



**Manipulating the manipulators into prosocial behavior: Machiavellianism and Incentives for Prosocial Behavior**

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## **Abstract**

Machiavellians are characterized by their egocentricity and manipulateness in interpersonal relationships, and therefore this personality trait has been linked to antisocial behavior. However, in recent years, interest has grown in studying the relationship between Machiavellianism and prosocial behavior. Research found that Machiavellianism is positively linked to public helping, and negatively linked to anonymous helping. Yet, the role of corresponding incentives for these helping behaviors has not been tested. Therefore, this study contributes to the literature on the dark triad, by examining the role of status and monetary incentives on the relationship between Machiavellianism and prosocial behavior in public and anonymous settings. In this paper, it is expected that status and monetary incentives increase participants' prosocial behavior and that these incentives especially appeal to those who score high on Machiavellianism. A sample of 451 participants completed the MPS questionnaire measuring Machiavellianism and were then randomly assigned to one of the three conditions: control condition, status condition, and money condition in which they were asked to donate to the ALS Association. Results did not support that status and monetary incentives increased participants' prosocial behavior. Additionally, no support was found that Machiavellians responded differently to the incentives. These findings could be explained by the manipulations of the incentive, which showed no significant differences in prosocial behavior compared to the control group. Practical implications and recommendations for future research are discussed.

*Keywords:* Machiavellianism, prosocial behavior, status incentives, monetary incentives, public helping, anonymous helping

## Introduction

Prosocial behavior is important. There are so many crises in the world that prosocial behavior is needed more than ever. However, some people are notorious for not pulling their weight when it comes to prosocial behavior. This paper tries to address these people. Paulhus and Williams (2002) identified narcissism, psychopathy, and Machiavellianism as three aversive personality types known as the dark triad. The dark triad and its link to antisocial behavior have been a central theme in academic literature for several years (Sijtsema et al., 2019; Williams et al., 2001). In recent years there has been a growing interest in studying the relationship between the dark triad personalities and prosocial behavior (Palmer & Tackett, 2018; Wertag et al., 2018). Prosocial behavior can be defined as those behaviors that aim to benefit others (Batson & Powell, 2003). Prosocial behavior classifies several types of 'helping'. First is altruistic helping which can be defined as voluntary helping purely motivated by sympathy for the well-being of another (Carlo & Randall, 2002). Second, Carlo and Randall (2002) distinguish compliant helping as a form of helping which occurs as soon as an individual is verbally or nonverbally asked for assistance. Emotional helping is the third type of helping and this occurs when individuals help others in highly emotional circumstances. Fourth, dire helping can be described as helping in extreme emergency cases. Next, Carlo and Randall (2002) define anonymous helping as helping without knowing who offered help. On the contrary, the last type of helping is public helping which is characterized by the presence of an audience. Individuals who engage in public helping are often motivated by gaining respect and social praise from others (Carlo & Randall, 2002).

Recent research found that psychopathy seems to be positively related to public helping and inversely related to altruistic and anonymous helping (Leńczuk, 2021; White, 2014). Moreover, different studies found evidence for a positive relationship between narcissism and public helping (Leńczuk, 2021; Kauten & Barry, 2016; Konrath et al., 2016). This is because,

due to the presence of an audience narcissists could gain admiration and social praise, which is a crucial need for a narcissist. Despite this growing body of research, Machiavellianism and its link to prosocial behavior has still found little research interest. Machiavellianism is named after the Italian philosopher, diplomat, and political advisor Niccolò Machiavelli. This Machiavellian personality can be classified into three main sets of values (Forsyth et al., 2012; Muris et al., 2017). First, Machiavellians believe that manipulation tactics are effective when dealing with other people. Second, Machiavellians have a cynical view of human nature. And lastly, they can be characterized by their moral disregard. Meaning they would choose expediency above moral principle (Forsyth et al., 2012; Muris et al., 2017).

Nevertheless, Bereczkei and colleagues (2010) did examine the relationship between this manipulative personality and prosocial behavior and found that Machiavellianism is positively related to public helping. This is because, Machiavellians need social recognition, and the presence of an audience fulfills this need (Bereczkei et al., 2010; Kückelhaus et al., 2020). In addition, Leńczuk (2021) found that Machiavellianism is negatively related to anonymous helping. This can be explained by Machiavellian's natural overemphasis on self-interest and their disregard for social interest (McHoskey, 1999). Therefore, the papers by Bereczkei et al. (2010) and Leńczuk (2021) suggest which incentives should and should not work for Machiavellians, however, they did not test incentives that correspond to those helping behaviors to increase prosocial behavior in Machiavellians. Hence, the first contribution of this study is to test those corresponding incentives that can motivate Machiavellians to engage in prosocial behavior in both public and anonymous settings. Since we know that without an incentive (e.g. anonymous helping) Machiavellians show very little prosocial behavior (Leńczuk, 2021), their potential for incentivization is a priori higher (Lacetera & Macis, 2010). More specifically, this study examines how status and monetary incentives can motivate Machiavellians to donate money to the ALS Association. Status incentives correspond to public

helping because these incentives focus on positional goods and therefore they also fulfill Machiavellians' need for social recognition (Besley & Ghatak, 2008; Kückelhaus et al., 2020). Moreover, monetary incentives are used in the anonymous settings, as monetary incentives appeal to Machiavellians' self-centeredness (McHoskey, 1999). This is of practical importance because society as a whole benefits when more people engage in prosocial behavior, such as through charitable donations (Gabriel, 2017). And since Machiavellians do not naturally engage in prosocial behavior (Leńczuk, 2021; McHoskey, 1999), they are a relevant population because it is in this group that the most growth in prosocial behavior can be achieved.

In addition, previous studies of the dark triad and prosocial behavior had problems measuring actual prosocial behavior, instead, they only measured self-reported intentions of the dark triad personalities to engage in prosocial behavior (Bereckzei et al., 2010; Konrath et al., 2016; White, 2014). For example, Konrath and colleagues' (2016) study tested how narcissists responded to the ALS 'ice bucket challenge' charity donation campaign. This challenge required individuals to post a video on social media in which they dumped a bucket of ice water on their heads. They were then expected to donate to the ALS Association. Konrath and colleagues (2016) found that individuals who scored higher on narcissism were more likely to post the video on social media than those who scored lower on narcissism. However, in terms of donating the actual money to the ALS Association, the individuals who scored lower on narcissism were more likely to donate than those who scored higher on narcissism (Konrath et al., 2016). Therefore, Konrath et al. (2016) concluded that narcissists post the videos more often because they thereby benefit themselves from the reputation that prosocial behavior brings. However, when it comes to performing the actual prosocial behavior, narcissists do not donate the money to the ALS Association because this behavior is not seen by others and therefore does not benefit them. Thus, narcissists could pretend their prosocial behavior and benefit from the social praise that it brings without actually performing prosocial behavior. The second

contribution of this study is to overcome this practical problem by first encouraging the dark triad personality to engage in prosocial behavior before they can benefit from their positive behavior. In this particular study, this means that Machiavellians, instead of Narcissists as in the study by Konrath et al. (2016), first had to donate money to the ALS Association before being incentivized with status or money. In this way, this paper was able to measure Machiavellians' actual prosocial behavior rather than their pretended intentions to engage in prosocial behavior.

Building on the findings of Bereczkei and colleagues (2010) and Leńczuk (2021), and stressing the importance of increasing prosocial behavior in Machiavellians, the following research question was formulated:

*“To what extent can status and monetary incentives increase prosocial behavior in Machiavellians?”*

### **The influence of status incentives on the relationship between Machiavellianism and prosocial behavior**

Due to their egocentricity and manipulative interpersonal relationships, McHoskey (1999) found that Machiavellianism is associated with antisocial behavior. Moreover, the findings of McHoskey (1999) indicated that Machiavellianism has an ambiguous relationship with altruistic helping and social interest. This can be explained by Machiavellian's primary focus on personal goal attainment and their disdain for establishing social relationships. However, McHoskey (1999) disregarded the fact that prosocial behavior can be divided into several subcategories of helping.

On the contrary, Bereczkei et al. (2010) did distinguish between the different forms of prosocial behavior and specifically examined the subcategory 'public helping'. This form of prosocial behavior indicates that individuals will offer help when others are present (Carlo &

Randall, 2002). Berezkei et al. (2010) characterize Machiavellians by their ‘cold empathy’. Meaning that Machiavellians can cognitively take over the perspectives of others and understand their intentions and complex mental states, however, they are not emotionally affected by the perspectives taken. Even more so, other research suggests that Machiavellians use that information strategically and behave in such a way that they manipulate others into thinking that they behave prosocially when they are actually behaving in a self-interested way (Barnett & Thompson, 1985; Berezkei et al., 2010; Berger et al., 2015). That is, they will only behave prosocially when others are watching as this will positively impact their social status. Hence, Machiavellians pretend to be altruistic, meaning that they would be purely motivated to help others due to their concern for others’ well-being (Berezkei et al., 2010). But in fact, their actions are selfish since they are merely motivated to help others when they personally gain reputation and respect from the audience (Berezkei et al., 2010). Thus, it can be argued that Machiavellians strategically use prosocial behavior for personal gain (Berger et al., 2015).

Building on the idea that Machiavellians are motivated to engage in prosocial behavior when they gain reputation and social praise from others, status incentives can be used to drive Machiavellians to engage in prosocial behavior. Status incentives are defined as incentives targeted at positional goods which are characterized by their scarcity (Besley & Ghatak, 2008), and therefore this aligns with Machiavellian’s need for social recognition (Kückelhaus et al., 2020). However, research has never investigated the role of status incentives on the relationship between Machiavellianism and prosocial behavior before. Status incentives can be given as a reward for good performance and come in different forms: receiving a medal, getting a better job title, and fellowships (Besley & Ghatak, 2008). Bhattacharyaa and Durarb (2012) explain that status incentives can motivate individuals because people are driven by social recognition and prestige. Hence, people participate in status-seeking activities.

Since this study seeks to examine certain incentives that can specifically motivate Machiavellians to engage in prosocial behavior, status incentives could be particularly relevant for this dark triad personality. After all, Machiavellians are highly reputation-conscious and therefore they want to garner respect and social praise from those around them (Bereczkei et al., 2010; Kükelhaus et al., 2020). Status incentives may therefore further encourage Machiavellians to engage in prosocial behavior, as they will be recognized for their positive behavior. This in turn leads to more social praise and respect from others.

Moreover, Barnett & Thompson (1985) argue that Machiavellians help strategically, meaning that they will only offer help when they benefit from it. Therefore, it can be argued that Machiavellians specifically offer help when they receive social recognition in return in the form of status incentives. Consequently, this study argues that status incentives have a positive influence on the prosocial behavior of Machiavellians. Based on this reasoning, the following hypothesis was formulated:

*H1: Individuals with higher levels of Machiavellianism are more likely to engage in prosocial behavior when they receive status incentives than individuals with lower levels of Machiavellianism*

### **The influence of monetary incentives on the relationship between Machiavellianism and prosocial behavior**

Thus, Machiavellians are expected to be motivated to engage in prosocial behavior when incentivized with status so that others acknowledge their positive behavior. However, it is also important to consider incentives that may encourage Machiavellians to engage in prosocial behavior when the role of publicity is minimal because research has shown that Machiavellianism is negatively related to anonymous helping (Leńczuk, 2021), but the goal of this paper is to increase the prosocial behavior of Machiavellians. Hence, the second type of

incentive that will be examined in this study is monetary incentives. Monetary incentives are a widely used form of incentives and have been found to be a very effective motivator for most individuals (Aguinis et al., 2013).

However, in high-publicity situations, the use of monetary incentives can be counterproductive, meaning that it will reduce motivation, effort, or performance (Burson & Harvey, 2019). One example of this is incentives for prosocial behavior. When individuals exhibit prosocial behavior, incentivizing them with money can have an inverted impact on their behavior (Burson & Harvey, 2019). This is because prosocial behavior, at least to some extent, is driven by the need to obtain goodwill from others. Exley (2018) therefore argues that individuals would not want to receive monetary incentives for their prosocial behavior when others are present, because this will make them look greedy toward others. As a result, their reputation will be damaged, which is especially discouraging for reputation-conscious Machiavellians (Bereczkei et al., 2010; Kückelhaus et al., 2020).

Nevertheless, as mentioned earlier, prosocial behavior is sometimes required in settings with minimal publicity. Thus, in those anonymous settings, the counterproductive effect of monetary incentives for prosocial behavior can be overcome. This is because the individuals in those settings are not evaluated by others, meaning that if they received a monetary incentive for their prosocial behavior, no one would know about it. As a result, the individuals who accept the monetary incentives do not come across as greedy to others (Exley, 2018).

In those anonymous settings, monetary incentives may actually motivate Machiavellians to engage in prosocial behavior. This can be explained by Machiavellian's overemphasis on self-interest and their disregard for social interest (McHoskey, 1999). Machiavellians are therefore more likely to help others if it will benefit them (Barnett &

Thompson, 1985). However, the role of monetary incentives in the relationship between Machiavellianism and prosocial behavior has never been investigated before.

Birkás and colleagues (2015) complement these findings by arguing that Machiavellians are motivated by short-term gain, and therefore prioritize situations where there is little threat to reputation and the possibility of receiving high rewards. Thus, one might expect that monetary incentives could motivate Machiavellians to prosocial behavior when there is little publicity involved. This is because, when there is little publicity, Machiavellians are not at risk of appearing greedy when they accept money for their prosocial behavior, which could potentially damage their reputation (Exley, 2018). Moreover, monetary incentives are short-term benefits that amount to the self-interest Machiavellians are motivated by (Birkás et al., 2015; McHoskey, 1999). Hence, the second hypothesis is proposed:

*H2: Individuals with higher levels of Machiavellianism are more likely to engage in prosocial behavior when they receive monetary incentives than individuals with lower levels of Machiavellianism*

### **The present study**

In summary, the present study aims to investigate whether specific incentives can motivate Machiavellians to engage in prosocial behavior (i.e., donating money to the ALS Association).

In the status incentive condition, participants are given the option to receive a thank you note as an acknowledgment of their donation to the ALS association. Receiving a thank you note can act as a status incentive (Besley & Ghatak, 2008). In this study, it is expected that Machiavellians would want to receive such a thank you note because it allows them to demonstrate to others that they engaged in prosocial behavior. By doing so, they garner social

praise and respect from those around them, which is an important need for Machiavellians (Kückelhaus et al., 2020).

In the monetary incentive condition, participants are given the option to participate in a lottery only after they donated money to the ALS Association. In this lottery, they have a chance to win a gift card, which thus resembles a monetary incentive for their prosocial behavior (Aguinis et al., 2013). In this study, Machiavellians are expected to want to participate in the lottery. This is because participation in the lottery remains anonymous, indicating that there is little reputational threat and potential for high rewards that will motivate Machiavellians (Birkás et al., 2015; McHoskey, 1999).

This study will also have an anonymous helping condition with no incentives, which will serve as a control condition. Therefore, we can verify whether our incentives had the intended effect of increasing prosocial behavior for Machiavellians.

## **Methods**

### **Sample**

Participants were recruited online using Prolific Academic (Damer & Bradley, 2014), which led to a sample of 451 participants. They were invited to participate in a 15-minute study and they received compensation of £1,-, plus a bonus of £0.50 for the prosocial behavior measure. During the collection and processing of the data, confidentiality and anonymity were ensured for all participants.

In Table 1 the demographics of the sample are represented, which shows a mean age of 27.59 years ( $SD= 8.84$ ). Moreover, 48.8% of the participants were male, 49% female and the non-binary/ third gender group was in minority with 2.2%. Considering the social-economic

status of the sample, the majority of the sample earned less than £5000 a year (25.5%), whereas the minority of the sample earned between £40,000 and £49,000 a year (3.8%).

**Table 1**  
*Demographics sample*

	Sample
<i>N</i>	451
Age	27.59 years
Gender	
<i>Male</i>	48.8%
<i>Female</i>	49%
<i>Non-binary/ Third gender</i>	2.2%
SES	
<i>Less than £5000</i>	25.5%
<i>£5000 - £9,999</i>	15.7%
<i>£10,000 - £14,999</i>	16%
<i>£15,000 - £19,999</i>	12%
<i>£20,000 - £29,999</i>	15.3%
<i>£30,000 - £39,999</i>	7.1%
<i>£40,000 - £49,000</i>	3.8%
<i>More than £50,000</i>	4.7%

### Power analysis

The program G\*Power was used to conduct a priori power analysis. To detect a medium effect size of  $f^2=0.05$  with a power of  $(1-\beta) = 0.80$  and an alpha of 0.05 in a multiple regression analysis,  $N=159$  participants had to be recruited. Due to budgetary constraints, the sample size of this study was set to  $N=451$ . With a total sample size of  $N = 451$ , a power of  $(1-\beta) = 0.80$ , and an alpha of 0.05, an effect size of  $f^2=0.017$  was achieved with a multiple regression analysis.

## Measured variables

**Machiavellianism.** To assess the level of Machiavellianism of the participants, the Machiavellian Personality Scale (MPS) was used (Dahling et al., 2009). The MPS is a self-report scale, consisting of 4 subscales: amorality, desire for control, desire for status, and distrust of others. The MPS consists of 16 items which are measured on a 5-point Likert scale on which participants had to rate to what extent they agreed with the statement (1= strongly disagree, to 5= strongly agree). An example of an item was: *'Status is a good sign of success in life'* (Dahling et al., 2009). The MPS has been shown to have acceptable reliability and validity (Birkás et al., 2015). In this study, the MPS also had good reliability (Cronbach's  $\alpha = .85$ ). Moreover, the study of Birkás and colleagues (2015) also used this measurement scale when examining the associations between incentives and Machiavellian interpersonal tactics.

**Manipulations checks.** To check whether the experimental conditions had their intended effect on participants, three ad-hoc questions were included to check the manipulations. The three items were measured on a 7-point Likert scale, ranging from 1=to an extremely small extent, to 7=to an extremely large extent (Optima360, 2013). The first question included was to ascertain the status incentive condition and it was presented as follows: *'To what extent was your decision influenced by reputational considerations?'*. The second question was: *'To what extent was your decision influenced by monetary considerations?'*, which checked for the manipulation in the monetary incentive condition. The last item was presented as follows: *'To what extent was your decision influenced by the possibility of others finding out that you had donated (or not)?'* this measured the influence of the degree of publicity of the conditions.

**Demographic variables.** Age and socioeconomic status (SES) were included as control variables. First, age was included as a control variable since Götz and colleagues (2020) found a correlation between Machiavellianism and age, which was also the case in the present sample,

see Table 2. Second, the results were controlled for socioeconomic status, because research has shown that lower economic status is negatively related to giving charity donations (Bandy & Ottoni-Wilhelm, 2012). This was also found in the present sample, see Table 2. Gender was also assessed in this study because Zhu et al. (2021) found that males tend to score marginally higher on the Machiavellianism scale than females. However, in this study, there was no correlation found between gender and any of the other variables, therefore gender was not included as a control variable in the analysis, see Table 2.

## **Design**

The study had a one-factorial between-subjects experimental design with three conditions: one control condition (anonymous helping) and two experimental conditions (status incentive condition and monetary incentive condition). Additionally, Machiavellianism was used as a continuous predictor for the main analyses.

## **Manipulated variables**

The present study consisted of three conditions. The first condition was the anonymous helping condition, which functioned as the control condition. In this condition, the participants were told that the ALS Association would receive the sum of all donations of the participants after the experiment was completed. Hence, the donation of the participants stayed anonymous, which thus resembles anonymous helping (Carlo & Randall, 2002).

The second condition was the status incentive condition, which was the first experimental manipulation. In this condition, the participants were offered a thank you note as an acknowledgment of their donation. This thank you note functioned as a status incentive (Besley & Ghatak, 2008). If the participants were interested in receiving a thank you note, they could voluntarily choose to provide their e-mail address via which the certificate would be sent. By giving the participants an option to receive a thank you note, the status incentive condition

was manipulated. Also, since the participants can use their thank you note as a means to gain social praise, this was a public condition.

The third condition was the monetary incentive condition, which was the second experimental manipulation. In this condition, the participants were told that if they donated a part of their compensation, they would have the option to partake in a lottery to win an Amazon gift card. The Amazon gift card functioned as a monetary incentive (Aguinis et al., 2013). If the participants were interested in entering the lottery, they were asked to provide their e-mail address via which the winner would be announced. By giving the participants an option to take part in a lottery to win a gift card, the monetary incentive condition was manipulated. Since the lottery would take place via e-mail, and also the potential gift card was sent via this medium, this condition was anonymous.

## **Procedure**

First, all participants were asked to sign the informed consent before entering the online experiment. After signing the informed consent, the participants were requested to complete the MPS questionnaire (Dahling et al., 2009). When the participants completed the MPS questionnaire, they learned that they would receive their full compensation (£1.-), and a bonus of £0.50 unless they wanted to donate a part of that bonus to the ALS Association. Subsequently, participants were randomly assigned to one of the three conditions (see above) and asked for a donation. After all, participants decided whether they wanted to donate part of their compensation to the ALS Association, they were thanked for their participation and the experiment ended.

## **Plan of Analysis**

A multiple linear regression analysis and post-hoc correlations were conducted using the statistical analysis software IBM SPSS statistics 25. The multiple regression included the

continuous independent variable Machiavellianism and a discrete independent variable for the conditions, as well as their interaction. For the status incentive condition, the discrete independent variable compared the anonymous control condition to the status incentive condition (0 vs. 1). For the monetary status incentive condition, the discrete independent variable compared the anonymous control condition to the monetary incentive condition (0 vs. 1). The dependent variable measured prosocial behavior (PB), which was a continuous variable and indicated how much a participant donated.

For the first regression analysis, a main effect of the status incentive condition was expected, indicating that status incentives led to more prosocial behavior for all participants. Next, an interaction effect was expected for Machiavellianism, meaning that participants that scored higher on Machiavellianism would respond to the status incentives more strongly than participants that scored lower on Machiavellianism.

For the second regression analysis, also a main effect of the monetary incentive condition was expected. This means that for all participants the monetary incentives led to more prosocial behavior. Additionally, an interaction effect was expected for Machiavellianism, indicating that participants who scored higher on Machiavellianism would respond more strongly to the monetary incentives than participants that scored lower on Machiavellianism.

Following the multiple regression analysis, post-hoc correlation tests were conducted to specify any interactions. For these tests, simple correlations between Machiavellianism and prosocial behavior will be computed within the different conditions of the study.

## **Results**

### **Preliminary Analysis**

In Table 2 the descriptive statistics of the study can be found. A mean score of 2.71 ( $SD=0.63$ ) for Machiavellianism was found, indicating an average score on Machiavellianism

for the sample. Next, a mean of 0.22 ( $SD=0.19$ ) was found for prosocial behavior, indicating that the average amount of money donated per participant was £0.22.

Moreover, Table 2 presents the correlations between the variables of the study. First, a negative correlation was found between Machiavellianism and prosocial behavior ( $r(449) = -.25, p < .001$ ). Second, Machiavellianism was negatively correlated with age ( $r(449) = -.11, p = .021$ ) and social-economic status ( $r(449) = -.12, p = .010$ ). Last, social-economic status had a positive correlation with prosocial behavior ( $r(449) = .15, p = .002$ ). and age ( $r(449) = .25, p < .001$ ).

**Table 2**

*Descriptive Statistics and Correlations of Age, SES, Machiavellianism, and PB in the present sample*

		<i>M</i>	<i>SD</i>	1	2	3	4
1	Age	27.59	8.84	-			
2	SES			.25**	-		
3	Machiavellianism	2.71	0.63	-.11*	-.12**	-	
4	PB	0.22	0.19	.11*	.15**	-.25**	-

*Note.*  $N=451$ , PB= prosocial behavior, age is measured in years, \* $p < 0.05$ , \*\* $p < 0.01$

### Manipulation checks

After the descriptive statistics and correlations were analyzed, a one-Way ANOVA between groups was performed to compare the effect of the condition on prosocial behavior. No statistically significant difference was revealed when performing the one-way ANOVA,  $F(2, 448) = .289, p = .749$ , which can also be seen in Figure 1. This figure revealed a mean of £0.22 ( $SD=.20$ ) for the status condition, a mean of £0.23 ( $SD=0.19$ ) for the money condition, and a mean of £0.21 ( $SD=0.19$ ) for the control condition. This indicates that the manipulation of the incentives did not affect the prosocial behavior of the participants.

**Figure 1**

*Output One-way Anova for the differences in prosocial behavior per condition*



The last step of the preliminary analysis was to look for any differences in the mean scores of the manipulation check items per condition, which are shown in Table 3. A One-way ANOVA between groups was performed for the first manipulation check, which showed that people were not differentially considering reputational considerations across the conditions,  $F(2, 448) = .283, p = .753$ . Next, for the second manipulation check, people were not differentially considering monetary considerations across the conditions,  $F(2, 448) = .032, p = .969$ . Lastly, for the third manipulation check, people were not differentially considering the possibility of others finding out about their decision to donate,  $F(2, 448) = .443, p = .642$ . Therefore, the incentives did not affect the considerations of the participants to donate to the ALS Association.

**Table 3**  
*Means of the Manipulation Check Items per Condition*

Condition	Control		Status		Money	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
To what extent was your decision influenced by reputational considerations?	2.37	1.48	2.46	1.68	2.50	1.48
To what extent was your decision influenced by monetary considerations?	3.56	1.77	3.60	2.00	3.55	1.88
To what extent was your decision influenced by others finding out that you had donated (or not)?	1.83	1.36	1.87	1.49	1.72	1.26

Note:  $N=451$

### Multiple regression analysis to test the effect of status incentives

To check the first hypothesis a multiple regression analysis was conducted. Table 4 summarizes the statistics for all predictors of this regression. The results showed that the model explained 13% of the variance and that it significantly predicted prosocial behavior,  $F(5,294) = 8.94$ ,  $p < .001$ . This variance can be explained by Machiavellianism which significantly predicts prosocial behavior ( $B = -.05$ ,  $p = .006$ ), and negatively so. The control variables age ( $B = .00$ ,  $p = .076$ ), and SES ( $B = .01$ ,  $p = .065$ ), did not significantly predict prosocial behavior. Also, the status condition did not significantly predict prosocial behavior ( $B = .03$ ,  $p = .134$ ). Contrary to the expectations, the interaction effect of Machiavellianism on status incentives did not significantly increase prosocial behavior ( $B = -.03$ ,  $p = .243$ ), which is shown in Figure 2. This indicates that the status incentives did not lead to an increase in prosocial behavior for participants who scored higher on Machiavellianism compared to those who scored lower on Machiavellianism. Hence, the results do not support hypothesis 1.

**Table 4**  
*Regression analysis of Machiavellianism and Status incentive on Prosocial Behavior*

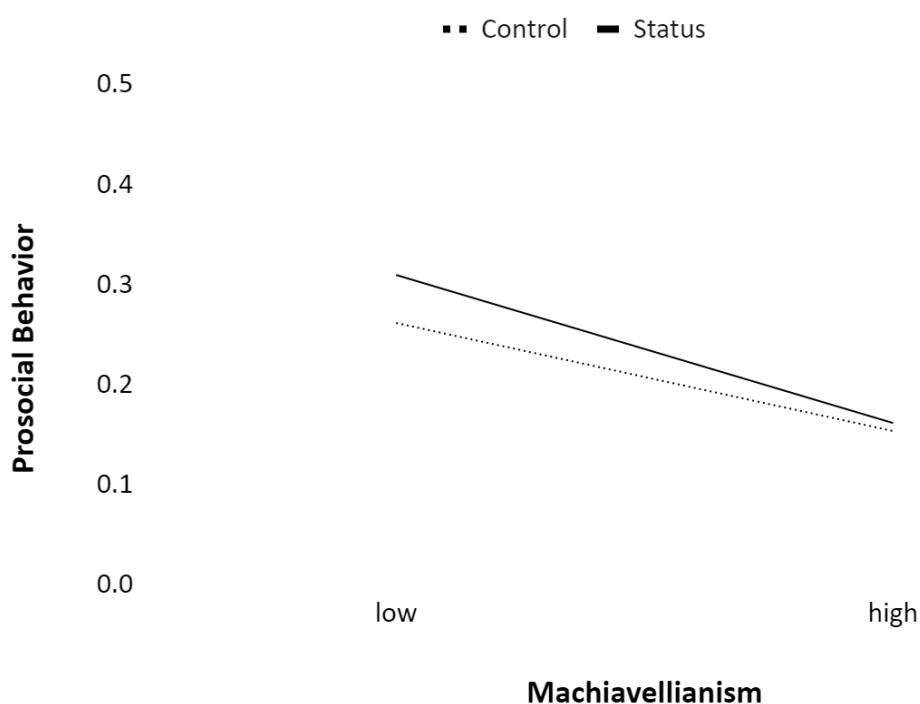
Model	<i>B</i>	<i>Std. Error</i>	<i>t</i>	<i>R</i> <sup>2</sup> change
1 (Constant)	.11**	0.04	2.85	.13

Age	.00	0.00	1.78
SES	.01	0.01	1.85
Machiavellianism	-.05**	0.02	-2.80
Status Condition	.03	0.02	1.50
Machiavellianism* Status Condition	-.03	0.02	-1.17

*Note.* Dependent variable: Prosocial Behavior, \* $p < 0.05$ , \*\* $p < 0.01$

**Figure 2**

*Prosocial behavior as a function of Machiavellianism and Status Condition*



*Note.* Prosocial behavior as a function of Machiavellianism and Status Condition. Simple slopes are plotted at  $M \pm 1 SD$ . The horizontal axis is the amount of money donated in £.

### **Multiple regression analysis to test the effect of monetary incentives**

Next, a second multiple regression analysis was performed, to test the second hypothesis. These results are shown in Table 5. The analysis showed that the model explained 6% of the variance and that it was a significant predictor of prosocial behavior ( $F(5,292) = 3.63, p = .003$ ). This variance can be explained by Machiavellianism which significantly

predicts prosocial behavior in a negative way ( $B = -.05, p=.003$ ). The control variables age ( $B = .00, p=.591$ ) and SES ( $B = .01, p=.095$ ) did not predict prosocial behavior significantly. Furthermore, the monetary condition did not predict prosocial behavior ( $B = .02, p=.302$ ). Contrary to the expectations, the interaction effect of Machiavellianism on monetary incentives did not significantly increase prosocial behavior ( $B =.04, p=.114$ ). This interaction effect is shown in Figure 6. Although the graph descriptively shows the same direction as the hypothesis, the effect of the monetary incentive was not large enough to significantly increase prosocial behavior in Machiavellians. Therefore, the results do not support that monetary incentives increase the prosocial behavior of those participants that scored higher on Machiavellianism compared to those participants that scored lower on Machiavellianism. Thus, hypothesis 2 is rejected.

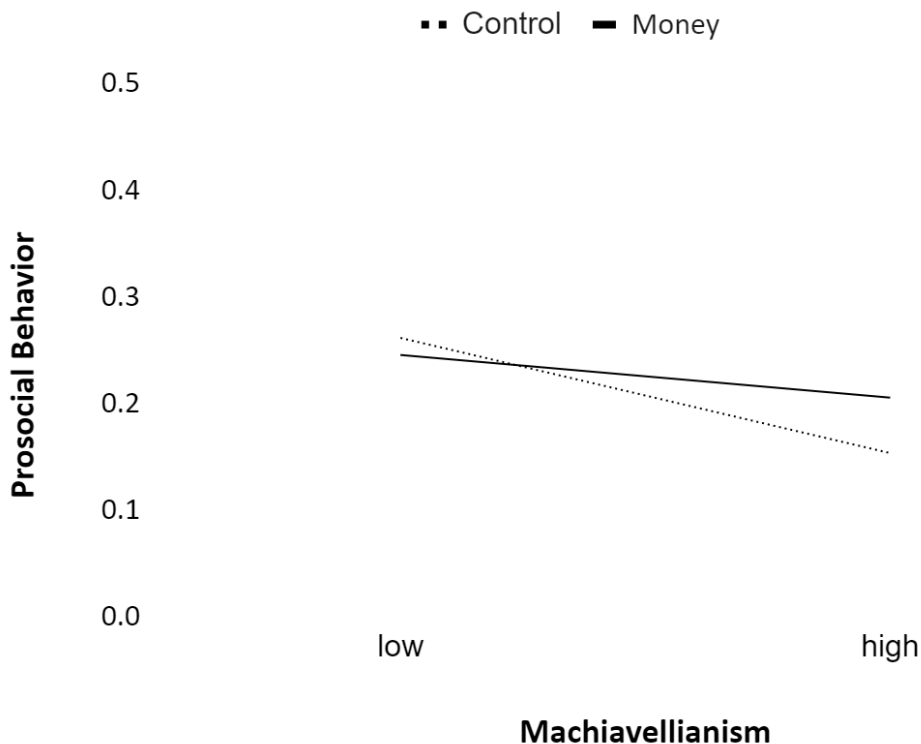
**Table 5**  
*Regression analysis of Machiavellianism and Monetary incentive on Prosocial Behavior*

Model		<i>B</i>	<i>Std. Error</i>	<i>t</i>	<i>R</i> <sup>2</sup> change
1	(Constant)	.16**	0.04	3.99	.06
	Age	.00	0.00	.54	
	SES	.01	0.01	1.68	
	Machiavellianism	-.05**	0.02	-3.02	
	Monetary Condition	.02	0.02	.1.03	
	Machiavellianism* Monetary Condition	.04	0.02	1.59	

*Note.* Dependent variable: Prosocial Behavior, \* $p < 0.05$ , \*\* $p < 0.01$

**Figure 6**

*Prosocial behavior as a function of Machiavellianism and Money Condition*



*Note.* Prosocial behavior as a function of Machiavellianism and Money Condition. Simple slopes are plotted at  $M \pm 1 SD$ . The horizontal axis is the amount of money donated in £.

## Discussion

This present study built on the findings of Bereczkei et al. (2010) and Leńczuk (2021) and examined the role of incentives for increasing prosocial behavior in Machiavellians in both public and anonymous settings. Hence, the following research was examined: “*To what extent can status and money incentives increase prosocial behavior in Machiavellians?*”.

### **Machiavellianism and status incentives**

First, we tried to motivate people to be prosocial with status incentives and compared this to a control condition of anonymous helping without any incentives. For the first hypothesis it was expected that status incentives would specifically appeal to people scoring high on Machiavellianism because these status incentives enhance publicity and meet the need for social

recognition Machiavellians have (Berezkei et al., 2010; Kückelhaus et al., 2020). Contrary to the expectations, status incentives in this study did not increase prosocial behavior for any of the participants. Also, no support was found that people scoring high on Machiavellianism responded differently to the status incentives than people scoring low on Machiavellianism.

This unexpected result could be explained by the manipulation of the status incentive. The status incentive was manipulated as a thank you note that participants would receive if they donated to the ALS Association. This thank you note could be shown to friends and family to gain reputation and status for their prosocial behavior. In this way, it was hypothesized that this condition would be public, which according to the findings of Berezkei et al. (2010) would especially appeal to Machiavellians to increase their prosocial behavior. However, as shown in the preliminary analysis, no significant difference was found in prosocial behavior between the different conditions. Previous research that examined status incentives conducted their study in an offline setting and announced the winner of the status incentive in front of an audience, in that way need for status was immediately met and this increased the individuals' performance (Bhattacharya & Dugar, 2012). Since this study was conducted online, there was no audience present when the status incentives were awarded, which might have limited the publicity of our condition and therefore did not increase the prosocial behavior among the participants. Besides, Besley and Ghatak's (2008) article mentions that another important feature of status incentives is that the incentive must be scarce and requires a well-defined rule explaining when someone deserves the reward. However, in this study all participants that donated to the ALS Association were offered a thank you note regardless of the amount donated. Hence, it could be argued that this status incentive was not scarce after all, since we did not differentiate between how much each participant had donated.

### **Machiavellianism and monetary incentives**

Second, monetary incentives were used to try to increase prosocial behavior among the participants, and we compared this to the control condition. The second hypothesis predicted that monetary incentives would especially appeal to Machiavellians, as they are motivated by short-term gain, and therefore prioritize situations where their reputation is not threatened and there is an opportunity to receive rewards (Birkás et al., 2015). However, the results in this study did not show an increase in prosocial behavior for the participants compared to the control condition when monetary incentives were offered. Additionally, the results did not significantly support the hypothesis that people scoring high on Machiavellianism responded differently to the monetary incentives than people scoring low on Machiavellianism.

Nevertheless, this study found a descriptive difference for Machiavellianism in prosocial behavior in the monetary condition compared to the control condition (see Figure 6). More specifically, it showed that Machiavellians were motivated to some extent to engage in prosocial behavior when given a monetary incentive in return, but this effect was not statistically significant. This suggests that the monetary incentive was probably not large enough to persuade Machiavellians to engage in prosocial behavior, which is consistent with the findings of the preliminary analysis that showed that the monetary incentive made no difference in participants' prosocial behavior compared to the control condition. This could be explained by the fact that this monetary incentive was manipulated as a gift card that could only be won by one person in the lottery. Consequently, this might have led to risk aversion among the participants because there was a low possibility of winning the gift card (Lane & Cherek, 2000). According to Lane and Cherek (2000) when there is a low chance of winning, people are more risk-averse and are less motivated to participate than when there is a high chance of winning.

In addition, Birkás and colleagues (2015) argued that Machiavellians are motivated by situations with low threats to their reputation and potential for gaining high rewards. However,

a lottery for winning a £20,- gift card is unlikely to be seen as a high reward for the Machiavellians. One participant even contacted us and asked why we did not offer a more convincing monetary incentive to motivate people, especially Machiavellians, to donate money. This participant could see how many people were participating in this study and calculated the probability of winning the lottery, which he felt was not convincing. Therefore, it is suggested that future research further investigate the role of monetary incentives on the relationship between Machiavellianism and prosocial behavior. More specifically, future research should look at different levels of monetary incentives to see if the amount of money and the probability of winning makes a difference in motivating the Machiavellians to engage in prosocial behavior.

Additionally, in all our analyses we found that Machiavellianism was a negative predictor of prosocial behavior, independent of the condition. This again suggests that the public condition might not have been perceived as such by the participants, as also in this condition we found Machiavellians not engaging in prosocial behavior which is consistent with the findings of Leńczuk (2021) who showed that there is a negative correlation between anonymous helping and Machiavellianism. Therefore, this study confirmed the findings of Leńczuk (2021) that Machiavellians will not engage in prosocial behavior when there is no audience present. This is because, in those situations, Machiavellians' reputation is not at risk, and they are acting purely out of self-interest (McHoskey, 1999). This again emphasizes the need for future research on possible incentives for Machiavellians to motivate them to prosocial behavior, as Machiavellians do not naturally engage in prosocial behavior and thus need incentives to motivate them.

In this study, we tried to motivate people to donate money to the ALS Association, because it is of practical importance that more people engage in prosocial behavior. This is because society as a whole benefits when more people participate in prosocial actions, such as

through donations to charities (Gabriel, 2017). And since Machiavellians (Leńczuk, 2021; McHoskey, 1999) and the other dark triad personalities (Leńczuk, 2021; White, 2014) generally do not engage in prosocial behavior, they represent a relevant population, as most growth in prosocial behavior can be realized in this group.

However, for organizations, such as the ALS Association, to engage the dark triad personalities in prosocial behavior, they must first force this population to engage in prosocial behavior before rewarding them for it. In this way, dark triad personalities cannot pretend to engage in prosocial behavior to receive social recognition or monetary reward without actually performing the prosocial behavior as in the article by Konrath et al. (2016). This is what we did in our study, which makes an important contribution to the current dark triad literature. However, we learned from Bereczkei et al. (2010), Konrath et al. (2016), and White (2014) that to engage the dark triad personalities in prosocial behavior, the settings must be made public. In this study, however, we did not succeed in making the settings public. In practice, this means that if charities want to raise money, they must ensure that the setting of the donation is not completely anonymous and that they force the dark triad personalities to engage in prosocial behavior before rewarding them for it. It is important that future research collaborate with charities, as this allows for a more realistic setting for prosocial behavior. Furthermore, partnering with charities also has an impact on the social well-being of society, as money is actually raised and spent on social initiatives that benefit society as a whole.

### **Limitations and future research**

Some limitations must be considered when interpreting the results of this study. Since this study is part of a master thesis, there was only limited time and budget available to manipulate prosocial behavior in specific settings and to collect data. Because this research was conducted during Covid-19, the study had to be conducted online. Therefore, the public

condition turned out to be not so public, because no one could see the prosocial behavior of the participants. Even though we tried to make the condition public by sending thank you notes as a way for people to get social recognition from their friends and family, the results showed that did not have the intended effect. For this reason, it is recommended that future research attempt to examine the role of status incentives in an offline setting to increase the publicity of this setting, which was also used in the research by Bhattacharya and Dugar (2012) who examined the role of status incentives on performance of individuals. Due to the budgetary constraints, monetary incentives were also likely not large enough for Machiavellians to engage in prosocial behavior. Therefore, as mentioned earlier, future research should look at the influence of different levels of monetary incentives on the relationship between Machiavellianism and prosocial behavior, to see if the amount of money offered makes a significant difference in the prosocial behavior of the Machiavellians.

## **Conclusion**

In conclusion, this study found no support for the role of status and monetary incentives in increasing prosocial behavior among participants. Additionally, the results did not show that participants who scored high on Machiavellianism responded differently to the incentives compared to participants who scored low on Machiavellianism. For the monetary incentives, this study did find a descriptive difference for the Machiavellians in prosocial behavior, but this finding was not statistically significant. This suggests that more research is needed to examine the role of monetary incentives to see if Machiavellians can be motivated by different levels of money to engage in prosocial behavior. Additionally, this study found support for the findings of Leńczuk (2021), as the results showed that Machiavellianism was a negative predictor of prosocial behavior. This suggests that future research should make the conditions more public, as this motivates the dark triad personalities to engage in prosocial behavior (Bereczkei et al., 2010; Konrath et al., 2016; White, 2014). Nevertheless, this study contributed to the dark triad

literature by first forcing the Machiavellians into prosocial behavior before rewarding them for it. In that way, the Machiavellians could not pretend their prosocial behavior to gain social recognition without performing the prosocial act. Hence, it is recommended that future research collaborate with charities, in which they use this insight on how to manipulate prosocial behavior because in that way society benefits from the actual money raised by the charities.

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