

A depletion approach to influence techniques

Analyzing the psychological effects of social influence techniques

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## Abstract

Social influence techniques are characterized by sequential requests: at least one initial request precedes a target request, which is of real interest to the persuader. Explanations for the effectiveness of the techniques point to the heuristically based decision making. But why do we use heuristics to make decisions in these short encounters? In three studies we investigated the role of mindlessness and ego-depletion in the process that leads consumers from initial requests to a target request. Based on Baumeister's statement that multiple decision moments lead to depletion (2002) we assume that the sequential requests of influence techniques result in depletion as well. Depletion, we assume, is a mediating link between influence techniques and compliance. We took personality characteristics into account to test if these moderate the effect of influence technique on compliance. Our studies did not straightforward support our assumptions, but they did confirm that ego-depletion plays a certain role in the process. The exact role is unclear, further research is needed to give more insight into this matter.

### A depletion approach to influence techniques:

#### Analyzing the psychological effects of social influence techniques

Most of us have at least once been in the position where we ended up buying products we did not need or signing petitions we afterwards considered not really matching our ideals. Have you ever wondered what made you behave the way you did? Have you ever thought about the effect the small, sales-like encounters have on you?

Many of those situations in which you act in a seemingly irrational way, are alike. They all start of with a first, initial, request and lead you to complying with a final, target, request, the real aim of the encounter. This process of leading you to compliance by making more than one sequential requests is the object of social influence techniques. Explanations for the working of the techniques ascribe their success to letting people use simple rules or heuristics to decide what to do. This article describes three studies that try to find out what it is that make people use these heuristics. We examined the role of ego-depletion, mindlessness and personality characteristics in the success of two social influence techniques. Three experiments were designed to test our assumptions. After describing the three studies we give alternative explanations and point to the need for further research.

#### *Social influence techniques*

Persuading consumers to buy products or getting passers-by to sign a petition or donate some money is not that easy: people seem to have little time, a restricted budget and lots of other things to do. There seems to be a never-ending conflict between salespeople on one side and consumers on the other side. It comes down to salespeople wanting to achieve a higher compliance rate with their requests and consumers wanting to avoid making decisions they afterwards regret. In the past years many techniques have been developed and investigated that seem to result in a higher compliance rate. Just to name a few, there is the that's-not-all technique, (Burger, 1986; Pollock, Smith, Knowles, & Bruce, 1998) the disrupt-

then-reframe technique (Davis, & Knowles, 1999; Fennis, Das, & Pruyn, 2004), and the lowball procedure, (Cialdini, Cacioppo, Bassett & Miller, 1978; Burger, & Cornelius, 2003). The techniques may differ in the procedures they follow, but what they have in common is that they all try to persuade consumers to do things that go a little further than their predetermined way of acting. That is: donating a bit more to charity, buying a product even though the price is above a prior set budget or spending time for charity although you already have a busy schedule. The other thing they have in common is their use of multiple sequential requests: one or more initial requests precede a final request, which is of real interest to the persuader. An example of this sequence of requests can be found in the foot-in-the-door (FITD) procedure (Bell, Cholerton, Fraczek, Rohlfs, & Smith, 1994; Pliner, Hart, Kohl, & Saari, 1974). Freedman and Fraser (1966) were the first to describe the technique: whether or not you make a small request prior to a larger, target request will have an effect on the compliance rate with that target request. In their research twice as many housewives would let a group of six men in their houses to rate their household products when they had answered just a couple of questions a few days before the target request was made, as compared to a group to which only the target request was made. Something happened that made them more open to complying with such a large request. A meta-analysis (Burger, 1999) showed there is a mixture of results on research concerning the foot in the door technique. Sometimes the use of the technique did not result in an effect, sometimes even a decline in compliance rate was found. Overall though, there seems to be an enhancing effect of the technique on compliance rate. A technique that resembles the working of the FITD technique is the continued questions procedure (CQP). Here, the influence target is exposed to various questions instead of just one, which lead him up to the target request. More than one initial request precede the target request.

A technique that works the other way around is the door-in-the-face technique (DITF; Tusing, & Dillard, 2000; Miller, 2002). The first research on the technique yielded an enormous increase in compliance rate as a result of the manipulation (Cialdini, Vincent, Lewis, Catalan, Wheeler, & Darby, 1975). An initial request precedes the target request, but this time the initial request is too large to comply with, so the person the request is made to, the influence target, declines. The influence practitioner, the one making the requests, therefore downsizes the request, to make it more attractive. In their research Cialdini et al. (1975) approached students and asked them if they were interested in a daylong trip to the zoo to accompany juvenile delinquents. The students in the DITF condition had received a larger request prior to this target request. They were asked if they were willing to spend two hours a week for the next two years to council juvenile delinquents. Adding this initial request resulted in a compliance rate of 50% as compared to 17% for the students who had only received the target request. The two techniques described here point out that it seems useful to not directly ask what you are really interested in, but instead circle around it before getting to the point.

#### *Accounts for the effectiveness of the techniques*

Cialdini and Guadagnol (2004) give an overview of the possible explanations for the sometimes striking effects of the techniques. They link various social principles (Cialdini & Goldstein, 2001) to the influence techniques. The success of the DITF-procedure is linked to the principle of reciprocity: when we get the idea that someone is doing us a favour, we are very keen on returning that favour to maintain an equal relationship. This is just what the DITF-technique does. The first request is too large to comply with, so declined by the target of influence. The impression is then made that the influence practitioner does the influence target a favour by downsizing the request. Consequently, he wants to return the favour, thus

complies with the request. Gouldner (1960) describes the norm of reciprocity as: 'you should give benefits to those who give you benefits'.

The FITD-technique and the CQP seem to build on the need to be consistent. We all like to behave in a consistent manner, be able to predict future behaviour on the basis of past behaviour. So when we find ourselves complying with one or more small request, we get the idea of 'being the kind of person who does that kind of things, who complies with requests made by strangers' (Cialdini et al., 1975). Therefore we also agree with the target request, which is usually a continuation of the initial request.

The other principles mentioned, are scarcity, liking, authority and social proof. Scarcity points to the tendency to have a stronger need for a particular product when that product is scarce. Authority addresses the phenomenon that when you have got the idea that the person making a request is an expert on the topic, you will be more likely to comply with the request. The principle of liking is about complying with a request sooner when you like the one making the request and social proof is about the tendency to do what other people do. When you get the idea you are the only one buying or signing something, you are less likely to actually do it. This principle is also termed: conformity to the norm.

The reader might have noticed the heuristic-like character of the principles. The explanations that have so far been given for the working of the techniques assume that we use simple rules to decide what to do instead of analyzing the information given during the encounter. Heuristics are indeed simple rules to make quick decisions (Baron & Byrne, 1997). We all use simple rules many times a day because we only have limited cognitive resources and thus reserve these for when it is really necessary. Social influence techniques seem to draw on the use of heuristics (Cialdini, 2001): the first request is responded to in a rational way, but in the continuation of the encounter we seem to base our decisions on prior set rules. Why is it that we fall back on the use of heuristics? Is it just our natural way of behaving,

because we do not see the need to actively process all the information given during a sales-like encounter? Or is it something in the techniques that makes us use simple rules to decide what to do?

A state of mind in which we are known to rely on categories that have already been formed and distinctions that have already been drawn in the past, is mindlessness.

Mindlessness can be characterized as 'a state of reduced attention' (Langer, 1989). There is some evidence that mindfulness and mindlessness play a role in the working of influence techniques. Pollock et al. (1998) showed through their studies on the that's-not-all technique that when people are set in a mindful mode, they are less susceptible to the technique. They stated that mindfulness results in a lower compliance rate. Research on the fear-then-relief technique (Dolinski, 2001) showed that people exposed to the technique complied more with a request and also acted in a mindless way. Participants in the FTR condition experienced fear by hearing a whistle when jaywalking. Shortly after they felt relief because they found out it was not a police whistle, so they did not have to worry about getting a ticket. When they were then asked to donate money to charity, they complied more than participants not exposed to the FTR technique. The technique thus was proven to be effective in inducing a higher compliance rate. On top of that participants in the FTR-condition accepted all sorts of reasons for donating money. For them it did not matter whether a legitimate reason was given, a placebo reason or no reason at all. This was not the case for the control condition. The blunt acceptance of all reasons, an indication of not paying attention to what has been actually said, fits a mindless way of processing information. Apparently the fear-then-relief experience made the participants give more money and ignore reasons for donating. Dolinski (2001) assumes mindlessness to play a significant role in the success of the fear-then-relief technique. Because of the reduced attention (mindlessness), participants easily relied on the simple rule (heuristic) that whenever a reason is given it is okay to comply.

Once again we wonder what is responsible for people falling in a mindless mode of behaving and thus using heuristics to decide what to do. We assume there is a role for ego-depletion (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Baumeister, 2002) in the process. Ego depletion is the exhaustion of an internal source (ego) of volition and will power, or self-control. We use this resource when we are trying to regulate our behaviour, thoughts and feelings. During the day there are many situations in which we have to use the resource to behave the way we would like to. Some people have to control themselves because of their diet, other people are busy trying not to smoke. When is it the hardest to succeed in monitoring your own behaviour? You will probably say: in the evening, when I'm taking a rest from a long day of work. That's right. Your resource of self-control is depleted. During the day you have used all the energy that was in there, so now there's no energy left to continue overwriting your desires. Research has shown that ego-depletion can also occur in a short period of time (Vohs and Heatherton, 2000). When people have to use their resource of will power on a certain point, they will experience trouble when shortly after they have to draw on the resource again. Apparently the resource needs time to be replenished. This pattern was found in a study conducted by Vohs and Heatherton (2000). They conducted research on dieting women. They were asked to watch a movie while either next to them or across the room a large bowl with snacks was situated. The large bowl is assumed to create a need for self-control, since the dieters don't want to give in to their desire to eat the fast food that is so near, as it works contrary to their diet. The proximity of the bowl reflected a high need for self-control (the bowl standing very close) or a low need for self-control (the bowl being further away). After watching the movie on a neutral topic, they were asked to solve some puzzles. Most of the puzzles were made unsolvable. The time spent on the task was the dependent measure. The assumption was that participants in the high temptation condition would exercise less effort on the puzzle task. They had already used energy to keep

themselves from eating the snacks while watching the movie. Therefore less energy was left to show persistence on the puzzle task. The results confirmed the assumption. The high temptation group spent an average of 17.0 minutes on the puzzle task ( $SD = 4.5$ ), as compared to 21.8 minutes ( $SD = 6.9$ ) in the low temptation group ( $t(26) = 2.04, p = .05$ ). Apparently having to control yourself to not-eat from the snacks that are almost whispering your name, draws on the same resource needed to persist in a difficult puzzle task.

Another example of the way ego-depletion comes into being, can be found in research by Muraven, Tice and Baumeister (1998). They used participants' performance on squeezing a handgrip as a depletion measure. Because you have to get yourself to squeeze the grip as long as possible and have to control your impulse to let go when it gets hard, this is assumed to be a measure of stamina. Self-control is a prominent part of the exercise. Prior to the task the participants had to watch a rather upsetting movie about animals that were in pain and even dying. Some of the participants had to regulate their emotions while watching the movie. They received one of two assignments: do not show emotions on your face while watching the movie, or increase the emotional responses to the movie. It appeared that these two groups of participants performed worse on the handgrip task as compared to participants who did not have to regulate their emotions ( $F(2, 57) = 3.34, p < .05$ ). Apparently also these two forms of self-control, not showing emotions and overwriting your impulse to let the handgrip go, make use of the same resource. Because the participants who were asked to regulate their emotions had already made use of the resource, they had less energy left to get themselves to endure in the handgrip task.

In sum, ego-depletion develops when one is to regulate ones thoughts or behaviour and this results in a less wealthy resource of self-control to draw on. Performance on tasks that require some degree of self-control is worse when shortly before one is to exercise self-control. We think that ego-depletion might well develop when people are exposed to the

sequential requests of a social influence technique. Baumeister (2002) has stated that the multiple decisions consumers are required to make when they are out shopping deplete the resource of self-control. Every decision draws on the source of will power. We assume this to be similar for the multiple requests from influence techniques. Because of the multiple requests depletion develops, people fall back into a mindless mode, start using heuristics and therefore comply more with the target request.

### *Overview of present research*

We decided to take a closer look at what happens when people are exposed to a social influence technique. We assume there is a mediating role for mindlessness as well as ego-depletion. Because of the multiple sequential requests, we expect social influence techniques to draw on the same resource that comes into action when you have to regulate yourself. This leads to depletion of the resource and people starting to make decisions mindlessly on the basis of heuristics. The alternative is that ego-depletion and mindlessness are just side effects of the techniques. That is, ego-depletion and mindlessness do develop when someone is exposed to an influence technique, but the two concepts do not mediate the relation between condition and compliance. We also tested if the two concepts play a similar role for different techniques.

The continued questions procedure was used as influence technique in experiments one and two. In designing the study we followed the guidelines made by Burger (1999). We made sure the initial request required high involvement from the participant by not asking a simple question that could be answered by either yes or no, but instead had to be answered by really thinking about something. Also, we made sure the target request was a logical continuation of the initial request. In the third study we applied the door-in-the-face technique, to find out if depletion also comes about with other techniques. This time we based our request on the research conducted by Cialdini et al. (1975) in which students were asked

to accompany juvenile delinquents. We approached students, and asked them to become a mentor for freshmen who find it difficult to start their lives in a new city.

In the third study we also took a closer look at personality differences. It's not unlikely that some are more susceptible to the techniques than others. High self-concept clarity, for example, seems to be a prerequisite for a success of the FITD-technique (Burger & Guadagno, 2003). Preference for consistency seems to have an enhancing effect on compliance when exposed to a FITD-technique (Guadagno, Demaine & Cialdini, 2002). Because the techniques seem to draw on decision rules, it seems logical that subjects who are more likely to respond in a heuristically way in general, are more susceptible. In our research: the ones with a higher personal norm of reciprocity (Perugini, Gallucci, Presaghi, & Ercolani, 2003) should more susceptible to the DITF-technique, which draws on this principle.

### Study 1

The first study was designed to test the assumption that social influence techniques do not only result in a higher compliance rate, but also in depletion, which is in fact a mediating link in the chain from condition to compliance. The continued questions procedure (CQP) was chosen as technique. The technique is characterized by asking multiple sequential questions, which build up to a large final (target) request.

We expect first a higher compliance rate in the CQP condition as compared to the control condition. Second we expect participants in the CQP condition to be more depleted than those in the control condition. Third we expect depletion to be the mediating link between condition and compliance. We tested our hypotheses in a between-subjects single-factor design (CQP-control), the target request being if the participant was willing to sign a petition to support a controversial proposition made by the Dutch government.

### *Method*

#### *Participants and procedure.*

Passers-by in the centre of a middle large town were approached by one of three female confederates and asked if they could spend a few minutes to answer some questions. A total of 60 persons participated in the study. There were 29 male and 31 female participants ( $M_{age} = 42.63$ ,  $SD_{age} = 15.45$ ). The participants were randomly assigned to one of the two conditions (CQP and control).

After expressing their willingness to participate the subjects in the CQP condition were asked the following: 'I'm from 'the Young Researchers Association' from the University of Twente. This summer we celebrate our first lustrum, therefore we're doing some studies. I have decided to do a research on the opinion of the Dutch on a current political issue. To be more specific, the research is about the proposal on vacation days from Mrs. Dekker, the secretary of housing and spatial planning. Are you familiar with the proposal?' If not, the confederate explained that according to Mrs. Dekker, all the Dutch should hand in a certain number of vacation days. 'Could you name a few reasons that might have led Mrs. Dekker to come up with this proposal?' If the participant couldn't come up with any reasons, he was asked to think again and really try to come up with some reasons. Answers were written down. As of this point the scripts for both conditions were similar, note that participants in the control condition had not been exposed to the previous.

The confederate stated: 'in the light of the lustrum of our association we designed a quiz. The quiz consists of multiple choice word tasks. The participant, who answers the most questions correctly within two minutes, wins a gift voucher with a value of 20 Euros. Would you like to participate?' If so, the quiz was handed to the participant and time was taken. Overall 50 participants made the quiz (83%). All of the subjects in the control group, 67% of the participants in the experimental group. Two minutes later, the participant was asked to stop and return the quiz. Then, the target request of signing a petition was made. Participants in the control condition were first asked if they were familiar with the proposal of Mrs.

Dekker. If not, they were explained that according to Mrs. Dekker, all the Dutch should hand in a certain number of vacation days. The target request then was: ‘we’re making an inventory on whether or not people support the proposal from Mrs. Dekker. Therefore I would like to ask you if you support the proposal, and if you do, would you sign this petition to show your support?’ The participants signing the petition were asked how many hours they considered reasonable to hand in.

### *Measures*

*Compliance.* Two measures of compliance were taken: signing the petition and if so, the number of hours mentioned reasonable to hand in. Signing the list was considered compliance, as was the number of days or hours named reasonable to hand in, more hours reflecting greater compliance.

*Depletion.* To test our assumption that ego-depletion develops when someone is exposed to a sequential request influence technique, we designed a quiz that consisted of various linguistic assignments. The assignments ranged from concrete tasks such as giving the meaning of certain sayings to more abstract anagrams (cf. Schmeichel, et al., 2003; for a full overview of the used measure see the Appendix). After being exposed to the influence technique we asked participants to fill in the quiz. Participants in the control group were also asked to fill it in, they had not been exposed to an influence technique. The number of correct answered questions and the number of attempts to fill in correct answers were used as indicators of depletion. We expected participants exposed to the influence technique to perform worse on the quiz compared to participants in the control condition.

### *Results and Discussion*

Overall 23,3% of the participants signed the petition to support the proposal on handing in some vacation days, 23,3% of the CQP condition and 23,3% of the control condition. Apparently, contrary to our assumption, the CQP did not result in a higher

compliance rate. The other compliance measure, number of days or hours named as reasonable to hand in, showed no effect from condition either. In the control condition a mean of 30.7 hours was mentioned, in the CQP condition 32.0 ( $F<1$ ). We further compared the control and CQP groups on the two depletion measures: number of attempted questions: and number of correct answered question. An analysis of variance showed significant differences between the two groups on both measures. For number of correct answered questions  $F(1, 58) = 5.78, p = .02$ , with  $M_{CQP} = 5.00, SD_{CQP} = .67$  and  $M_{control} = 7.31, SD_{control} = .69$ . For number of questions the participant filled in we found  $F(1, 58) = 7.02, p = .01$ , with  $M_{CQP} = 7.16, SD_{CQP} = .79$  and  $M_{control} = 10.17, SD_{control} = .82$ . Thus, participants who were exposed to continued questions scored higher on depletion than participants who had only been asked to participate in the quiz. This confirms our assumption that social influence techniques cause depletion. We also found an effect of the depletion measure 'number of attempted questions' on whether or not participants signed the petition. A logistic regression showed participants who filled in less questions to comply more with the target request (Wald(1)= 4.33,  $p = .03$ ). This means that participants indicated as being more depleted comply more with the target request as compared to those indicated as less depleted. Because of the lack of a main effect of influence technique on compliance no mediation analysis could be carried out (Baron & Kenny, 1986).

The first study produced a number of interesting findings. The study did not succeed in showing the success of the use of a social influence technique on compliance, but it does suggest there is a depleting effect. Complying with the small requests that lead the participant to actively processing information, lead to a worse performance on a cognitive word task. There also seems to be an effect of depletion on compliance with a larger request. To test whether depletion is just an effect from social influence techniques, or indeed *mediates* the

effect of condition on compliance we will first have to find an effect from social influence techniques on compliance.

### Study 2

The first study showed a significant effect of influence technique on depletion, but failed to show an effect of influence technique on compliance. A possible reason for this failure might have been the topic of the target request; handing in vacation days may not be something people are willing to sign for, regardless of whatever influence technique used. We decided to replicate the study, but change the topic of the target request to increase the odds of finding the sought after main effect of influence technique on compliance. We chose a less controversial topic, but nevertheless made sure complying with the request meant for the participant to make concessions. In study 2 the target request was once again whether the participant was willing to sign a petition. We chose to ask participants about the detrimental effect of exhaust gases, the target request being if they would sign a petition to raise road-taxes. The influence technique we used was the continued questions procedure. In the CQP-condition participants were first made smaller requests, which built up to the final, large request. In the control condition only the target request was made. As a depletion measure we used the same two minutes quiz as in study 1. We, again, assume the CQP to be more effective in gaining compliance as well as resulting in more depletion than the control condition. In addition we assume there is a mediating effect from depletion in the effect of condition on compliance. We tested our assumptions in a between-subjects single-factor design (CQP – control).

#### *Method*

##### *Participants and procedure.*

People passing by were asked if they could spare 5 minutes to answer some questions. A total of 60 passers-by participated, 50% male, 50% female ( $M_{age} = 43.23$ ,  $SD_{age} = 14.59$ ).

The confederate used a script akin to the one used in Study 1. The script differed in the topic and the exact questions asked to the participant. The questions asked to participants in the CQP condition were about an environmental issue: Are you aware of the damage cars cause to the environment because of the exhaust gases? Could you name some of the harmful effects of exhaust gases? How do you think car drivers could do something to make up for the damage they cause? All answers to the questions were recorded. After these questions participants were asked to fill in the depletion measure: the two minutes quiz, 43 participants filled in the quiz (72%). In the control group, 87% participated, in the experimental group 67% participated. The questions about the exhaust gases were not asked to the participants in the control condition.

### *Measures*

The depletion measure was similar to the one in study 1: a cognitive word task. The same incentive was used as in study 1: a 20-euro gift voucher. The number of completed questions and the number of correct answered questions were recorded as depletion measures. After finishing the quiz the target request was made: 'we've talked about the harmful effects of exhaust gases. In The Hague the proposition is made to raise the road-taxes with 20 euro and spend that money on environmental issues. The money could for example be used to lay out parks, plant new trees or build crossings for wild life. I would like to ask you if you support the proposal and, if so, would you sign this list to show your support.' Signing the list to support the proposal was considered as compliance. Participants were thanked for their participation and telephone numbers were written down to be able to contact the winner of the quiz.

### *Results and Discussion*

Overall, 48.3% of the participants complied with the request to sign the list. The proportion of participants who complied with the request was higher in the CQP condition

(53.3%) than in the control condition (43.3%), but a logistic regression showed the difference not to be significant (Wald (1) = .60,  $p = .44$ .). When using gender as factor, an interaction effect of condition and gender was found (Wald(1) = 3.24  $p = .07$ ), showing an effect that approaches significance from condition on compliance, but only for men; from all men in the CQP condition, 66.6% agreed to sign the petition, as to 33.3% of the men in the control condition. For women the percentages were 40% in the CQP condition and 53.3% in the control condition.

The assumption that participants in the CQP condition will be more depleted and therefore attempt to and answer less questions correctly was confirmed by an analysis of variance. Participants in the CQP condition answered less questions correctly than those in the control condition,  $F(1,58) = 4.77, p = .03$  ( $M_{CQP} = 4.33, SD_{CQP} = .89$  and  $M_{control} = 7.07, SD_{control} = .89$ ). They also filled in fewer questions,  $F(1,58) = 5.17, p = .03$  (with  $M_{CQP} = 6.53, SD_{CQP} = 1.08$  and  $M_{control} = 10.00, SD_{control} = 1.08$ ). To address the hypothesis concerning the role of depletion, a mediation analysis was carried out. The first step was to test if there was an effect from a depletion measure on compliance. We found this for both measures (number of correct answered questions and number of attempts) not to be the case. Because of this it became unnecessary to further carry out the mediation analysis (Baron & Kenny, 1987). Our assumptions were not confirmed: the depletion measures were not found to be mediating factors of the effect from influence technique on compliance.

Study 2 showed that the experimental group (CQP) performed worse on the cognitive word task than did the control group. They were thus more depleted. We also found a small effect of influence technique on compliance, but this only for men. Depletion seems thus far to be a side effect of the social influence technique used here. But is it an effect that only occurs with the CQP, or can it be generalized to other techniques as well? To test this a third study was conducted. In the study we also take a closer look at personality traits that might be

of influence on the success of a technique. We also address the question if mindlessness develops when being exposed to an influence technique, as suggested by Dolinski (2001, 2002). In addition we added a social principle, conformity to the norm. This addition, we assume, leads to a higher compliance rate.

### Study 3

In the third study a different technique is being used to test the assumptions. The door in the face technique (DITF) differs from the continued questions procedure in that the target request doesn't build up towards a large final request. On the contrary, the size of the initial request is bigger than the target request. When, in the first stage of the interaction, a relatively large request is made, chances are high the influence target declines the request. By making the request smaller, the participant is given the idea that the influence practitioner is making concessions, a reciprocal act is evoked; do something for the one who does something for you. The chance that subjects will comply with the request is larger then when only the target request is made.

We also took a personality characteristic into account: the personal norm of reciprocity. The main reason to take this into account was to see whether it would moderate the effect of condition on compliance. We assumed individuals with a high norm of reciprocity to comply with the request more often than those with a lower norm. More specific, the participants in the experimental condition with a high score on the personal norm of reciprocity questionnaire (Perugini, et al., 2003) should be most sensitive to the influence technique, which builds on reciprocity (you downsize the request for me, so I'll do something for you, in this case, I'll become a mentor). We also added a statement about how many students had already showed interest in the mentorship to evoke a heuristically response: conform to the norm. We tested out assumptions in a 2\*2\*2 between-subject factorial design

(condition \* conformity to the norm \* personal norm of reciprocity). The procedure and our assumptions will now be explained.

### *Method*

#### *Participants and procedure*

In the central library of the Twente University, students were approached and asked if they could spare approximately 20 minutes to participate in a graduation project. Participants were then taken to a quiet room in the library where a laptop and the papers needed to conduct the research had been prepared and the condition had been determined. A total of 99 students participated in the study. Two participants in the DITF condition complied with the first request, therefore, their data were excluded from further analysis. Six participants were identified as outliers, their standardized residual scores were above 2.00. This indicates that their scores can not be predicted well by looking at the entire group. We excluded their data from analysis. Data from 91 participants were used. There were 46 men and 45 women ( $M_{age} = 22.31$ ,  $SD_{age} = 2.18$ ). Approximately 20% of the participants received course credits for participating, the other 80% were volunteers.

#### *Influence technique*

The participant was led into a quiet room in the library. The confederate explained that the study consisted of personality questions, an intelligence measure, a network puzzle and an evaluation task. Depending on the condition, the participant was then asked the following: 'before we start, I would like to ask you something that has nothing to do with this research. The board of the university has recently begun implementing a policy regarding freshmen who have trouble finding their way. It seems useful to assign a mentor to those freshmen to offer them guidance in study behaviour, to show them around, etc. On behalf of the board I'm looking for students who are willing to become such a mentor of a group made up of a small number of freshmen. The mentorship consists of group meetings every Friday morning from

8:30 'til 10:30 for the next half a year.' We assumed the participants would decline the request, considering the size of it. After declining the request, the confederate stated: 'the request is rather large isn't it. What if I change the intensity of the mentorship? You wouldn't have to meet every Friday morning from 8:30 'til 10:30, but instead meet twice a month. When the meetings take place and how much time a meeting takes, is determined by the mentor and the group. Would you then be interested in a mentorship?' When the participant complied, he was asked to give an indication about the amount of time he would be willing to spend on the mentorship. The script for the control group differed in that they were only made the target request: 'The mentoring consists of group meetings twice a month for the next half a year. When the meetings take place and how much time a meeting takes, is determined by the mentor and the group.' Whether or not the participant complied and the time given as an indication, were used as measures of compliance.

#### *Conformity*

Half of the participants were exposed to a conformity manipulation. By stating 'we've already got a large number of students who are willing to become a mentor, so we only need a couple more' we added the factor 'conformity to the norm'. This was only stated to participants in the high conformity condition, not to those in the low conformity condition.

#### *Norm of reciprocity*

Because the DITF-technique draws on the principle of reciprocity, we assumed participants with a relatively high score on a questionnaire that measures subjects' tendency to act reciprocal to be more susceptible to the DITF-technique and thus comply more with the target request. To test this assumption we asked all participants to fill in a Dutch version of a questionnaire that measures this personal need: the personal norm of reciprocity questionnaire (Perugini et al., 2003). The questionnaire consisted of 26 items, which had to be judged on a 5-point Likert Scale (1=totally disagree, 5=totally agree). The questionnaire contains items

like: 'if I work hard, I expect it will be repaid' and 'when someone does me a favour, I feel committed to repay him/her.' (See the Appendix for the Dutch version, for an extensive overview of the questionnaire see Perugini et al., 2003). The reliability of the questionnaire, as measured by Cronbach's Alpha, was 0.76. We conducted a median split on the summated scores to create two groups: one group with individuals that have a relatively high personal norm of reciprocity, and a group with individuals with a lower personal norm of reciprocity.

### *Depletion*

Right after the participant had replied to the target request, the first measure of depletion was taken. The measure is the same as used in studies 1 and 2: a two minute-quiz. Again the number of correct answered questions and the number of filled in answers were used as measures of depletion. A second depletion measure consisted of a 19-numbers network puzzle. A timeframe of 10 minutes was set as maximum time available to solve the task. On the screen two buttons containing the texts 'clue' and 'continue' gave the participant the possibility to ask for a clue and to quit the puzzle before the 10 minutes were used. When a button was used, time was recorded automatically. When the 10 minutes time had elapsed, time was recorded as 600 seconds. After 10 minutes or when the participants pressed the 'continue' button the mindlessness measure was taken, which will be explained below. Time spent on the puzzle and time taken before pressing 'clue' or 'continue' were recorded as depletion measures. The more time spent before asking for a clue and the more time spent on trying to solve the puzzle was interpreted as persistence from the participant, thus exercising self-control, thus being not depleted (Vohs & Heatherton, 2000). The difficulty of the puzzle was such that it was virtually impossible to solve the puzzle, therefore whether or not participants succeeded in solving the puzzle was not taken as a measure of depletion.

*Mindlessness*

We measured if there was a difference in degree of mindlessness between the group exposed to the DITF technique and the control group. We adapted our measure from Langer and Piper (1987). In their research for ways to reduce mindlessness, they used the application of an ambiguous object as a measure. Participants were brought into a situation in which there was a need for an eraser. No eraser was in the room though. There was an ambiguous object in the room (actually a rubber dog chew toy) which could be used as an eraser when participants used their imagination. Whether or not participants made suggestions to solve the problem with the dog chew toy was the measure of mindlessness. The ones using the toy were considered to be mindful instead of mindless. In our study we replicated the need for an eraser by a statement on the computer screen: 'before you go on with the research, check if there's no participant number on the paper you've just made the network puzzle on. If there is: remove it! But: do not remove it by crossing it off with a pen!' Here too, the participant had to be mindful to think of a way to solve the problem. We placed a similar object as described above next to the computer the research was conducted with. We measured whether or not participants succeeded in removing the number. One way of solving the problem would be to use the object. Another way would be for instance, tear off the corner of the paper where the number was situated. Being unable to solve the problem was interpreted as an indication of mindlessness. We also measured the amount of time spent on the problem, the less time taken to solve the problem was considered to be a sign of mindlessness. An evaluation task containing four questions was designed just to let the participants notice the object.

*Manipulation checks*

After the reciprocity questionnaire, manipulation checks were administered. Participants in the experimental condition were asked to rate on a 5-point Likert Scale: 'what did you think of the size of the request to be a mentor for the next half a year, every Friday

from 8:30 'til 10:30?' (1=very small, 5=very large). All participants were asked to rate the following items: 'the request to be a mentor twice a month was...' (1=very small, 5=very large), 'I had the impression that I'm not the only one who the request was made to (1=totally disagree, 5=totally agree) and 'I have got the idea that there are many students willing to become a mentor' (1=totally disagree, 5=totally agree). Finally, age and gender were filled in and the participant was thanked for his participation. No debriefing was given, instead if the participant was interested in the purpose and outcomes of the research his/her email-address was written down.

### *Results*

*Manipulation checks.* To check if we succeeded in reducing the size of the request in the experimental group, we asked the participants to reflect on the size of both requests. The first request should be rated as being larger than the second request. Findings show that the first request ( $M = 3.13$ ,  $SD = .61$ ) was indeed perceived as significantly larger than the second request ( $M = 2.84$ ,  $SD = .63$ ). The t-test on these data yielded  $t (31) = 3.04$ ,  $p = 0.01$ . The experimental and control group did not differ in their ratings on the target request  $t (59) = -.70$ ,  $p = .49$ . ( $M_{DITF} = 2.84$ ,  $SD_{DITF} = .63$  and  $M_{control} = 2.72$ ,  $SD_{control} = .70$ ).

The scores on the manipulation checks concerning the heuristic to conform to the norm, yielded no significant differences between the two groups ( $t (71) = .51$ ,  $p = .61$  on 'I had the impression that I'm not the only one the request was made to' and  $t (71) = .21$ ,  $p = .84$  on 'I've got the idea that there are many students willing to become a mentor'). We concluded that our manipulation concerning the heuristic to conform to the norm had not been successful; therefore we left it out of further analyses.

*Compliance.* The main dependent measures were compliance with the request to become a mentor and the time given as an indication of how much time would be spent on the mentorship. A full factorial logistic regression showed no significant effects on the

dichotomous measure (a reply of yes/no to the request). Neither condition nor score on the reciprocity questionnaire yielded an effect on compliance rate.

A full factorial analysis of variance with the independent measures condition, median split on questionnaire and median split on age did show effects on the dependent continuous measure of compliance (the amount of time participants named they would spend on the mentorship). We found an effect of condition on compliance for the participants with a relatively high score on the reciprocity questionnaire,  $F(1,82) = 3.67, p = .06$ . They seem to be more susceptible to the DITF technique than those with a lower score, just like we assumed. From the participants with a relatively high score on the reciprocity questionnaire, the ones in the control condition were willing to spend .57 hours on the mentorship ( $SD = .51$ ), as compared to 2.02 hours ( $SD = .55$ ) for the participants in the DITF condition. The participants with a relatively lower score the ones in the control condition were willing to spend .86 hours on the mentorship ( $SD = .48$ ), those in the DITF condition .36 hours ( $SD = .49$ ).

We also found an interaction effect of condition on compliance for the younger participants, ( $F(1,82) = 4.10, p = .05$ ). They seem to be willing to spend more time on the mentorship. This seems plausible especially since during the experiment many older participants indicated that they were in their last phases of their studies and did not want to spend any time on extra curricular activities. The younger participants exposed to the DITF mentioned a larger number of hours ( $M = 2.19, SD = .56$ ) than those in the control group ( $M = .69, SD = .47$ ). For the older participants the opposite was found. The ones exposed to the DITF mentioned a smaller number of hours ( $M = .18, SD = .48$ ) than those in the control group ( $M = .75, SD = .53$ ).

Furthermore there was a marginally significant effect of age on compliance,  $F(1, 82) = 3.60, p = .06$ . For the younger participants:  $M_{\text{younger}} = 1.44$  ( $SD_{\text{younger}} = .37$ ), for the elder ones:

$M_{\text{elder}} = .47$  ( $SD_{\text{elder}} = .36$ ), indicating that the younger participants were willing to spend more time to the mentorship as compared to the older ones.

*Depletion.* Two depletion measures were designed for the study. First we will take a look at the 2-minutes quiz. We conducted an analysis of variance and this showed a significant difference between the DITF and control condition on both the number of correct answered questions,  $F(1,89) = 3.77, p = .06$ , and on the number of attempts,  $F(1,89) = 4.36, p = .04$ . Surprisingly the means showed the effect to be in the opposite direction of our assumptions. The participants in the DITF condition performed better on the depletion task. They answered more questions correctly:  $M_{\text{DITF}} = 10.07, SD_{\text{DITF}} = .41$  and  $M_{\text{control}} = 8.93, SD_{\text{control}} = .41$ . They also made more attempts to answer questions correctly:  $M_{\text{DITF}} = 11.46, SD_{\text{DITF}} = .39$  and  $M_{\text{control}} = 10.29, SD_{\text{control}} = .40$

The second depletion measure, the network puzzle, did not yield any significant results. There was no difference in number of participants succeeding in solving the problem, nor in the time taken to solve the puzzle or time taken before asking for a clue.

Although the effect of condition on the depletion measure was the opposite of our assumptions, we decided to once again start a mediation analysis. The purpose of the analysis now was to make sure that the results were not all contrary to our hypotheses. That is, we found participants exposed to the DITF technique to be less depleted than those in the control group. We also found them to comply more with the target request. We had to test if this lack of depletion was not the mediating factor that led to compliance. Because we did not find an effect from depletion on the compliance measure this study too could not specify the role of depletion.

*Mindlessness.* Whether or not participants succeeded in solving to remove the number from the paper was used as a measure of mindlessness as well as the time spent on trying to solve the problem. A logistic regression analysis showed a marginally significant effect of

condition on the dichotomous measure;  $\text{Wald}(1) = 3.59, p = .06$ , showing that the participants in the experimental condition (43.5%) succeeded more in removing the number as compared to those in the control condition (23.4%). This points to the participants exposed to the DITF being mindful and those in the control condition to be mindless, which is the opposite of our prediction. There was no difference in the time taken to solve the problem either, ( $F < 1$ ).

#### *General Discussion*

The present investigation was designed to further analyze the psychological effects of social influence techniques in order to understand how the increase in compliance comes about. Various explanations for their effectiveness have already been given through earlier research. Overall the success of the techniques is ascribed to the fact that they draw on people's automatic way of reacting, make people use social principles (Cialdini & Goldstein, 2001). Consistency and reciprocity are key terms. In our studies we take a fresh look at the research domain of social influence techniques. Knowing that they draw on social principles is the starting point. Now it is interesting to find out what goes on in people's mind; why do they fall back on the use of simple rules. In our three studies on social influence techniques, we assumed depletion to be a mediating factor in the functioning of social influence techniques. Because the techniques create a situation in which multiple decisions have to be made, we assume depletion to develop (Baumeister, 2002). We assume this depletion in turn to result in a use of heuristics. We applied two different social influence techniques (CQP and DITF) in order to test our assumptions.

First and foremost our studies have confirmed our assumption that ego-depletion plays a certain role in the process of social influence techniques. Unfortunately we cannot specify the role, because our studies showed no main effects. As far as the effects of social influence techniques are concerned, it is remarkable that we did not succeed in showing a pure main effect of social influence technique on compliance. We did find an interaction between social

influence technique and gender on compliance in study 2, an interaction between age and influence technique and also reciprocity-score and influence technique in study 3, but the lack of a main effect is a limitation of this research. Reconsidering the design of studies one and two, we found a possible explanation for the absence of a main effect in the place of the depletion measure. In the first two studies we confronted participants with continued questions, just like the technique prescribes to do. But instead of making the target request that completes the process of the technique, we asked the participants to fill in a quiz to measure depletion. Only after the quiz had been filled in, we made the target request. The moulding of the participants to comply with the target request is suddenly paused by a quiz. It is not unlikely that by interrupting the sequence that originally goes from first requests to target request, we lost the effect of condition on compliance. And there might be another reason for the lack of a difference in compliance rate between the two groups. The depletion developed because of exposure to sequential requests is assumed to be the key to the successes of social influence techniques. Thus: because subjects exposed to social influence techniques are more depleted, they respond in a more heuristically way which results in a higher compliance rate. Our design may have erased a difference in depletion. It might well be that the depletion measure itself resulted in depletion for all participants. Filling in the quiz required some serious thinking and this could have resulted in the disappearance of a difference in depletion between the two groups. Replicating the study with a different place of the depletion measure (the quiz should follow the target request and not precede it) would be a start to get more insight into the effect of the place of the depletion measure.

The third study showed no main effect of social influence techniques on compliance either. There were some interaction effects that can be easily understood, but we thought it to be surprising that we found no main effect. We tried to understand why our social influence technique again did not result in a higher compliance rate. After all, we stayed very close to

the original study conducted by Cialdini et al. (1975). We examined the procedure followed with the third study. Before the students were led to the room where the actual experiment took place, they had already received a request. Indeed, students were approached and asked to participate in a graduation project for 20 minutes. No compensation whatsoever was given. The students who decided to actually participate thus had already complied with a sizeable request. The request concerning the mentorship may have been just a little too much. It may have provoked psychological reactance (Brehm & Brehm, 1966). This is the phenomenon that when we get the feeling someone is pressuring us too much, we choose to act in a certain way as to reassert our personal freedom. When you get the feeling of being over-asked and think of an additional request as being inappropriate, a natural reaction is to decline any further requests. This might have been the case with our third study.

Overall the third study yielded some unexpected results. The study did not show a main effect from social influence technique on compliance rate, but it did show two interaction effects. Results concerning the depletion measures contradicted those from the first and second study. Participants exposed to the social influence technique did not perform worse on the depletion task, but instead, performed better. They thus showed less signs of depletion. Our assumptions concerning mindlessness (as resulting from exposure to a social influence technique) were contradicted. Participants exposed to an influence technique were found to be more mindful than the ones in the control group. Finally, our assumption about the role of people's personal norm of reciprocity was confirmed. Participants with a relatively high score were willing to spend more time on the mentorship than those with a lower score.

A limitation of the third study is the experimental setting. The large number of tests taken after the target request (depletion measures, personality questionnaire, mindlessness measure and manipulation checks) made it impossible to apply on the street, so we used an experimental setting: students were led to a quiet room so they could work in a non distracting

environment for 20 minutes. When people are brought into an experimental setting they may act differently than when they had been approached in a more natural setting. In our research, participants were very much aware of the fact that they took part in research. They were explicitly asked to participate and were told the research consisted of a battery of tests. Maybe results would have been different when a more natural setting was used like in studies one and two. Note that all the research conducted so far on the working of social influence techniques has been held in a natural setting (Burger, 1986; Cialdini, et al., 1975; Cialdini, et al., 1998; Fennis, et al., 2004 etc.).

#### *Alternative explanations and directions for future research*

Many new questions arise through the results of our studies. Although our assumptions have not all been confirmed, the studies do show there is a role of ego depletion in the process of social influence techniques. The exact role is not clear yet; whether it is a mediating factor, or just a side-effect remains to be seen. A pure main effect is needed to clarify this.

In past research the emphasis has been on social principles like reciprocity and reciprocity. We have suggested that depletion is part of this process. Mindlessness might play a role as well (as Dolinski (2001, 2002) has shown for the fear-then-relief technique), although our results do not confirm this. More research should be conducted on the concept of mindlessness and its role in other social influence techniques than the FTR.

An alternative way of thinking about the successes of the techniques has to do with priming. Priming refers to the phenomenon that behaviour can be influenced by conscious or unconscious stimuli. A well known study on priming (Bargh & Wyer, 1997) showed the effects of the kind of words used in a puzzle task on how participants afterwards left the laboratory. More specifically: participants that had been exposed to puzzles that consisted of words related to elderly (e.g. flowered dress, forgetful, grey) took significantly more time to

leave the room than those who had been exposed to neutral words (e.g. dress, car, mistake). Apparently the words had evoked a scheme of behaviour that has to do with elderly and this resulted in a slow walk. Another example can be found in the study conducted by Epley and Gilovich (1999). Participants were asked to work on a puzzle that consisted either of words that had to do with conformity, or words about individuality. After making the puzzle they were asked to answer some questions about the research. Two confederates joined the conversation and were instructed to answer the questions before the participant. It appeared that the theme of the questions was of influence on whether or not the participants based their answers on those given by the confederates. The two studies show that behaviour can be influenced by themes of earlier assignments. It is not a large step to assume that behaviour can thus also be influenced by earlier conversations.

As far as the continued questions procedure is concerned, the importance of a relation between the initial and target request seems to be a common-sense prerequisite for a good working technique (although this is not a firm fact (Burger, 1999)). In the light of the priming theory: by asking multiple questions, people are primed with the topic of interest and hereby more susceptible to the target request. For the DITF procedure the principle is the same: the first request makes the participant familiar with the topic. Because of this the second request is not considered as coming out of the blue. The initial request makes way for and prepares the participant for the target request. It has a warming up effect. To test a priming explanation, research should be conducted that varies the consistency in topic of the initial and target request. Support for a priming account would be an enhancing effect of consistency between initial and target request on compliance.

A design in which participants in the experimental condition are asked to name arguments against a proposition and are then asked to sign a petition to support the proposition, is a way of addressing the depletion or priming debate. A control group would

directly be asked to sign the petition. Support for a depletion approach to influence techniques would be an *increase* in compliance. That is: because of the effort needed to come up with arguments, less energy is left to rationally decide whether or not to sign a petition. They then rely on the heuristic: I have said ‘yes’ before, so I will say ‘yes’ again; consistency. Support for a priming approach would be a *decrease* in compliance. Because the participants have activated arguments against the proposition, they will decide not to sign the petition.

The studies did not straightforward support our assumptions, but they do strengthen our ideas about depletion playing a role in the successes of social influence techniques. The exact role of ego-depletion should be further investigated. In general, more research is needed on the prerequisites for a good functioning CQP and DITF. Although some research has been done on this topic, (Burger, 1999; Burger, Reed, DeCease, Rauner, & Rozolis, 1999; Baron, 1973) more research is needed to extend knowledge on this part. For example, it might be interesting to examine if there is an effect of the question asked to all participants: could you spare a few minutes to participate in research. Strictly taken, this is a request too. So: not only the participants in the experimental condition are exposed to multiple requests, the participants in the control condition too have to answer more than one question. Although it will be a challenge to make a design in which passers-by are not explicitly asked to participate, it might be worth trying.

Overall the three studies have once again shown there is much more to learn on the research domain of social influence.

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## Appendix A

Scripts used for study 1.

### Script experimentele conditie

Mevrouw/meneer, mag ik u wat vragen?

.....

Wij zijn van de Jonge Onderzoekers Vereniging van de UT. Deze zomer vieren wij ons eerste lustrum, en daarom doen wij een aantal onderzoekjes. Dit onderzoek gaat over de publieke opinie over actuele politieke kwesties.

Heeft u gehoord van het voorstel van minister Dekker van het ministerie van VROM rondom vakantiedagen?

(*Zo nee:* Minister Dekker heeft het voorstel gedaan om iedere Nederlander een klein aantal vakantiedagen in te laten leveren.)

#### *Initial Request:*

Ik zou u willen vragen om in de huid van minister Dekker te kruipen en 1 of 2 redenen op te schrijven waarom het voorstel is gedaan. (Wil iemand het formulier weer inleveren na 1 reden, vraag dan of ze niet nog een reden kunnen bedenken).

---

#### *Depletion meting*

In verband met het lustrum van onze vereniging hebben wij een ludieke actie bedacht. We hebben een aantal opdrachten op een rijtje gezet en degene die binnen 2 minuten de meeste opdrachten goed heeft opgelost, wint een waardebon van 20 euro. Zou u hieraan mee willen doen?

*Zo ja: opdracht overhandigen en 2 minuten timen. Daarna bedanken, emailadres vragen en verder gaan met het script.*

*Zo nee: verder gaan met het script*

---

#### *Target Request:*

We hebben het zojuist al even gehad over het voorstel van minister Dekker. Voor ons onderzoek hebben wij een handtekeningenlijst opgesteld waarop mensen te kennen kunnen geven voor het voorstel van minister Dekker te zijn. De lijst wordt puur en alleen voor ons onderzoek gebruikt. Zou u uw handtekening willen zetten?

Bedankt voor uw medewerking!

Nog een prettige dag en wellicht hoort u nog van ons.

### Script controle conditie

Meneer/Mevrouw, mag ik u wat vragen?

...

#### *Depletion meting*

Wij zijn van de Jonge Onderzoekers Vereniging van de UT. Deze zomer vieren wij ons eerste lustrum en daarom hebben wij een ludieke actie bedacht. We hebben een aantal opdrachten op

een rijtje gezet en degene die binnen 2 minuten de meeste opdrachten goed heeft opgelost, wint een waardebon van 20 euro. Zou u hieraan mee willen doen?

*Zo ja: opdracht overhandigen en 2 minuten timen. Daarna bedanken, emailadres vragen en verder gaan met het script.*

*Zo nee: verder gaan met het script*

Naast de ludieke actie doen wij ook onderzoek naar de publieke opinie over actuele politieke kwesties. Heeft u gehoord van het voorstel van minister Dekker van het ministerie van VROM rondom vakantiedagen?

*(Zo nee: Minister Dekker heeft het voorstel gedaan om iedere Nederlander een klein aantal vakantiedagen in te laten leveren.)*

*Target Request:*

Voor ons onderzoek hebben wij een handtekeningenlijst opgesteld waarop mensen te kennen kunnen geven voor het voorstel van minister Dekker te zijn. De lijst wordt puur en alleen voor ons onderzoek gebruikt. Zou u uw handtekening willen zetten?

Bedankt voor uw medewerking!

Nog een prettige dag en wellicht hoort u nog van ons.

## Appendix B.

Scripts used for study 2.

### Script experimentele conditie

Mevrouw/Meneer, mag ik u wat vragen?

...

Wij zijn van de Jonge Onderzoekers Vereniging van de UT. Deze zomer vieren wij ons eerste lustrum, daarom doen wij een opinieonderzoek. Het gaat over een milieukwestie.

*Vraag 1:*

Wist u dat auto's door de uitlaatgassen veel schade aanrichten aan het milieu?

*Vraag 2:*

Zou u een aantal voorbeelden kunnen noemen van de schadelijke gevolgen van uitlaatgassen?

*Als mensen geen antwoord weten of vragen aan jou wat de schadelijke gevolgen zijn:*

- *Uitlaatgassen veroorzaken zure regen*
- *Deze zure regen is slecht voor de bodem, er komen zware metalen in de bodem*
- *De onzonlaag wordt aangetast*
- *Bomen sterven eerder*

*Vraag 3:*

Hoe denkt u dat automobilisten iets terug zouden kunnen doen voor het milieu?

---

#### *Depletion meting*

In verband met het lustrum van onze vereniging hebben wij een ludieke actie bedacht. We hebben een aantal opdrachten op een irjtje gezet en degene die binnen 2 minuten de meeste opdrachten goed heeft opgelost, wint een VVV-waardebon van 20 euro. Zou u hieraan mee willen doen?

*Zo ja: opdracht overhandigen en 2 minuten timen. Daarna bedanken, email-adres vragen en verder gaan met het script*

*Zo nee: verder gaan met het script*

---

#### *Target Request:*

We hebben het zojuist al even gehad over de schadelijke gevolgen van uitlaatgassen voor het milieu.

In Den Haag is het voorstel gedaan om de wegenbelasting met 20 euro per jaar te verhogen en dat geld aan het milieu te besteden. U kunt dan denken aan het onderhouden van natuurparken, het planten van nieuwe bomen en het aanleggen van groenviaducten. Zou u uw handtekening willen zetten om het voorstel te ondersteunen?

Bedankt voor uw medewerking!

Nog een prettige dag en wellicht hoort u nog van ons.

### **Script controle conditie**

Mevrouw/Meneer, mag ik u wat vragen?

...

#### *Depletion meting*

Wij zijn van de Jonge Onderzoekers Vereniging van de UT. Deze zomer vieren wij ons eerste lustrum. In verband met het lustrum hebben wij een ludieke actie bedacht. We hebben een aantal opdrachten op een rijtje gezet en degene die binnen 2 minuten de meeste opdrachten goed heeft opgelost, wint een VVV-waardebon van 20 euro. Zou u hieraan mee willen doen?

*Zo ja: opdracht overhandigen en 2 minuten timen. Daarna bedanken, email-adres vragen en verder gaan met het script*

*Zo nee: verder gaan met het script*

#### *Target Request:*

Naast de ludieke actie doen wij ook opinieonderzoek over een milieukwestie. In verband met de schadelijke gevolgen voor het milieu van uitlaatgassen van auto's is in Den Haag het voorstel gedaan om de wegenbelasting met 20 euro per jaar te verhogen en dat geld aan het milieu te besteden. U kunt dan denken aan het onderhouden van natuurparken, het planten van nieuwe bomen en het aanleggen van groenviaducten.

Zou u uw handtekening willen zetten om het voorstel te ondersteunen?

Bedankt voor uw medewerking!

Nog een prettige dag en wellicht hoort u nog van ons.

## Appendix C

### Scripts used for study 3

#### **Experimentele groep, zonder beroep op conformiteitnorm. (E-)**

Fijn dat je mee wilt werken aan ons onderzoek.

Wij zijn bezig met een afstudeeronderzoek voor TCW over opvattingen, vaardigheden en levensstijl. Jouw inbreng hierin bestaat uit het uitvoeren van een aantal taken en het invullen van een vragenlijst. Voordat we gaan beginnen wil ik je nog even iets heel anders vragen.

##### *Initial Request:*

Het college van Bestuur is bezig met de uitwerking van het plan om eerstejaars studenten die hun draai niet kunnen vinden in Enschede een soort mentor te geven die hen begeleidt. De begeleiding bestaat uit het samenkommen van kleine groepjes eerstejaars met daarbij een mentor. Ik ben namens het College op zoek naar studenten die het komende half jaar vrijwillig elke week zo'n groepje begeleiden. De begeleiding vindt plaats op vrijdagochtend van 8:30 tot 10:30. Heb je interesse in zo'n mentorschap?

##### *Target Request:*

*Na nee:* het is ook wel een intensieve vorm van begeleiding. [Even stil zijn, alsof je nadenkt]  
→ En als ik er nu van maak dat je niet elke vrijdag van 830-1030, maar maandelijks 2 keer begeleiding geeft. De duur en het tijdstip van de begeleiding kun je dan in overleg met het groepje vast stellen. Zou je dat willen doen?

*Zegt pp ja:* hartstikke goed! Zou je voor mijn planning een indicatie kunnen geven van het aantal uur dat je bereid bent in het mentorschap te steken? *Daarna direct de quiz laten maken.*

*Zegt pp nee:* direct quiz laten maken.

#### **Experimentele groep met beroep op conformiteitnorm (E+)**

Fijn dat je mee wilt werken aan ons onderzoek.

Wij zijn bezig met een afstudeeronderzoek voor TCW over opvattingen, vaardigheden en levensstijl. Jouw inbreng hierin bestaat uit het uitvoeren van een aantal taken en het invullen van een vragenlijst. Voordat we gaan beginnen wil ik je nog even iets heel anders vragen.

##### *Initial Request*

Het college van Bestuur is bezig met de uitwerking van het plan om eerstejaars studenten die hun draai niet kunnen vinden in Enschede een soort mentor te geven die hen begeleidt. De begeleiding bestaat uit het samenkommen van kleine groepjes eerstejaars met daarbij een mentor. Ik ben namens het College op zoek naar studenten die het komende half jaar vrijwillig elke week zo'n groepje begeleiden. De begeleiding vindt plaats op vrijdagochtend van 8:30 tot 10:30. Heb je interesse in zo'n mentorschap?

##### *Target Request:*

*Na nee:* het is ook wel een intensieve vorm van begeleiding. [Even stil zijn, geef de indruk dat je nadenkt] → En als ik er nu van maak dat je niet elke vrijdag van 830-1030, maar maandelijks 2 keer begeleiding geeft. De duur en het tijdstip van de begeleiding kun je dan in

overleg met het groepje vast stellen. Er hebben al heel veel studenten gereageerd die mentor willen worden, dus we zoeken er nog maar een paar. Zou je dat willen doen?

*Zegt pp ja:* hartstikke goed! Zou je voor mijn planning een indicatie kunnen geven van het aantal uur dat je bereid bent in het mentorschap te steken? *Daarna direct de quiz laten maken.*  
*Zegt pp nee:* direct quiz laten maken.

### **Controle groep, zonder beroep op conformiteitnorm. (C-)**

Fijn dat je mee wilt werken aan ons onderzoek.

Wij zijn bezig met een afstudeeronderzoek voor TCW over opvattingen, vaardigheden en levensstijl. Jouw inbreng hierin bestaat uit het uitvoeren van een aantal taken en het invullen van een vragenlijst. Voordat we gaan beginnen wil ik je nog even iets heel anders vragen.

*Target Request:*

Het College van Bestuur is bezig met de uitwerking van het plan om eerstejaars studenten die hun draai niet kunnen vinden in Enschede een soort mentor te geven die hen begeleidt. De begeleiding bestaat uit het samenkommen van kleine groepjes eerstejaars met daarbij een mentor. Ik ben namens het College op zoek naar studenten die het komende half jaar vrijwillig elke maand 2 keer zo'n groepje begeleiden. Het tijdstip en de duur van de begeleiding kun je in overleg met het groepje dat aan jou wordt toegewezen vaststellen. Heb je interesse in zo'n mentorschap?

*Zegt pp ja:* hartstikke goed! Zou je voor mijn planning een indicatie kunnen geven van het aantal uur dat je bereid bent in het mentorschap te steken? *Daarna direct de quiz laten maken.*  
*Zegt pp nee:* direct quiz laten maken.

### **Controle groep, met beroep op conformiteitnorm. (C+)**

Fijn dat je mee wilt werken aan ons onderzoek.

Wij zijn bezig met een afstudeeronderzoek voor TCW over opvattingen, vaardigheden en levensstijl. Jouw inbreng hierin bestaat uit het uitvoeren van een aantal taken en het invullen van een vragenlijst. Voordat we gaan beginnen wil ik je nog even iets heel anders vragen.

*Target Request:*

Het College van Bestuur is bezig met de uitwerking van het plan om eerstejaars studenten die hun draai niet kunnen vinden in Enschede een soort mentor te geven die hen begeleidt. De begeleiding bestaat uit het samenkommen van kleine groepjes eerstejaars met daarbij een mentor. Ik ben namens het College op zoek naar studenten die het komende half jaar vrijwillig elke maand 2 keer zo'n groepje begeleiden. Het tijdstip en de duur van de begeleiding kun je in overleg met het groepje dat aan jou wordt toegewezen vaststellen. Er hebben al heel veel studenten gereageerd die mentor willen worden, dus we zoeken er nog maar een paar. Heb je interesse in zo'n mentorschap?

*Zegt pp ja:* hartstikke goed! Zou je voor mijn planning een indicatie kunnen geven van het aantal uur dat je bereid bent in het mentorschap te steken? *Daarna direct de quiz laten maken.*  
*Zegt pp nee:* direct quiz laten maken.

## Appendix D

### Depletion Measure used in all three studies: quiz.

*Wat betekenen de volgende uitdrukkingen ongeveer?*

*Waar rook is, is vuur*

- Roken is gevaarlijk
- In geruchten zit vaak iets waars
- Denk na voordat je wat zegt
- Vele handen maken licht werk

*Bezint eer ge begint*

- Denk vooruit
- Oefening heeft betrekking op geest en lichaam
- Je bereikt niets als je geen risico's neemt
- Wie geduldig wacht, krijgt alles

*Er kunnen geen twee kapiteins zijn op een schip*

- Het is niet slim om alle schepen achter je te verbranden
- Wees niet te ambitieus
- Het werk wordt beter gedaan als een persoon de leiding heeft
- Te veel mensen weigeren te helpen

*Voor niets gaat de zon op*

- Leg wat geld opzij voor moeilijkere tijden
- Je moet je schulden op tijd betalen
- Geniet van het leven wanneer je jong bent
- Je krijgt niets voor niets

*Waar gehakt wordt, vallen spaanders*

- Waar gewerkt wordt, worden ook fouten gemaakt
- Je kunt maar beter praten dan vechten
- Als je aan iets begint, weet je niet wat het resultaat wordt
- Handel snel

*Je moet het paard niet achter de wagen spannen*

- Veranderingen houd je niet tegen
- Iedereen heeft hulp nodig bij een lastig karwei
- Neem de tijd om alles goed te plannen
- Pak de zaak op de juiste manier aan

*Een goed begin is het halve werk*

- Het is goed om het werk helemaal af te maken
- Beter ten halve gekeerd, dan ten hele gedwaald
- Wat goed wordt aangepakt, vordert ook goed
- Goed op je werk oriënteren is heel belangrijk

*Welk woord hoort niet in het rijtje thuis?*

- Gitaar, viool, harp, blokfluit
- Aardappel, radijs, raap, tomaat
- Tocht, water, ijs, stoom
- Cirkel, vierkant, ovaal, kubus
- Wol, nylon, katoen, zijde

- Liter, meter, el, kilogram

*Los de volgende raadsels op*

*Het antwoord is een klinker die wel zit in OMARMEN, maar niet in KLOMPEN*

A  
E  
I  
O

**Het juiste antwoord is een van de letters A, B, C, of D. Het is geen klinker en zit ook niet in het woord CIDER.**

A  
B  
C  
D

**Vissen zitten vaak in vijvers. Harry is een vis. Henk zit in een vijver. Welke bewering MOET waar zijn?**

- Harry en Henk zijn allebei vissen
- Henk is een vis
- Harry kan al dan niet in een vijver zitten
- Henk is geen vis

**Andre is groter dan Linda. Suzanne is kleiner dan Rob. Suzanne is kleiner dan Linda. Wie is het grootst?**

- Andre
- Rob
- Linda
- Andre of Rob

**Het antwoord is een van de letters A, B, C en D. Als de laatste letter van deze zin C is, dan is het antwoord B, als deze letter D is, is het antwoord A en als deze letter iets anders is, dan is het antwoord C.**

- A
- B
- C
- D

**Als Parijs niet de hoofdstad is van Duitsland, is het antwoord A, C of D, anders is het B. Als olifanten groter zijn dan katten, is het antwoord niet A. Als het in juni warmer is dan in januari, is het antwoord niet D.**

- a
- b
- c
- d

Als kilogram staat tot gewicht,

Staat meter tot ... (omvang, grootte, afmeting, lengte)

Als veel staat tot weinig

Staat niets tot ... (alles, vaak, nooit, frequent)

Als schilderen staat tot penseel,

Staat smid tot ... (vuur, ijzer, hamer, aambeeld)

Als wortel staat tot penseel,  
Staat ... tot hond (vel, botten, oor, bek)

Als mens staat tot verstand, staat

- a) aanleiding tot stemming
- b) trilling tot toon
- c) hond tot buit
- d) dier tot instinct

Als roer staat tot schip, staat

- a) kenteken tot motorfiets
- b) lamp tot fiets
- c) rem tot auto
- d) stuurknuppel tot vliegtuig

Als geluid staat tot oor, staat

- a) knal tot explosie
- b) verkoudheid tot mens
- c) smaak tot tong
- d) pijn tot ziekte

Als aardbeving staat tot instorting, staat

- a) roepen tot horen
- b) zon tot regen
- c) ochtend tot avond
- d) stormvloed tot overstroming

Als inspanning staat tot ontspanning, staat

- a) start tot eindpunt
- b) vakantie tot reis
- c) stress tot gelatenheid
- d) muziek tot taal

## Appendix E

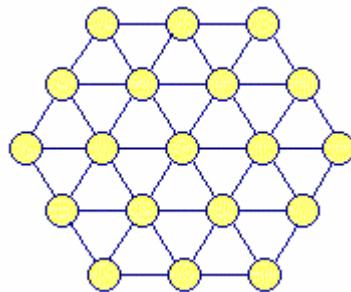
Depletion measure used in study 3: network puzzle.

### 19-nummers netwerk

Hieronder zie je een nummernetwerk. Het heeft negentien cirkels die gevuld moeten worden met de getallen 1 tot en met 19. Deze getallen moeten zodanig geplaatst worden dat alle getallen op elke horizontale en op elke diagonale lijn samen tot dezelfde som optellen.

Let op: er zijn veel horizontale en diagonale lijnen die een verschillend aantal cirkels (3, 4 of 5) hebben. Toch moeten al deze sommen gelijk zijn!

De vraag: hoe moeten de 19 getallen in het netwerk worden geplaatst?



De aanwijzing die verscheen wanneer de respondent op de button ‘aanwijzing’ klikte luidt:

De som van de horizontale en diagonale lijnen is 38

## Appendix F

Dutch version of the Personal norm of reciprocity questionnaire (Perugini, et al., 2003).

### Opvattingen over wederkerigheid

- O1: Iemand helpen is de beste manier om er zeker van te zijn dat diegene jou in de toekomst ook zal helpen
- O2: Ik ga niet slecht met anderen om, om te voorkomen dat zij slecht met mij omgaan.
- O3: Ik vrees de reacties van mensen tegenover wie ik me slecht heb gedragen
- O4: Als ik hard werk, verwacht ik daar iets voor terug te krijgen
- O5: Als ik iemand een compliment maak, verwacht ik dat die persoon dit ook bij mij zal doen.
- O6: Ik vermijd onbeleefd gedrag, omdat ik niet wil dat anderen onbeleefd tegen mij zijn.
- O7: Wanneer ik toeristen help, verwacht ik dat ze me vriendelijk zullen bedanken
- O8: Het is logisch dat iemand, wanneer ik hem slecht heb behandeld, wraak zal willen nemen

### Positieve wederkerigheid

- P1: Ik ben ertoe bereid kosten te maken om iemand te helpen die mij heeft geholpen
- P2: Als iemand mij een gunst verleent, ben ik ertoe bereid hem ook een gunst te verlenen
- P3: Als iemand me op het werk behulpzaam is, help ik hem/haar ook graag
- P4: Ik ben ertoe bereid een vervelende klus te doen omdat iemand mij eerder heeft geholpen
- P5: Als iemand mij een gunst verleent, voel ik me ertoe verplicht hem hiervoor te vergoeden
- P6: Als iemand mij vriendelijk vraagt om informatie, help ik hem/haar graag
- P7: Als iemand mij geld leent als een gunst, heb ik het gevoel dat ik hem iets meer moet terugbetalen dan strikt noodzakelijk is
- P8: Als iemand mij de winnende nummers van de Lotto heeft gesuggereerd, zou ik hem/haar zeker een deel van de winst geven
- P9: Ik doe veel moeite om iemand te helpen die eerder vriendelijk tegen me is geweest.

### Negatieve wederkerigheid

- N1: Als mij serieus onrecht wordt aangedaan, zal ik, koste wat het kost, zo snel mogelijk wraak nemen.
- N2: Om een oneerlijke gebeurtenis te vergelden, ben ik bereid tijd en moeite te investeren
- N3: Ik ben vriendelijk en aardig als anderen goed met mij omgaan, anders geldt: oog om oog, tand om tand
- N4: Als iemand me in een moeilijke situatie brengt, doe ik hetzelfde bij hem/haar
- N5: Als iemand mij beledigt, beledig ik hem/haar ook
- N6: Als iemand oneerlijk tegen me is geweest, geef ik hem liever wat hij verdient, in plaats van zijn excuses te aanvaarden
- N7: Ik zou iemand die mij slecht heeft behandeld geen gunst verlenen, ook al zou dat betekenen dat ik een voordeel voor mezelf laat liggen
- N8: Als iemand onbeleefd tegen mij is, word ik zelf ook onbeleefd
- N9: Hoe ik met andere mensen omga, hangt sterk af van hoe ze met mij omgaan.