

MOTHER TERESA DOESN'T HELP HERE: LACK OF MORAL PRIMING EFFECTS ON MALINGERED SYMPTOM REPORTS AND WHAT WE CAN LEARN FROM IT

Harald Merckelbach, & Jorg Collaris*
Maastricht University, The Netherlands

The issue of how to reduce malingered symptom reports is an important one. We explored whether exposing people to a moral prime would reduce their tendency to engage in malingering. Using an instructed malingering paradigm ($N = 90$), half of the participants were given the option to malingere symptoms, whereas the other half was asked to respond honestly. Within each group, some participants received no further instructions; others were warned that malingering might be detected, while still others were given a prime that consisted of questions about moral topics (i.e., the Mother Teresa Questionnaire). Next, a symptoms scale, and two dedicated malingere tests were administered. Malingere instructions generated heightened scores on the symptoms scale, and deviant performance on the malingere instruments. Moral priming, however, did not reduce malingering tendencies. We present follow-up data from a clinical context, which suggest that it might be worth pursuing moral prime effects on malingering outside the lab.

The exaggeration or fabrication of symptoms by patients – commonly referred to as malingering – is a bit of a taboo subject. Clinicians generally don't feel comfortable talking about it. As one author pointed out, malingering is "like debating pornography; most don't feel good about it, some see it as a necessary evil, while others wish it would go away" (Hartman, 2002, p. 709). Indeed, for a long time, main stream psychiatry and psychology ignored malingering and one way to accomplish this was to simply follow the puritanical approach: to conceptualise malingering as a rare condition that reflects latent psychopathology (Kuperman, 2006). Over the past few years, perspectives have changed profoundly. What has become increasingly clear is that malingered symptom reports are a form of rational behaviour governed by cost-benefit analyses. Individuals who engage in malingering are not mad, but rather try to secure benefits – e.g., psychostimulant medication, compensation money, academic privileges, positive legal outcomes – by presenting as patients (Coppola, Bewley, Harrison, & Shapiro, 2007). Indeed, preva-

* Harald Merckelbach, PhD and Jorg Collaris, master student psychology, Forensic Psychology Section, Maastricht University, The Netherlands.

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Correspondence concerning this article should be addressed to Harald Merckelbach, Forensic Psychology Section, Maastricht University, PO Box 616, 6200 MD, The Netherlands. E-mail: H.Merckelbach@maastrichtuniversity.nl

lence studies show that in the forensic context, and even in psychiatric outpatient facilities, it is not at all unusual for patients to exaggerate their symptoms. Thus, Alwes, Clark, Berry, and Granacher (2008) reported for their forensic sample that the prevalence rate of symptom overendorsement was in the 8-24% range. Other studies indicated that rates might be even higher in patients who seek financial compensation for work-related or accident-related complaints (e.g., burnout and post-concussive complaints; Mittenberg, Patton, Canyock, & Condit, 2002). A recent study conducted by our own group focused on Dutch psychiatric outpatients and found prevalence estimates for symptom exaggeration to be on the order of 30% (Dandachi-FitzGerald, Ponds, Peters, & Merckelbach, 2011).

Why is malingering a problem? Many answers can be formulated, but the one that is crucial for research and clinical psychologists hinges on the notion that malingering may distort predictor-criterion relationships. For example, researchers have found that head-injured individuals with normal and abnormal MRI brain scans do *not* differ with regard to their verbal memory performance, *unless* those in the normal scan group who exaggerate their symptoms are removed from the data set. When this is done, the expected brain-behaviour relationship shows up, namely that abnormal scans are related to worse memory performance (see for further examples Rohling, Larrabee, Greiffenstein, Ben-Porath, Lees-Haley, Green et al., 2011).

Clearly, then, research and clinical psychologists have an interest in reducing the attractiveness of malingered symptom reports when they administer tests to their participants or clients. This is particularly important when patient samples are involved that are known to have raised prevalences of malingering (e.g., Post Traumatic Stress Disorder; Rosen, 2006). With this in mind, it is tempting to speculate about pre-testing techniques that reduce malingering tendencies. From the extant literature, we know that simply warning potential malingerers (e.g., “malingering may be detected ... it will lead to prosecution for fraud”) will not work (e.g., Sullivan & Richer, 2002). An alternative approach is suggested by the cognitive dissonance framework (e.g., Bayer, 1985). Briefly, the idea is that malingerers act on the basis of a cost-benefit analysis, in which benefits might be medication, compensation money, or a positive legal outcome, whereas costs involve the dissonance that malingerers experience due to the inconsistency between their malingered symptom reports and their self-image of being honest and healthy. By this view, one might reduce the potential for malingering if one were to be able to make these inconsistencies salient beforehand.

How can this be accomplished? Priming with moral codes is a technique that immediately comes to mind when one considers possibilities for making inconsistencies salient. There is an extensive literature on primes and their behavioural effects. Basically, priming capitalises on memory. It is through

implicit memory that priming modulates subsequent behaviour (see for a technical review Bargh & Chartrand, 2000). This is true, for example, for early spatial processing (e.g., Germeyns & d'Ydewalle, 2001), but also for social behaviour. A fine example in the latter category is cheating. When participants are given the opportunity to cheat, many of them will do so if they can earn money with this, but the magnitude of dishonesty is relatively modest. Even so, dishonesty levels drop to a considerable degree when participants are first primed with moral standards, which might involve having them list the Ten Commandments or having them read and sign an honour code (Mazar, Amir, & Ariely, 2008).

The current study explored whether subtle priming may reduce malingering tendencies. Following the cognitive dissonance approach, we expected that when circumstances provoke malingered symptom reports, people previously primed with moral issues will scale down their symptom exaggeration compared with those who have not been pre-tested with a moral prime. The rationale behind this prediction is that the former group anticipates an aversive state of dissonance when they would malinger symptoms. Finding such a pattern would give research psychologists and clinical psychologists a clue how to mitigate or even eliminate malingering tendencies in participants or clients who undergo testing.

Malingering often involves two dimensions: exaggeration (i.e., overendorsement) of psychological symptoms and underperformance on simple cognitive tasks so as to suggest impairment (Dandachi-FitzGerald et al., 2011). As we have argued elsewhere, a limitation of many underperformance tests is that they exclusively address memory performance, although it is not at all evident that most malingerers have a preference for feigning memory impairment (Dandachi-FitzGerald & Merckelbach, 2012). A subsidiary aim of the current study was therefore to explore the merits of the vocabulary and abstraction subtests developed by Schretlen, Wilkins, van Gorp, and Bobholz (1992). These simple tests are based on the forced-choice principle and intend to tap into attempts to malinger a general cognitive deficit.

Pilot study

To prime participants with moral standards, we developed the so-called 10-item *Mother Teresa Questionnaire* (Appendix 1). Its items aim to seduce respondents to stipulate that they are sensitive to moral issues (e.g., "I'm in favour of the rich countries financially supporting people who are threatened by starvation, for example, in Africa"). Response options are "Yes", "I don't know", and "No". In a pilot study, we tested whether the Mother Teresa scale does, indeed, prime moral categories. We gave 40 undergraduates items like "I, more/less often than my friends, feign illness when I want to evade an

appointment.” Half of them were first primed with the Mother Teresa Questionnaire; the other half did not receive this prime. We found that undergraduates primed with the Mother Teresa Questionnaire subsequently more often tended to endorse honest response options than controls, although the group differences were far from impressive. For example, in the prime condition, 13 out of 20 participants said that compared with their peers, they were less likely to lie that they were sick when they wanted to avoid an appointment against 8 out of 20 control participants, a difference that is borderline significant (Fisher’s exact $p = .10$). We refrained from designing a more radical version of the Mother Teresa Questionnaire because the literature on primes and implicit memory stresses that when primes become too obvious, carry-over effects to subsequent behaviour dissipate or may even take a boomerang route (e.g., Bargh & Chartrand, 2000).

Method

Participants

In total, 90 undergraduate students (60 women; mean age = 23.2 years; range: 18-56 years) volunteered to participate in the experiment in return for course credits. The study was approved by the standing ethical committee of the Faculty of Psychology and Neuroscience, Maastricht University.

Measures

All participants completed the following three measures in a fixed order. First, participants filled in a Dutch research version of the *Structured Inventory of Malingered Symptomatology* (SIMS; Merckelbach & Smith, 2003). The SIMS is a 75 true-false self-report instrument designed to screen for the exaggeration of neurocognitive and psychiatric complaints (Widows & Smith, 2005). Its items allude to atypical and rare symptoms and experiences. The SIMS contains five subscales, each with 15 items, which address commonly feigned conditions: amnesia, neurological impairment, psychosis, affective disorders, and low intelligence. After recoding some items, yes-answers are summed to obtain a total score (range: 0-75), with higher scores indicating stronger symptom overendorsement. Previous studies have recommended a cut-off of 16 to identify possible malingering (Merckelbach & Smith, 2003).

Next, participants completed a Symptoms List (SL) containing 45 items taken from the Dutch version of the *Symptom Checklist-90* (SCL-90; Derogatis, Lipman, & Covi, 1973). This widely used scale addresses a broad range of psychological symptoms (e.g., depression, anxiety, and fatigue). We did

not use the complete SCL-90 scale because its length (i.e., 90 items) may obscure priming effects. Participants indicated on a 5-point scale (anchors: 0 = *not at all*; 4 = *all the time*) to what extent they experienced each symptom in the past week. In the current study, responses were summed, yielding a total score ranging from 0 to 180, with higher scores indicating higher symptom levels.

Finally, participants completed a Dutch translation of the vocabulary and abstraction subtests of the *Malingering Scale* (MS) developed by Schretlen et al. (1992). The 26 items of the vocabulary subtest present target words and for each target, the participant has to choose from two alternative words the one that has a similar meaning as the target word. The 20 items of the abstraction subtest require the participant to complete sequences in a logical way by selecting the correct alternative from two options. Vocabulary and abstraction items are simple enough that even persons with low IQ levels can recognise the correct alternative. The subtests are based on the binomial principle of forced-choice testing. The correct responses on both subtests are totalised (range: 0-46) and the cut-off is 18: scoring 18 or less items correct would indicate below-chance level ($p < .05$) performance. Sample items of the Dutch version are given in Appendix 2.^[1] Note that the MS subtests tap into underperformance, whereas the SIMS taps into overendorsement of symptoms.

Procedure

All participants were first provided with a case vignette that we have employed in previous studies (e.g., Merckelbach, Smeets, & Jelacic, 2009; see also Dandachi-FitzGerald & Merckelbach, 2012). The vignette is about an employee who for more than 10 years has been very loyal to his organisation, with work weeks often exceeding 50 hours so as to support his colleagues. One day, a new manager arrives and already during their very first meeting, the new manager and the employee have a serious argument. The manager not only has an arrogant attitude, he also announces that in the near future, the employee has to look out for a new job, outside the organisation. The next day, the employee decides to report him/herself ill. After a couple of days, the employee is visited by a medical doctor from the workers insurance company. The doctor wants to determine the medical status of the employee.

After having read the case vignette, half of the participants (control condition) were asked to indicate whether the case represented a social, a legal or a medical problem. The other half (malingering condition) was instructed to imagine that they were the employee and that they would be examined by a medical doctor. They were told to consider the option of malingering symp-

1. The complete Dutch version is available on request from Harald Merckelbach.

toms and that when they would choose this option, they should do it in a convincing way, because "the more convincing you are, the more likely it is that you would be awarded a financial settlement." However, participants in the malingering condition were also informed that they had the option not to malingering symptoms when they judged this to be a morally dubious strategy ("you don't have to do it").

Within both the control and malingering condition, there were three groups. The no-warning groups completed the SIMS, the SL, and the MS subtests without further instructions. The warning groups received an additional instruction that some tests may be able to detect malingering. Following this, they completed the three measures. The priming groups first received the Mother Teresa Questionnaire and then were administered the three measures. Each group contained 15 participants (10 women; 5 men).

Results

Figure 1 shows the mean scores of the 6 groups on SL, SIMS, and MS subtests. As can be seen, malingering instructions raised scores on the SL and the SIMS, while they depressed performance on the MS subtests. However, priming did not modulate this pattern. That is to say, priming did not suppress malingering tendencies. This visual impression was confirmed by 2 (Condition: control *versus* malingering condition) \times 3 (Priming: no instruction *versus* warning *versus* priming) between-subjects Analyses of Variance (ANOVA's) performed on SL, SIMS, and MS subtests. With regard to SL, the main effect of malingering reached significance ($F(1, 84) = 169.5, p < .01$), but the main effect of priming and the interaction effect with priming remained non-significant (both F 's(2, 84) < 1.0). A similar pattern was evident for the SIMS: the main effect of malingering was significant ($F(1, 84) = 111.9, p < .01$), but the main and interaction effects of priming did not attain significance (both F 's(2, 84) < 1.0). It was also evident for the MS subtests, because here too, the significant effect of malingering ($F(1, 84) = 21.1, p < .01$) was accompanied by non-significant effects of priming (both F 's(2, 84) < 1.0).

We looked more closely into the MS subtests and their ability to detect malingering. Overall, the Pearson product-moment correlation between the SIMS and the MS subtests was $r = -.69$ ($p < .01$), indicating that overendorsement of symptoms was associated with poor performance on the MS subtests. Of the 45 instructed malingerers, 34 (sensitivity = .76) scored above the SIMS cut-off of 16, while none of honest controls scored above this cut-off (specificity = 1.0). For the MS subtests a considerable lower sensitivity was obtained. That is, of the 45 malingerers, only 2 performed below chance level (sensitivity = .04), while none of the honest controls scored below this level

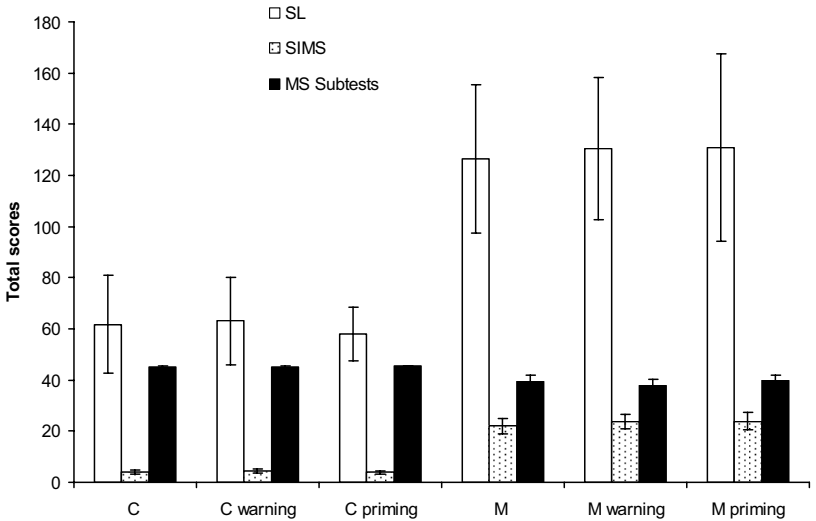


Figure 1

Mean scores of participants in the control condition (C; left) and in the malingering condition (M; right) on the Symptoms List (SL; range: 0-180), the Structured Inventory of Malingered Symptomatology (SIMS; Range: 0-75), and the Malingering Scale (MS) Subtests vocabulary and abstraction (range: 0-46). Within each condition, there were three groups (each n = 15): those with no further instructions, those with a warning, and those with a prime

(specificity = 1.0). The two positive cases identified by the MS subtests were also detected by the SIMS, suggesting that the MS subtests have no incremental value.

Figure 2 (p. 278) shows the Receiver Operating Characteristics (ROC) curves for SIMS and MS subsets. As can be seen, the SIMS has more optimal trade-offs between sensitivity (true positives) and false positives, which is also reflected in the areas under the curve (AUCs) for SIMS and MS subtests: .96 and .28, respectively. Following common standards, the AUC for the SIMS is excellent, whereas that for the MS subtests is poor.

Follow-up

To explore the effects of priming in a clinical environment, we conducted a pilot study, in which 20 psychiatric outpatients (7 women) of Mondriaan Clinics at Maastricht, The Netherlands, participated. The mean age of the patients was 33.7 years (range: 20-61 years). Patients underwent neuropsychological evaluation as all had been referred for a possible diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). As part of routine neuro-

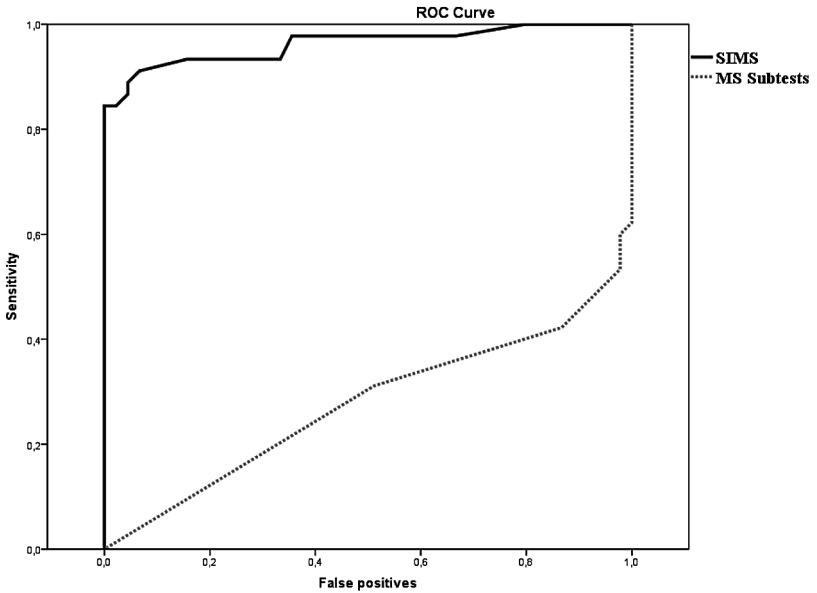


Figure 2

ROC curves for Structured Inventory of Malingered Symptomatology (SIMS) and the Malinge Scale (MS) Subtests vocabulary and abstraction

psychological testing, they completed the SIMS and the SCL-90 (*cf supra*). Half of the patients first filled in the Mother Teresa Questionnaire (*cf supra*) and then were administered the SIMS and the SCL-90. The other half was not pre-tested with the Mother Teresa Questionnaire. Paired sample t-tests indicated that the prime group had somewhat lower SIMS scores than the no-prime group, means being 9.0 ($SD = 6.06$) and 12.7 ($SD = 6.73$), respectively, $t(18) = 1.25, p = .11$ (one-tailed). In the prime group, one patient scored above the SIMS cut-off, whereas in the no-prime group four patients had SIMS scores above the cut-off (Fisher's exact $p = .15$, one-tailed). Prime and no-prime groups had similar average scores on the SCL-90 items, means being 1.13 ($SD = 0.73$) and 1.26 ($SD = 0.52$), respectively, $t(18) < 1.0$.

Discussion

The take home message of this study is a disappointing one: priming does not seem to suppress malingering tendencies. Of course, experiments with spectacular significances are nicer to write up and more fun to read. The reason for nevertheless reporting these null results is that they provide food for thought. There are three considerations that we would like to bring up. First,

one could argue that with 15 participants in each condition, our lab study was underpowered and therefore unable to detect the suppression effects of moral primes on malingering. We don't consider this to be a valid counterargument. Previous studies have reported impressive effects of moral priming on cheating behaviour (e.g., Mazar et al., 2008). For example, Randolph-Seng and Nielsen (2007) had their participants complete the circle test in which numbers have to be written down in circles while the eyes are closed. Unrealistic good performance on this test points in the direction of cheating (i.e., eyes open). As in the current study, Randolph-Seng and Nielsen (2007) had three groups of undergraduates with $n = 15$ each. The three groups were primed with religious words (e.g., cross, faith, prayer), sports words or neutral words. In the sports and neutral prime groups, 44-50% of the participants met the criteria for cheating. In contrast, none of the participants in the religious prime group were classified as cheaters, leading the authors to conclude that "participants primed with religious representations (religious words) cheated significantly less on a subsequent task" (Randolph-Seng & Nielsen, 2007, p. 303). With such spectacular effects in mind, our lab study explored whether priming can be employed to suppress malingering in the context of individuals who undergo standard tests. The interim conclusion seems to be that such type of priming doesn't work. However, this conclusion needs to be qualified. Our clinical pilot data suggest that priming might have a mitigating effect on symptom exaggeration. Although this effect was modest at best, it is sufficiently encouraging to warrant follow-up research in the clinical domain.

A second consideration pertains to the intensity of the primes employed in the present studies. One might reason that the Mother Teresa test consists of self-evident statements (see appendix 1). Therefore, its potential to make moral sentiments salient so as to suppress malingering might be restricted from the outset. Our pilot data do, indeed, suggest that the Mother Teresa Questionnaire is only modestly effective in activating moral categories. So, we acknowledge that the intensity of the moral prime is an important issue that deserves further study. As mentioned before, previous priming studies have shown that when primes become too obvious, they no longer fly under the radar of explicit memory and might lose their power to affect subsequent behaviour (Bargh & Chartrand, 2000). There might, however, be an additional complication, which is that intense and explicit moral primes may perhaps encourage supernormality (Cima, Merckelbach, Hollnack, Butt, Kremer, Schellbach-Matties et al., 2003). Supernormality, or faking good, is another type of response bias that may distort brain-behaviour relationships. It refers to the tendency to deny common symptoms that most people experience from time to time. Thus, our point is that the more obvious a moral prime is, the higher the risk of subsequent fake good tendencies. Future studies may

shed light on this by including an array of subtle and intense moral primes while measuring both malinger and fake good tendencies.

A third consideration has to do with the instructed malinger paradigm that we employed in the current study. Authors like Rogers, Harrell, and Liff (1993) have criticised this paradigm, arguing that its generalizability to the clinical context is limited. These authors referred to the “simulation-malinger paradox which occurs when we ask subjects to comply with directions to fake in order to study those who fake when asked to comply” (Rogers et al., 1993, p. 257). This critique is legitimate. However, the problem here is not that the malingered symptom reports obtained with this paradigm fail to reach the symptom levels typically found in the clinical context. For example, the current lab study found mean Symptoms List scores for instructed malingerers and controls of 1.87 ($SD = 0.68$) and 0.36 ($SD = 0.35$), respectively. These come close to the scores that have been obtained with scales that overlap with our Symptoms List and rely on the same response format (i.e., the 5-point Likert scale). Thus, de Beurs and Zitman (2006) reported with their 53-items Brief Symptom Inventory averages of 1.23 ($SD = 0.72$) and 0.42 ($SD = 0.40$) for clinical and normal population samples, respectively. Accordingly, there is no problem in approaching clinical symptom levels when using an instructed malinger paradigm. There is, however, a more fundamental problem inherent to this paradigm, which has to do with the fact that participants who are instructed to mangle do not have to feel responsible for their behaviour. And yet, we know from the literature that dissonance due to attitude-discrepant behaviour only occurs to the extent that one experiences a sense of responsibility for ones behaviour (Bayer, 1985). It may well be the case that our attempt to explore the suppressing effects of priming was futile precisely because the instructed malinger paradigm evoked too little dissonance. The fact that our clinical sample did show a suppressing effect of Mother Teresa priming on SIMS scores – albeit it a modest one – underlines this point. Our failure to document priming effects in the lab has therefore an important methodological implication: the challenge for future studies is to find a paradigm with which one can provoke malingered symptom reports in such way that participants feel responsible. Again, our clinical pilot data suggest that the idea is worth pursuing and might have practical relevance for clinicians who want to control malinger tendencies in their patients.

A subsidiary aim of the current study was to evaluate the merits of the MS subtests as screening instruments for underperformance. The MS subtests appeared to have low sensitivity and had no incremental value over and above the SIMS. Our finding that few instructed malingerers performed below chance level is in keeping with other studies. That is, previous research observed below-chance response patterns only in a limited number of malingerers, probably because this type of response bias merely occurs when

symptom reporting is grossly distorted (see for a review Merten & Merckelbach, 2012). Whereas the MS subtests may add little to the diagnostic screening of malingering, the point remains that malingering involves two dimensions that do not necessarily covary in a perfect way: overendorsement of symptoms (as indexed by e.g., the SIMS) and underperformance. To date, the main targets of tests designed to detect underperformance have been recall and/or recognition during simple memory tasks, with little attention given to malingering in other cognitive domains (e.g., attention, motor behaviour, abstraction, language). Elsewhere, we have argued that this emphasis on malingered memory deficits is problematic because not all malingerers have a preference for memory impairments (Dandachi-FitzGerald & Merckelbach, 2012). Thus, there is a need for broad screening instruments tapping into malingered cognitive deficits. The MS subtests appear not to fulfil this need, and research exploring alternative tools is clearly warranted. We hasten to add that the MS subtests might have diagnostic relevance: not so much as a broad screening instrument, but in those situations in which blatant forms of malingering are to be expected (e.g., forensic clinics; see Schretlen, Neal, & Lesikar, 2000).

In sum, then, unlike research that reported spectacular suppression effects of moral primes on cheating behaviour, our instructed malingering study found no evidence that priming with moral notions inhibits malingering tendencies. Even so, there are enough reasons to further test the idea in a clinical context before it is buried as a failed hypothesis.

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Appendix 1

The Mother Teresa Questionnaire (Dutch version)

1. Ik ben er een voorstander van als mensen die in hongersnood verkeren – bijvoorbeeld in Afrika – financiële steun krijgen vanuit de rijkere landen.
2. Als ik op weg zou zijn naar een belangrijke afspraak en een toevallige voorbijganger zou worden getroffen door een beroerte, dan zou ik stil blijven staan om een ambulance te bellen.
3. Als ik zou moeten kiezen tussen een leuk avondje uit met een goede vriend en een bezoek afleggen bij een eenzaam en ziek familielid, dan zou ik toch kiezen voor het familielid.
4. Ik vind het een goede zaak dat slachtoffers van ernstige geweldsmisdrijven in de rechtszaal de gelegenheid krijgen om aan de dader uit te leggen wat voor hen de gevolgen waren van het misdrijf.
5. Ook al kost het de maatschappij geld, ik vind dat gehandicapte kinderen recht hebben op goede opvang- en leerfaciliteiten.
6. Ik vind het goed als mijn land nationale inzamelacties organiseert voor de slachtoffers van grote rampen, ook al snap ik dat soms wat geld aan de strijdstok blijft hangen.
7. Als ik arts zou zijn en een fout zou maken bij een patiënt, dan zou ik dat eerlijk toegeven en er niet om heen gaan draaien.
8. Ik vind het ongepast als mensen een knoop in de collectebus gooien bij vrijwilligers van de Kankerstichting die langs de deuren komen collecteren.
9. Als een bejaarde man die op weg is naar een begrafenis mij zou aanrijden en ik zou er geen schade aan overhouden, dan zou ik zeker niet tegen zijn verzekering gaan zeggen dat ik *wel* schade heb.
10. Ik vind dat mensen die met gevaar voor eigen leven een kind van de verdrinkingsdood redden in aanmerking moeten komen voor een Koninklijke Onderscheiding.

Appendix 2

Sample items from the Dutch version of the vocabulary and abstraction subtests of the Malingering Scale (Schretlen et al., 1992).

Vocabulaire

Aan de *linkerkant* van deze bladzijde ziet u 26 woorden. Omcirkel aan de *rechterkant* van de bladzijde steeds dat woord dat het beste past bij het woord links.

- | | | |
|--------------|-----------|----------|
| 1. Dubbeltje | Geld | Snoep |
| 2. Stap | Schrijven | Wandelen |
| 3. Straat | Weg | Pad |

Abstractie

Aan de *linkerkant* ziet u steeds een reeks. Omcirkel aan de *rechterkant* van de pagina steeds het antwoord dat het beste past bij de reeks.

- | | | |
|---------------------|----|----|
| 1. A B C - | D | R |
| 2. 1 2 3 4 - | 5 | 4 |
| 3. Scape Cape Ape - | Ca | Pe |