high Machiavellians should be related to a reduction in the amount of memory distortion experienced by liars. Conversely, low Machiavellians should show an increase in memory distortion as a result of performing incongruent behavior, heightened emotional arousal, and increase in cognitive effort.

## **Method**

### **Subjects**

The participants were 81 male and female undergraduate students from a large university in the Midwest. Participants received partial course credit for participation. 2 participants were excluded due to suspicion leaving a total of 79 participants.

### **Design**

Participants who had completed a pre-screening packet earlier in the semester were selected for participation. This pre-screen packet included the Mach IV scale (Christie & Gies, 1970), a 20 item trait measure of Machiavellianism.

Participants were run individually by a single experimenter with a confederate researcher posing as a second participant. Participants who varied in levels of Machiavellianism, were assigned to one of two narrative conditions: truth versus lie. Following the initial experimental session, participants were asked to return one week later to complete the second part of the study.

### **Cover Story**

The study employed the use of a cover story in order to enable the use of a confederate and to minimize suspicion. At the time of signup, participants were told that the study awarded a total of two course credits for attending two study sessions which were scheduled a week apart. During the study, an additional credit was offered as an incentive for participants to fully engage with the upcoming storytelling task. In reality, all participants were awarded three course credits for completing the study. The participants arrived to the first study location and were paired with a confederate posing as the second participant. The participants were informed that the study sought to determine what effect the vividness and believability of a story has on the individual listening to the story. The study was explained as having separate roles for the participants, either as the storyteller or listener, which was determined by an ostensibly random number draw.

### **Procedure**

Upon arrival to the first study session, each participant was greeted and sat in a waiting room with the confederate researcher. The experimenter told the participant and confederate that the study was investigating the differences between believability and vividness in storytelling and the effect it has on the listener. The experimenter further explained that participation would involve taking either the role of the listener or of the role of a storyteller. The confederate then participated in an ostensibly random draw to determine their role in the study. Regardless of the number drawn, confederates were assigned to the role of listener and participants the role of storyteller. The participant was then led into a separate room where they were told that they would be shown a film clip and either be asked to provide an accurate retelling of the film clip (truth condition) or to fabricate an account (lie condition) to the confederate. The participant then participated in a fixed but supposedly 'random' draw to determine if they were in the truth or lie condition. Regardless of their assigned condition, an additional course credit was offered if the participant's account was rated by the listener as believable.

Participants then then watched the film clip. Next, they completed the need for cognition (NFC; Cacioppo & Petty, 1982) and positive and negative affective schedule (PANAS; Watson, Clark & Tellegen, 1988) scales, which served to maintain the cover story and as a time delay between the video and narrative task. The PANAS (Watson et al., 1988) is a 20-item scale designed to measure positive and negative dimensions of mood. After completing the NFC and PANAS, the experimenter explained to the participant that the confederate had not seen the film clip and that the confederate would be shown two images from the clip; one from the beginning of the clip and one from the end. Before the confederate was brought into the room, the participant was reminded that their task was to: lie to the confederate in the lie condition; or to provide an accurate account in the truth condition. After the confederate entered the room, the

participant was reminded that the confederate had been given the task of determining the believability of the account given. The confederate showed the participant two images, one from the opening and one from the closing scenes of the video clip. Depending on whether the participant was in the lie or truth condition the participant gave either a fabricated account or an accurate retelling of the video clip to the confederate. The confederate used a hidden digital audio recorder to record the participant's narrative. After completing the task, participants were told that they would be informed of whether or not they had earned the additional incentive during the second study session, and then were dismissed. They returned one week later for the second part of the study.

Upon arriving for the second study session, participants were greeted and seated at a table across from the experimenter. Participants were presented with the two images that were provided during part one of the study and asked to provide an accurate account of what happened in the video between the two images. If the participant was part of the lie condition, they were asked to disregard the lie that they told. The participants' responses were recorded with a digital audio recorder that was concealed in the room. After the participants completed this task, they were told that they did receive the additional course credit. Participants were then probed for suspicion, debriefed and thanked for their participation.

### **Materials**

The film clip used in this study, a two minute edited clip of the film "Looking for Miracles" (Sullivan, 1989), begins with a truck driving down a country road heading towards a boys camp. The truck is then parked in such a way that the road is blocked and the driver leaves the truck. An adult woman that is standing on a podium asks one of the camp counselors to move the truck. The counselor enters the truck and drives the truck in reverse through the camp and

near the podium, knocking over the megaphone in front of the podium. At this moment the adult woman falls from the podium. The truck continues in reverse until it backs into a tree. The adult woman is helped up by an adult man and a teenage camp counselor and proceeds to walk away. We chose this clip because it contains a sequence of causal events in a logical order that are emotionally neutral.

The Mach-IV (Christie & Geis, 1970) is a 20 item trait measure which, in addition to yielding an overall score, also has 3 correlated factors that assess the extent to which individuals manipulate social interactions (traits), hold Machiavellian worldviews (views), and equate morality as secondary to personal gain (morality). The Mach IV has been used in past research and demonstrated adequate reliability and predictive validity (Brewer & Abell, 2015; for a review see, Rauthmann, 2013).

### **Coding and Scoring**

In order to examine differences between participants ability to recall the video clip we developed a detailed coding scheme to categorize its contents. Our objective was to categorize contents of the video clip into the separate events that involved a subject and action. From this, we would be able to determine the extent that participants' narrative made inferences that were plausible or implausible relative to the actual events in the video clip. Four researchers reviewed the film clip and created a comprehensive inventory of events that were central to the story in the video clip. This list was compiled by having each researcher independently assess the inventory for events that were central to the theme of the story. The researchers comparing and resolved any discrepancies, which yielded a list of 39 events that were identified as events central to the story contained in the clip. Each of the 39 events include the subject(s) and action during a

moment in the video clip; i.e. “The boy puts the truck in gear” and “The truck backs down the road”.

When the clip is presented verbally in the form of a narrative the events of the story are contextualized within a framework of inferences, supporting details, and peripheral details. So in order to determine the accuracy of someone’s recollection it is necessary to differentiate between plausible and implausible inferences as well as correct and incorrect details. Plausible and implausible inferences were determined by comparing the participants narrative to what could be reasonably extrapolated from viewing the film clip but in some cases, may not have been explicitly stated in the clip. For example in one scene from the clip a boy is hesitant to move a truck, the boy then gets into a truck and looks confused, it could be reasonably inferred that the boy does not know how to drive or that he is unfamiliar with the truck. In contrast it would not be plausible to infer that the boy was confident about driving the truck from watching the clip. Details include elaborated information regarding specific objects, the environment, or the characters in the clip. Because of the vast array of possible details that could be provided from the clip details were determined as items that were actually in the video but not necessarily central to the events. Conversely, incorrect details were identified as elaborations that were not actually in the video.

## **Results**

### **Machiavellianism**

We began our data analysis by examining the overall reliability of the Mach-IV and it’s sub-scales. The overall reliability of the scale was low in our sample,  $\alpha = .48$ , with several items showing negative corrected item-total correlations. We then assessed the reliability of each subscale of the Mach-IV separately. The two items that assessed Morality (People suffering

from incurable diseases should have the choice of being put painlessly to death; All in all, it is better to be humble and honest than to be important and dishonest (reverse scored)) were negatively correlated with each other,  $r = -.35$ . The nine items assessing Machiavellian traits also showed low internal consistency,  $\alpha = .21$ . The views subscale of the Mach-IV had a somewhat better internal consistency,  $\alpha = .53$ , although two items had negative corrected item-total correlations (P.T. Barnum was wrong when he said that there's a sucker born every minute,  $r = -.13$ , Most people are brave (reverse scored),  $r = -.12$ ). After excluding these items, the internal consistency of this measure increased to an acceptable level ( $\alpha = .74$ ) and principal axis factoring analysis showed that these items all loaded on a single factor (Eigenvalue = 2.85, loadings  $> .20$ ). The seven remaining worldview items showed good face validity and a clear theme with each item assessing aspects of social mistrust and manipulation (e.g., The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught; It is safest to assume that all people have a vicious streak and it will come out when they are given a chance). Scores on this measure were normally distributed ( $M = 16.68$ ;  $SD = 4.82$ ) and ranged from 6 – 27. Having established the psychometric properties and face validity of this composite, we included it in our subsequent analyses of the video recall (See Appendix 1 for Machiavellian worldview items).

### **Video Clip Recollection Task**

To examine the effects of lying and the relationship of Machiavellianism on people's recollection of the video clip after the one week delay, we regressed each measure of recall on centered Machiavellian worldview scores, narrative condition (lie vs. truth) and the interaction of the two.

**Total number of details in the recall task.** As described above, we examined the total amount of detail contained in participants' recollection of the video clip. This analysis revealed that Machiavellianism did not directly predict the amount of detail provided by participants in the recall task, nor did it interact with narrative condition,  $p$ -values  $> .14$ . However, there was a main effect of narrative condition such that participants in the truth condition provided more detail,  $M = 3.44$   $SD = 3.49$ , than those who were in the lie condition,  $M = 1.68$ ,  $SD = 2.33$ ;  $t(75) = 2.62$ ,  $SE = .14$ ,  $p = .011$ . This effect suggests that lying led participants to recall fewer details from the video clip, but that this effect was not further moderated by their level of Machiavellianism.

**Number of correct details recalled.** To explore the accuracy of participants' memory of the events depicted in the video we analyzed the number of correct details they provided in the recall task. Machiavellianism and narrative condition did not affect the number of correct details that participants recalled,  $p$ -values  $> .21$ .

**Number of incorrect details recalled.** There were no main effects of Machiavellianism or narrative condition on the number of incorrect details recalled,  $p$ -values  $> .11$ . However the two-way interaction was significant,  $t(75) = 2.34$ ,  $SE = .04$ ,  $p = .022$ . Simple slopes analyses did not show significant differences across levels of Machiavellianism within each narrative condition,  $p$ -values  $> .086$ . To examine this interaction in greater detail, we tested the difference between the lie conditions at one standard deviation above and below the mean of Machiavellian worldview using the method recommended by Aiken & West (1991). The difference between narrative conditions among low Machiavellian participants was not significant,  $p > .31$ , however, high Machiavellians who lied recalled fewer incorrect details,  $Y_{pred} = .35$ , than those who told the truth,  $Y_{pred} = .95$ ,  $t(75) = 2.31$ ,  $SE = .26$ ,  $p = .024$ ; see Figure 1.

**Total number of inferences in the recall task.** The total number of inferences made by participants in the recall task did not vary by their level of Machiavellianism,  $p > .18$ . However, there was a main effect of narrative condition,  $t(75) = 4.67$ ,  $SE = .67$ ,  $p < .001$ , such that participants in the lie condition,  $M = 3.63$ ,  $SD = 3.09$ , made fewer total inferences than those who were in the truth condition,  $M = 6.77$ ,  $SD = 2.85$ . The Machiavellianism  $\times$  narrative condition interaction was not significant,  $p > .22$ .

**Plausible inferences.** The main effect of Machiavellianism was not significant,  $p > .18$ . However there was a main effect of narrative condition,  $t(75) = 4.33$ ,  $SE = .60$ ,  $p < .001$ , such that participants in the lie condition,  $M = 3.30$ ,  $SD = 1.77$ , made fewer plausible inferences than those who were in the truth condition,  $M = 5.90$ ,  $SD = 3.32$ . The Machiavellianism  $\times$  narrative interaction was not significant,  $p > .38$ .

**Implausible inferences.** The analysis of the number of implausible inferences that participants made showed no main effects for narrative condition,  $p > .97$ . However, there was a main effect of Machiavellianism,  $t(75) = 4.38$ ,  $SE = .04$ ,  $p < .001$ , such that higher levels of Machiavellianism was associated with an increased likelihood of recalling more improbable inferences. This main effect was qualified by a significant condition  $\times$  Machiavellianism interaction,  $t(75) = -3.19$ ,  $SE = .06$ ,  $p = .002$ .

Simple slope tests confirmed that the number of implausible inferences did not differ between high and low Machiavellian individuals when they told the truth,  $p = .87$ . However, when participants lied, there was a positive relationship between their level of Machiavellianism and the number of implausible inferences they remembered,  $t(75) = 4.38$ ,  $SE = .04$ ,  $p < .001$ .

Point estimate tests at one standard deviation above and below the mean of Machiavellianism, showed that low Machiavellianism participants recalled fewer implausible

inferences when they told a lie than when they told the truth,  $t(75) = 2.25$ ,  $SE = .29$ ,  $p = .027$ .

Conversely, high Machiavellian individuals were more likely to remember implausible inferences when they lied,  $Y_{pred} = 2.15$ , than when they told the truth,  $Y_{pred} = 1.22$ ,  $t(75) = -2.27$ ,  $SE = .41$ ,  $p = .026$ ; see Figure 2.

### Discussion

Exploring the effect of lying on memory using the personality characteristic of Machiavellianism has provided novel information adding to the understanding of memory distortions that result from lying. Comparative levels of Machiavellianism significantly affected participants ability to accurately recall elements of the video clip after lying. When the amount of incorrect details provided by participants was examined, low Machiavellian participants exhibited no significant difference across narrative conditions. However, fewer incorrect details were recalled by high Machiavellian participants who lied than low Machiavellian participants. That is to say that regardless of narrative condition low Machiavellian participants included similar amounts of correct details but provided far more incorrect details after having lied.

While both high and low Machiavellians experienced memory distortion of the details of the clip after lying, low Machiavellian participants produced significantly more memory distortion as indicated by their recollection of more incorrect details. The analysis of incorrect details recalled is consistent with the self-generated misinformation paradigm (Pickel, 2004) in which participants were asked to convincingly lie about and later recall the appearance of individuals previously seen in a video clip. Pickel (2004) found that deception increased the number of incorrect details that were recalled by participants. The current study shows that while lying does not affect the recall of low Mach individuals, it leads to a decrease in the number of incorrect details recalled by high Mach individuals.

When participants provided their recall of the film clip they contextualize the events of the clip using inferences to convey story cohesion. Inferences provide a way for participants to convey the conclusions drawn from the video clip used in the study. For example the woman in the clip stands at a podium and gives orders to the children at the camp. Participants draw the conclusion that the woman is in charge of the camp and add that contextual information to their verbal account. Memory distortions to relational and contextual information have been shown to occur under normal conditions where people are telling the truth (Alba, 1984), but have not been previously investigated when people are using deception. Our results showed that there were more plausible, correct, inferences made by participants who first told the truth compared to those who lied. Our results showed no difference between the overall amount of implausible inferences used in each narrative condition. However, high Machiavellian participants who lied provided more implausible inferences than low Machiavellians when recalling the clip in the same narrative condition. This result suggests that for contextual information, memory distortions are more prominent among high Machiavellians than low.

Previous research has established that high Machiavellians are more skilled liars and consequently craft more believable lies than their low Machiavellian counterparts (Geis & Moon, 1981). Following from this, it seems possible that poorly constructed lies lead to more distortion of details than more believable and coherent lies. High Machiavellians strategic construction of lies lead to an improved ability to distinguish between correct and incorrect details, but may come at the cost of contextual accuracy. The memory distortion of contextual information observed in high Machiavellians may occur as a result of strategic information processing because the difference is observed between the amount of implausible and plausible inferences recalled, and not the total amount of inferences made overall. When high Machiavellian motives

for strategic behaviors were examined in previous research, it was found that they are more likely to invest themselves in a situation only as much as is needed to be successful in the situation (Christie, 1970; Cizbor, Vince, & Bereczkei, 2014). High Machiavellian's display a propensity for attributing other's behavior to external forces while perceiving themselves as having strong influence over others behavior (Jones & Paulhus, 2009). This finding is consistent with the idea that high Machiavellians who lied would attempt to provide enough information when asked to recall the video, in order to convince the researcher that they had provided an accurate response. While trying to recall the story high Machiavellians would be engaged in monitoring their response and behavior in accordance with the demands of the social situation of the experiment (Jones & Paulhus, 2009) much as they would while lying (Christie, 1970). If high Machiavellians are allocating more cognitive resources in working memory towards impression management while relying on their ability to avoid mistakes about event details, they may be more likely to rely on inferences to seem like they are recalling enough. The result being a contextual erroneous account of the clip based on quantity compared to quality.

The current study reinforces the need for including individual differences, such as the personality dimension of Machiavellianism, into the exploration of the effects of deception on memory. While past research indicates cognitive advantages in working memory among high Machiavellians (Bereczkei, & Birkas, 2014) this study suggests that those advantages are limited to the type of information that needs to be recalled, specifically detailed and contextual information. The results of our analysis demonstrate that this memory bias occurs independently of the need for cognition and differences in self-reported affect. These results are consistent with the idea that these differences likely stem from differences in the extent that lying consumes cognitive resources that are allocated to construct a credible lie. These findings extend work by

Christie (1970) and Pickel (2009) which indicate that high Machiavellian individuals differ from their low Machiavellian counterparts in their ability to recall events that they have lied about.

Moreover this study is the first to investigate the nature of the memory distortion that occurs and suggests that lying may actually facilitate attention to detail among high Machiavellians but decrease their overall ability to understand the overall structure of the event they have lied about.

Further analyses of this data will allow us to additionally tease apart how participants used inferences in the first study session, and if carry-over of information from the first session played a role in the observed pattern of results. It is possible that the errors in contextual information are due to differing levels of strategic behavior among low and high Machiavellian individuals. It is also possible that the errors may be due to errors in source monitoring between the lies told and the actual events shown in the video. If we are able to find that novel information increased bias in recall, it would suggest that high Machiavellians may be embellishing contextual information in order to convince the researchers that they have given an accurate account. However, if the majority of incorrect inferences that are found in the recall session match those used during the first study session it would suggest that residual amounts of the lie they told may interfere with high Machiavellians ability to accurately recall context after lying.

In sum, this study shows that while lying distorts memory, the effect of the distortion is moderated by the individual differences found among varying levels of Machiavellianism. This effect occurs in such a way that high Machiavellians make less detail oriented errors but more contextual errors, when recalling events they have lied about, than low Machiavellians. These results may have applied value in situations where witnesses recant fabricated testimony and

expand our theoretical understanding of lying and memory as well as individual differences in Machiavellianism.

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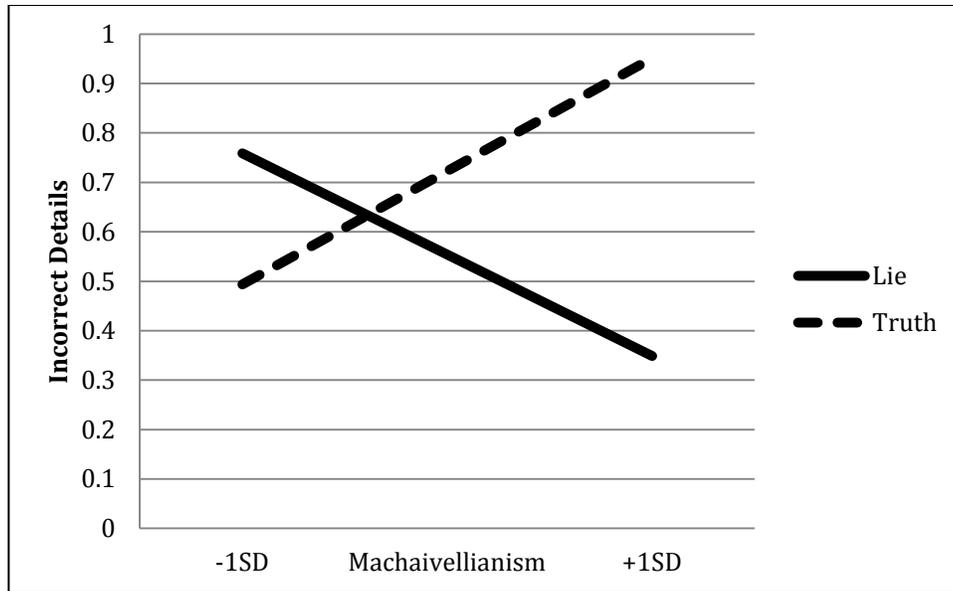


Figure 1. The Effect of Worldview and Narrative Condition on the Number of Incorrect Details.

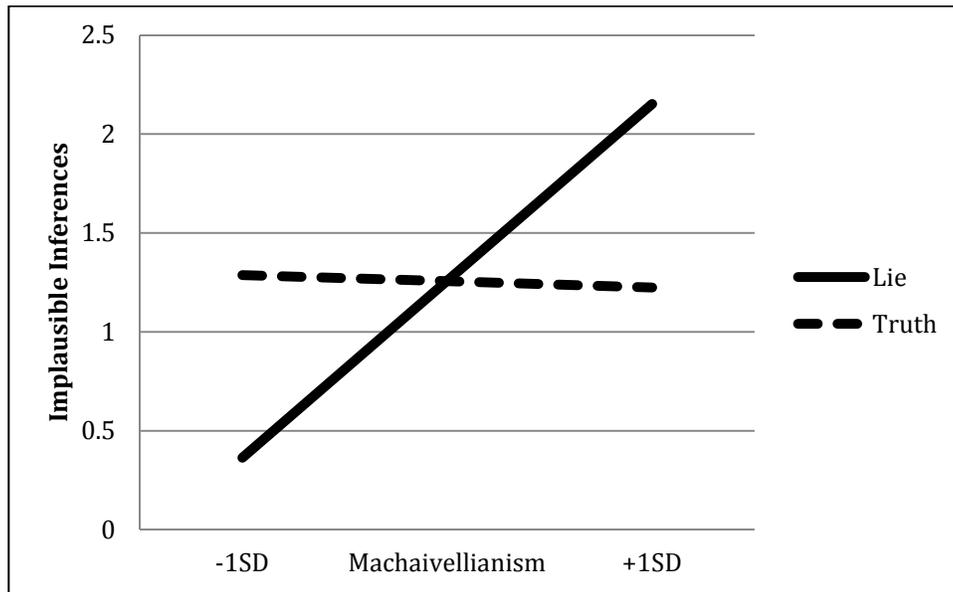


Figure 2. The Effect of Worldview and Narrative Condition on the Number of Implausible Inferences.

**Table 1. Detailed explanation of coded elements**

Coded category	Definition	Example Statement
Event	Events that are central to the theme of the story in the video clip.	“Boy puts truck in gear.”, “Truck backs down road.”
Plausible Inference	An inference that either directly or could be plausibly inferred from the events depicted in the video clip. contains information that could be inferred when compared to the film clip.	“The woman was in charge of the camp.”
Implausible Inference	An inference that could not be plausibly inferred from the events depicted in the video clip. statement that contains information that could in no way be inferred when compared to the original clip.	“The woman was a stranger that wandered into camp”
Correct detail	Correct details that were actually in the video but not necessarily central to the story depicted in the video clip.	“There were chickens in the back of the truck”
Incorrect detail	Incorrect items that were not actually in the video.	“There were nuclear weapons in back of the truck.”

### Appendix

Amended MACH IV Worldview Scale;		
1.	WV-	Most people are basically good and kind.
2.	WV+	It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
3.	WV+	Generally speaking, people won't work hard unless they're forced to do so.
4.	WV-	Most people who get ahead in the world lead clean, moral lives.
5.	WV+	The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.
6.	WV+	Most people forget more easily the death of their parents than the loss of their property.
- indicates reverse coded		