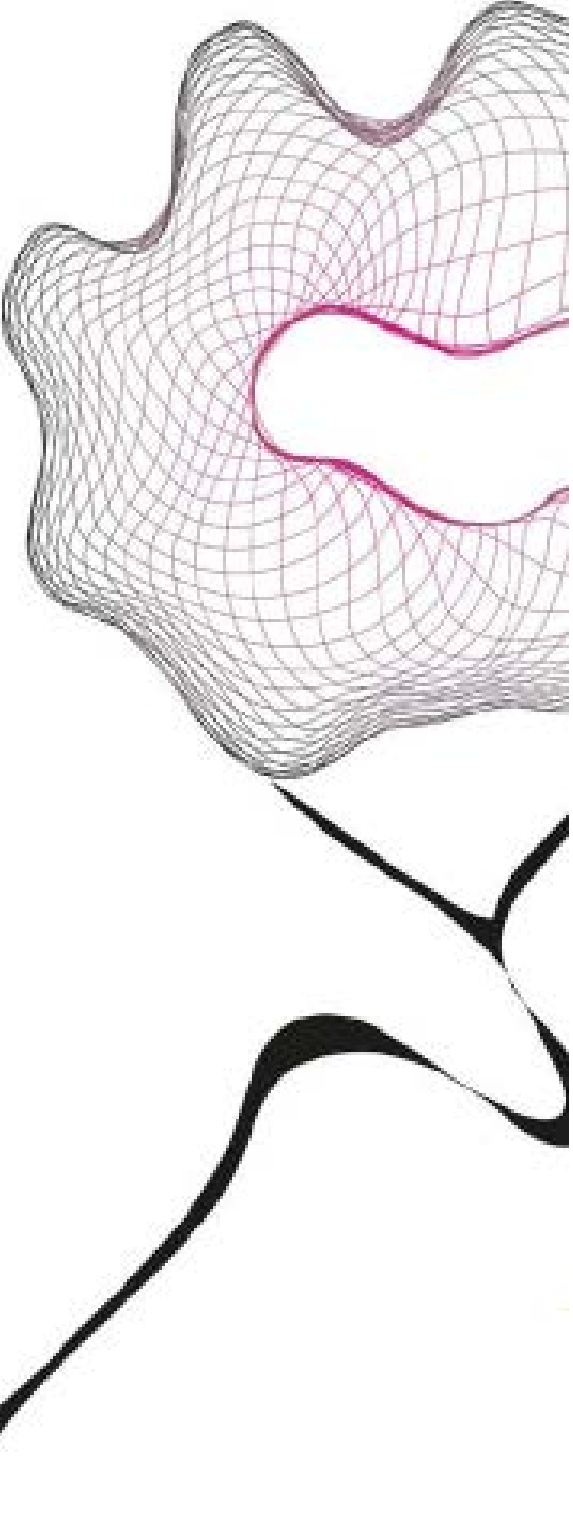


MASTER'S THESIS

An abstract graphic on the left side of the page. It features a hand-like shape with a grid overlay. The grid is composed of thin, light-colored lines. A prominent, thick, dark red line runs through the center of the hand, following the path of the fingers. The overall effect is that of a digital or scientific visualization of a human form.

HOW AN INDIVIDUAL IS  
MOVED BY THE GROUP:  
INFLUENCES OF  
PERCEIVED ACTION  
RADICALITY, SOCIAL  
IDENTITY AND  
LEADERSHIP ON AN  
INDIVIDUAL'S INTENT  
TO ACT

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## Abstract

Terrorism has been a serious problem throughout history and throughout communities around the world. Most contemporary research suggest that processes which drive individuals towards terrorism are fundamentally equivalent to those that emerge in normal groups. Using college students as participants, the aim of the current study was to provide more insight in group radicalization processes, exploring the effects of perceived action radicality, social identity and leadership on an individual's intent to act in accordance with a group's collective decision. Seventy two participants completed the entire experiment. Over the course of five days college students were asked, both individually and under influence of a small group, to respond to scenario describing a hypothetical situation in which students of a particular university were faced with significant threats concerning their position as a student at the university. Seventy two participants completed the entire experiment. We found social identity plays a significant role in explaining a group's influence on an individual's intent to act after a collective decision is made ( $p = .006$ ). We furthermore found that the intent to act in accordance with group norms significantly and continuously increases over time ( $p < .001$ ). Together with the finding that perceived action radicality does not change over time and the finding that removing a group's leader does not affect the intent to act in accordance with group norms, the current study shows there is a need for a new, long-term counter-terrorism strategy where special focus needs to be placed on an early identification of possible 'candidates' for recruitment by terrorist organization.

## Samenvatting

Door de geschiedenis heen is terrorisme een ernstig probleem geweest voor gemeenschappen of de hele wereld. Hedendaags onderzoek wijst uit dat de processen welke individuen naar terrorisme doen grijpen fundamenteel hetzelfde zijn als processen die zich voordoen in normale groepen. Door gebruik te maken van studenten als deelnemers was het doel van het huidige onderzoek meer inzicht te verschaffen in radicalisatie processen in groepen door te onderzoeken wat de effecten zijn van de waargenomen radicaliteit van een actie, sociale identiteit en leiderschap op de intentie van een individu om gedrag te vertonen in overeenstemming met collectieve beslissing. Over een tijdspan van vijf dagen werd studenten gevraagd, zowel individueel als onder invloed van een kleine groep, te reageren op een scenario waarin een hypothetische situatie werd geschetst waarin studenten van een universiteit met significante bedreigingen te maken krijgen met betrekking tot hun positie als student aan die universiteit. Tweeënzeventig studenten ronden het volledige experiment af. We vonden dat sociale identiteit een significante rol speelt in het verklaren van de rol die groepsinvloed heeft op de intentie om gedrag te vertonen nadat een collectieve beslissing is genomen ( $p = .006$ ). Verder vonden we dat de intentie om dit gedrag te vertonen significant en continu toeneemt over tijd ( $p < .001$ ). Samen met de bevindingen dat de waargenomen radicaliteit van een actie en de bevinding dat het verwijderen van ontpopte leider geen effect heeft op de intentie om gedrag te vertonen volgens groepsnormen, laat de huidige studie zien dat er een behoefte is aan een nieuwe, lange-termijn counter-terrorisme strategie, waarin speciale focus moet worden gelegd om een vroegtijdige identificatie van mogelijke 'kandidaten' voor rekrutering door terroristische organisaties.

### **Acknowledgements**

I would like to say special thanks to Dr. Paul Taylor and Dr. ir. Peter de Vries for thinking along, your expert opinion and flexibility during the course of this study. Thank you for answering the numerous questions (especially Peter, across whose office I conducted my experiment), but no less I want to thank Paul for his constructive feedback during the entire process.

I would also like to take this opportunity to thank all the employees at the Department of Psychology of Conflict, Risk and Safety at Twente University for bringing back the joy in studying which I had lost for a while. Compliments to your lecturing, thanks for being easily approachable and thanks for the shown interest in the current study.

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**How an individual is moved by the group: influences of Perceived action radicality,  
Social Identity and Leadership on an individual's intent to act.**

Terrorism has been a serious problem throughout history and throughout communities around the world. However, over at least the last few decades, policies for ending terrorism have tended to be short-term, often driven by immediate political demands rather than by scientific understanding (Moghaddam, 2005). A better understanding of factors leading to terrorism could therefore prove to be essential to develop more effective, long-term, non-violent policies. This opportunity has been recognized by a numbers of researchers, who have explored the effects of the 'hard' responses to violent extremism (cf. Parker, 2012; Schmid, 2012). One lesson that has emerged from this research is that the causes of terrorism are not simply the person responsible for the ultimate act, it is the conditions that spawn or nurture the emergence of terrorist behavior in the first place. Paradoxically, most contemporary research on these 'push' and 'pull' factors suggest that processes which drive individuals towards terrorism are fundamentally equivalent to those that emerge in normal (i.e. political) groups (i.e. Weinberg, 1991; de la Corte, 2010; Martin & Perliger, 2012) . However, this leaves open the question why terrorism seems to be the answer for some groups and why other groups, who may be equally extreme in viewpoint, turn away from such violence?

One approach to answering this question is to gain a better understanding of the process by which people's attitudes and intended behaviors become more extreme. What brings about this attitude change? Our attitudes are typically grounded in the groups that we belong to and they serve to define and proclaim who we are in terms of our relationships to others of the same or different groups (Hogg & Smith, 2010). If we want to understand what drives a terrorist group, therefore, we need to understand both intergroup and intragroup

social processes.

### **1.1 The social identity approach**

No group can live alone. All groups of society live in the midst of other groups and can therefore only acquire meaning in relation to, or in comparison with other groups (i.e. “us” men and “them” women). This phenomenon is referred to as social categorization (Tajfel, 2010). It plays an important role in intergroup conflict because the breakdown of individuals into social categories is usually associated with positive or negative social comparisons amongst these categories (Tajfel, 2010). For example, according to the relative deprivation theory (Runciman, 1966), an account that has often been used to explain engagement in terrorism, it is only when these social comparisons result to the subjective sense of injustice that collective action to redress the injustice is likely to occur. Runciman (1966) made a further distinction between egoistical deprivation, where an individual feels deprived because of his or her position within a group and fraternal deprivation, where feelings of deprivation arise because of an individual’s group position relative to those of other groups. Smith & Ortiz (2002) found that when individuals experience group-based deprivation collective action is most likely to occur. Correspondingly Bernholz (2004) stated that these feelings of deprivation serve as the most important basis for terrorist actions. Relative deprivation through social categorization therefore serves as an important starting point for the current study.

Self-categorization furthermore configures and changes one’s identity and one’s attitudes. It depersonalizes our attitudes so that they conform to our in-group prototype. The resulting collective identity is known as Social Identity (Tajfel & Turner, 1979). It is understood as the part of an individual’s self-concept which is derived from his knowledge of his membership of a social group together with the value and emotional significance attached



to that membership, and can only be defined through the effects of social categorizations (Tajfel, 2010). Since its origins 35 years ago social identity has become a key social psychological explanation of both intra- and intergroup processes.

Even though social identity theory does not explicitly talk about extremism, (social) identity does play a vital role in explaining involvement in terrorism. Silke (2008) found that in case of jihadi extremism, individuals need to have a strong sense of Muslim identity and, equally important, to identify strongly with the wider Muslim community. The importance of ordinary social processes in radicalization is furthermore underlined by Bakker (2006). In his analysis of 242 jihadis, Bakker (2006) found individuals were not becoming radicalized because of the efforts of an al-Qaeda recruiter. In contrast; the process was occurring almost independently of established jihadis.

## **1.2 Social causes of radicalization**

To a large extent, becoming involved in the jihad is a group phenomenon. Individuals tend not to join the jihad as isolated individuals. Rather, it is within small groups that individuals gradually become radicalized (Silke, 2008). Responses of these group tend to be more extreme than individual members' responses. This is generally known as the group polarization effect (Myers & Lamm, 1976). Within the context of terrorist groups this effect occurs when individuals gradually adopt the beliefs and faith of the group's more extreme members (Silke, 2008). Bakker (2006) found that the polarization experienced within the group, combined with an increased sense of group identity and commitment, helped to radicalize individuals and facilitate their entry into the jihad in a way that was approved by their new social peers (Silke, 2008). It is therefore hypothesized that:

H1a: *Group influence causes an individual to show a higher intent to perform a chosen behavioral option when compared to when one is not influenced by a group.*

McCauley & Moskaleiko (2008) define radicalization as “the increase of money, time,

risk-taking and violence in support of a (political) cause.” As McCauley and Moskaleiko (2008) state “(self-)radicalization is a slippery slope of increasingly extreme behavior with increasingly extreme reasons and justifications icing the slope.” Bandura (1990) stated that people do not ordinarily engage in reprehensible conduct until they have justified to themselves the morality of their actions. Moral cognitive restructuring can therefore serve terrorist action aimed at changing inhumane social conditions. Terrorists define their actions as morally justifiable means to eradicate harmful social practices (Bandura, 1990). The most striking example of this moral justification might be terrorist’s self-assigned label of “freedom fighters.” Since, in general, it is easier to find reasons for what we have done than to do what we find reason for (McCauley & Moskaleiko, 2008) it is hypothesized that

*H1b: Greater intent to perform a behavioral option due to group influences is directly linked to a decrease in perceived action radicality.*

At this point social identity needs discussing again. Social identity is not a dichotomous measure (e.g. either someone has it or not). As discussed earlier social identity is understood the degree in which one identifies oneself with a relevant in-group. This degree can vary greatly between groups and even among group members which leads to an important question. Since social identity influences group members’ thoughts and guides action on behalf of the group, it could also be argued that a higher sense of identification with the group leads to a higher tendency to act in accordance with these group’s norms. Social identity thus works as an intensifier of group processes. Furthermore, if so, it could also be argued that a higher degree of identification leads to a higher level of moral justification by group members. Both effects of a high level of social identification could thus have a tremendous effect on both the fanaticism of group members and the perceived radicality of a certain path of action. It is hypothesized that

*H1c: The intention to perform a behavioral option and the corresponding perceived action radicality after group influence is directly related to the degree an individual identifies oneself with the group*

### **1.3 Leadership**

An important moderator of group dynamics is leadership. If social identity and social categorization are a necessary basis for social collaboration, then it is equally important for someone to guide and shape that collaboration (Haslam, Reicher & Platow, 2010). The more representative an individual is seen to be of a given social identity –the more one is seen “one of us” – the more influential he or she will be within a group and the more willing other group members will be to follow his or her direction (Haslam et al. 2010). Likewise, the more in-group prototypical a person is, the more influential he or she will be (Haslam et al. 2010). Being the most in-group prototypical individual also means that the leaders could be the defining factor of group norms and a group’s social identity. It is therefore hypothesized that

*H2a: Under the influence of leadership group members perceive a stronger sense of social identity when compared to group members that are not influenced by leadership.*

Additionally van Knippenberg, Lossie and Wilke (1994) found clear support for the causal relationship between people’s in-group prototypically and their ability to influence fellow group members. Since the defining capacity of leadership is the ability to influence a group, the most in-group prototypical member is the one who is best positioned to vouch for leadership. Considering their great ability to influence fellow group members, it could thus be assumed that removing a group’s leader will have an effect on the behavior of group members. It is therefore hypothesized that

H2b: *Group members which are not influenced by leadership will show a weaker intention to perform a chosen behavioral option when compared to groups which are influenced by leadership*

In the previous discussion on the justification of terrorist acts, it was discussed that in order to justify ones increasingly radical behavior it is usually the attitude that changes (Bandura, 1990; Hogg & Smith, 2010). If a loss of leadership causes an individual to show a weaker intent to act in accordance with group norms this again creates an inconsistency which must be resolved. Solving this inconsistency through (moral) justification this time has the reversed effect in comparison with our previous discussion. It is therefore hypothesized that

H2c: *The weaker intention to perform a chosen behavioral option is directly linked to a higher perceived action radicality.*

#### **1.4 Current study**

In order to examine the issues of social identity, action radicality and leadership described above, the current study examined the changing attitudes and behavioral intentions of a student group over time, and in response to external inputs. Over the course of five days college students were asked, both individually and under influence of a small group, to respond to scenario describing a hypothetical situation in which students of a particular university were faced with significant threats concerning their position as a student at the university. To begin, each participant was instructed to individually read and emphasize the scenario and subsequently evaluate seven possible behavioral options on the perceived action radicality and the intent to perform the behavioral option. To test our first set of hypotheses the participants are subsequently placed in groups of four individuals and instructed to discuss (meeting (day) two) and make a collective decision on (meeting three) the most appropriate behavioral option. To test our second set of hypotheses an experimental condition is added on meeting four. Both groups are instructed to write a plan of action. Experimental groups

however are deprived of their emerged leader. A final meeting was added to bring all groups together in the same composition and to give a full debriefing of the experiment.

## 2 Method

### 2.1 Participants

One-hundred and twenty-four mostly Psychology freshmen signed up for the experiment and completed the initial online questionnaire (see Procedure). After the initial questionnaire eighty individuals responded and were randomly divided in twenty groups of four individuals. Due to changing circumstances two groups were not able to complete the entire experiment, leaving seventy two participants for statistical analysis. Age ranged from 18 to 26 ( $M = 19.61$ ,  $SD = 1.53$ ). Approximately 26 % of participants were male, approximately 74 % were female. Approximately 31 % of participants were born in the Netherlands, approximately 65 % were born in Germany and approximately 4 % were born somewhere else; reflecting the approximate demographics of the faculty's subject pool. Forty-nine nonnative Dutch speaking participants rated their control of the Dutch language on average 2.73 ( $SD = 0.53$ ) on a five-point Likert scale ranging from 0 = very bad to 4 = very good. Five course credits were given to each participants who completed the entire experiment.

### 2.2 Design

The study was based on a 4x2 mixed factor experimental design and was conducted over the course of five days. Questionnaire administration was dependent on the progress of participants (see Figure 1). Depending on the time it took for a group to complete the assignment each meeting lasted between twenty-five and forty-five minutes.

The experiment contained one independent within-subjects variable; Progress (Individual, Discussion, Decision, Plan of action), one between-subject variable; Leadership (Absence, Presence), three dependent variable (Intent to act, Perceived action radicality, Social Identity), and two control variables (Organizational Identification, Relative Deprivation). While relative deprivation was a prerequisite for the study and is discussed in the remainder of this article, organizational identification was only incorporated in order to explain a possible absence of relative deprivation. Since, for the purpose of this experiment, it was not possible for participants to complete the group decision before the group discussion counter balancing was not used.

## **2.3 Measures**

### **Organizational Identification**

Organizational identification was measured by using five items from the original six-item scale described by Mael and Ashforth (1992). These items required participants to indicate whether or not they agreed with statements like “I am highly interested in others’ opinions about Twente University.” Utilizing only these five items Mael and Ashforth (1989) reported a coefficient alpha ranging from 0.83 to 0.84 in two samples of U.S. Army squad members, and from 0.87 to 0.89 in two samples of squad leaders. As stated by the authors the questionnaire was edited to fit the current subject pool. Items were measures on a five-point Likert scale ranging from 0 = completely disagree to 4 = completely agree. For an overview see Appendix A1.

### **Perception of Inequality and Relative Deprivation**

Perception of Inequality was measured by asking participants to indicate whether they believed the “study opportunities at Twente University were the same as the study opportunities at other universities;” measuring intergroup inequality. This item was measured using a five-point Likert scale ranging from 0 = completely equal to 4 = completely unequal.

Second, participants were asked to indicate to what extent he or she was satisfied with his or her personal situation when compared to (i) students at other universities and (ii) to that of other students at Twente University. This was the measure of egoistic relative deprivation. Finally participants were asked to what extent they were “satisfied about the study opportunities of students at Twente University when compared to students at other universities.” These items were measured using a five-point Likert scale ranging from 0 = completely satisfied to 4 = completely unsatisfied. Together, the four items comprised the questionnaire presented by Guimond and Dubé-Simard (1983). For an overview see Appendix A2.

### **Intent to act and Perceived action radicality**

Intent to act and Perceived action radicality were measured by presenting participants seven possible behavioral options. First, intent to act was measured by asking participants to independently indicate the probability one would choose a behavioral option. Choice options were (i) “I accept the negative, I won’t undertake any action” (do nothing); (ii) “I will gather information about the consequences of this decision, I won’t undertake any further action” (gather information); (iii) “I will think of the possible consequences of this decision and will talk about it, in example, during lunch” (talk about it); (iv) I will investigate the possibilities to counter this decision”(investigate counter actions); (v) “I will investigate the possibilities to counter this decision and will discuss these with fellow students.” (investigate and discuss counter actions); (vi) “I will urge students to protest against this decision” (urge to protest); (vii) “I will go to the meeting to exert influence and to oppose the decision” (go to meeting). Probability, or intent to act, was measured using a five-point Likert scale ranging from 0 = highly unlikely to 4 = very likely. For an overview see Appendix A3. Subsequently perceived action radicality was measured by asking participants to independently indicate the degree they perceived the behavioral option as a radical choice, using a five-point Likert scale

ranging from 0 = not at all drastic to 4 = very drastic. It was specifically chosen not to use the word ‘radical’ for the questionnaire, drastic however was found to be a good synonym. Changes in Intent and Perceived action radicality were determined by identifying the group decision and linking the associated Intent to act and Perceived action radicality scores of the same behavioral option from the different days. For example, when a group’s collective decision was to perform behavioral option (iv), than the corresponding scores from the other days for behavioral option (iv) were paired for analysis. This way results could be analyzed regardless of what choice was made. For an overview see Appendix A4.

### **Inclusion of Others in the Self (In-group/Out-group)**

Inclusion of Others in the Self (Aron, Aron and Smollan, 1992) was measured by asking participants to indicate what picture of two circles best displays the perceived distance between either themselves and other group members or themselves and groups of other universities. Seven pictures representing a seven-point Likert scale in which picture one would display the most distance between two circles and picture seven would display perfect overlap between two circles. A higher rating would therefore display greater feelings of interpersonal closeness. Since the Social Identity questionnaire was developed for the purpose of the current study, the current questionnaire was used as a back-up in case low levels of reliability were found. For an overview see Appendix A5 and A6.

### **Social Identity**

The Social Identity questionnaire was specifically developed for the current study. Items were developed following the social identity approach (see i.e. Postmes & Branscombe, 2010) and incorporated statements concerning both social identity and social categorization. Participants were asked to indicate the degree of agreement on eight statements like “In the current situation, I see the group’s choice as my own choice,” “in the current situation, I attach great value to my membership of the group” and “there are many differences between



my group and groups of other universities.” Items were measured using a five-point Likert scale ranging from 0 = completely disagree to 4 = completely agree. To assess reliability of the questionnaire Cronbach’s  $\alpha$  was computed and was found to be .62, .79 and .80 after respectively the group discussion meeting, the group decision meeting and the plan of action meeting. Mean social identity scores were computed by the sum of the separate items, divided by eight. For a complete overview of the questionnaire see Appendix A7.

### **Explicit leadership questionnaire**

Explicit leadership was measured by asking participants (i) who was most influential during the group assignment? (ii) Who gave the best arguments? And (iii) who could be the group’s leader? Each participant could designate one group member for each question. For an overview see Appendix A8.

### **Implicit leadership questionnaire**

Implicit leadership was measured using items adapted from Bullée’s (2012) questionnaire for mapping leadership in small groups. The questionnaire requires participants to indicate for each group member, the degree which: (i) they identified themselves with another group member; (ii) a group member was prototypical for the group; (iii) a group member was able to represent the group’s interests; and (iv) a group member was responsible for group feeling. Participants answered these questions by ‘distributing’ points across the group members. Excluding the first question, where participants were instructed to give themselves zero point, participants were instructed to give each participant and themselves at least one point and distribute twelve points in total between all group members. For an overview see Appendix A9.

### **Measuring verbal behavior**

Each participant wore a sociometric badge (Sociometric solutions®) during the entire group phase of the experiment. Sociometric badges registered intragroup communication.

Data derived from the badges however are outside the scope of the current. Group member numbers were presented on each badge so individuals could be identified.

## **2.4 Procedure**

### **Pre-experimental procedure**

Participants were recruited for a study on 'group decision making' through presentations during college hours. Students who agreed to participate could write down their name and e-mail address on an entry list. An e-mail with a link to the first questionnaire (Individual) and the entry list including participant numbers was sent to all enrolled participants and they were given two weeks to complete the first online questionnaire.

Groups of four individuals were formed using a web-based list randomizer (<http://www.random.org/lists>). The full list of participant names was entered in the generator. Once the list was randomized every successive four individuals would form a group and were given a group number. Subsequently groups were randomly assigned to either the control or experimental condition. Due to the high number of German speaking participants it was chosen that groups which consisted only native-German speaking individuals could speak German during group assignment. Mixed groups spoke Dutch. To avoid misinterpretation crucial words during the experiment were translated in German in the on-screen instructions.

After groups were determined an e-mail was sent to each separate group. This e-mail stated the group members were placed in the group on the basis of their answers on the primary questionnaire. After this they were instructed to agree upon four contact points with a maximum of two weeks between the first and last contact point. When a group reached agreement on these four points the experiment could start on the first agreed contact point.

### **Procedure**

Participants read about budgets cuts the Dutch government is currently implementing. It was stated that leaked documents showed Dutch universities would be cut on government

funding. Relatively small universities like Twente University would endure the hardest blow. As a consequence students of Twente University would have to pay an extra college fee up to 945 euro if the budget cuts were implemented. This was placed in contrast to students from Leiden University and Utrecht University who were not struck by the budget cuts. The scenario ended with the notion that a meeting was organized within a few weeks at which the definitive decision on the implementation of the budget cuts would be made. The scenario was written in such a way that it was anticipated to create a feeling of relative deprivation and was central to the entire experiment. For the full scenario see Appendix B.

During the experiment participants had to answer the questionnaires presented in Figure 1 in the context of the scenario. In general all participants went through the same experimental process. Experimental groups however were manipulated during the fourth meeting. Experimental groups' leaders were taken out of the group and were placed in an adjacent room, which was provided with a laptop and industrial earmuffs (Appendix C2). The remainder of the experimental group was instructed the same way as groups in the control condition.

Leader selection should be elaborated more thoroughly. A leader was identified using the implicit leadership questionnaire scores collected during the fourth meeting (when the group decision was made). For each group member the received ratings were identified and subsequently the total was determined by the sum of the ratings on separate questions, excluding one's own rating. The total score was divided by twelve, creating the average score. The experimental group's member with the highest average rating was identified as the emerged leader and subsequently removed from the group before the fourth meeting started. As stated before, participants were instructed to give each participant at least one point and distribute twelve points in total between all group members. When an individual distributed more than twelve points this meant s/he distributed more points consequently for every

participant. Ratings could therefore still be used during analysis. The explicit leadership questions were used as a back-up for the implicit leadership questionnaire if the average ratings were the same for different group members. However, this was never the case.

**Individual phase.** The individual phase consisted of several questionnaires, completed in the participants own time. First, participants were asked to provide some general information such as their participant number, gender, age, date of birth and how long they were registered as a student of Twente University. After basic information was collected participants were carefully instructed through the scenario and questionnaires as presented in Figure 1. Answers to these questionnaires were used as a base values from which changes in intent and perceived action radicality due to group influence could be derived.

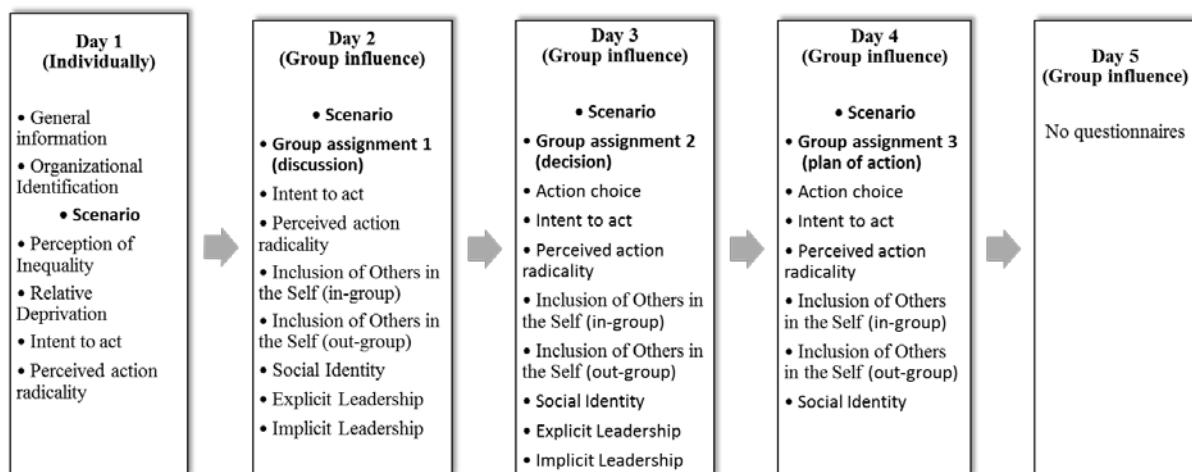


Figure 1: Overview of measurements on different meetings

**Group phase.** The group phase consisted of four meetings. During this phase the participants, in groups of four, were received in an isolated research room of the university's psychology laboratory. Participants were seated around a table in the middle of the room (Appendix C1). Before the first meeting, participants were asked to carefully read and sign the informed consent, in which participants rights were explained (Appendix D in Dutch). Every meeting the research leader named every participant's number, the group number and

the individual's group member number which had to be filled in prior to the experiment. Each meeting, after the registration process was completed participants were carefully instructed through the corresponding questionnaires as presented in Figure 1. It was stressed, both verbally and on-screen that participants should not discuss individual answers. Group assignments varied from meeting two through four and are therefore elaborated more thoroughly below.

#### *Day 2 - Group discussion*

Groups were instructed to discuss the pros and cons on why a certain behavioral option should or should not be taken for twenty minutes. It was stressed not to give one's opinion but solely focus on arguments. After twenty minutes the research leader entered the room and instructed the participants to individually proceed with the questionnaires.

#### *Day 3 - Group decision*

Groups were instructed to make a collective decision on which behavioral option they would take or perform. Additionally the group was briefly informed that during the next meeting they had to develop a plan of action on how to perform the chosen behavioral option. Again the group was given twenty minutes to reach a collective decision. If a decision was reached before time was over the participants were instructed to reel off the alarm clock after which the research leader again entered the room and instructed the participants to individually proceed with the questionnaires.

#### *Day 4 - Plan of action*

Experimental groups completed the assignment without the emerged leader. In the adjacent room the leader was instructed to answer a dummy questionnaire while other group members continued in the same manner as groups in the control condition. The leader was told he could leave once he was finished.

The remainder of the experimental groups and control groups were provided with a

hard copy of the chosen behavioral option. Before the group assignment started groups were first asked to briefly (five minutes) discuss if the previous chosen behavioral option was indeed the right one. If not, the group could alter their choice. Subsequently individuals were asked to indicate the degree in which they agreed with the definitive choice. The assignment, which was briefly introduced during meeting three followed. Groups were instructed to develop a “as complete as possible” plan of action on how to perform the chosen behavioral option within twenty minutes. Groups were instructed that if they felt they were finished before time ran out they could reel off the alarm clock after which the research leader again entered the room and instructed the participants to individually proceed with the questionnaires.

During the final meeting both the control groups as the experimental groups appeared in the same composition as during the second and third meeting. Once the registration process was finished the participants were instructed to determine who would give a short presentation of the plan of action and furthermore indicate why this group member was chosen. After this the participants were given fifteen minutes to prepare the presentation, for which the plan of action was presented in hard copy. The research leader interrupted the preparation with the notification the experiment was finished. Participants were given a full debriefing of the experiment and any questions were answered by the research leader. Once there were no more questions, the participants received their credits and were thanked for their participation.

## **2.5 Statistical analysis**

Before starting statistical analysis the data was screened for errors. Some missing and erroneous data was found in the ‘group decision’ section. Since the decision was a collective one, missing and erroneous data were filled in or edited by looking at the other group members.

Data was analyzed on an individual level using IBM SPSS 22. All analyses used a significance criterion of  $p < 0.5$ . Post hoc tests were conducted using Bonferroni correction.

### 3 Results

#### 3.1 Preliminary analyses

We assumed that, through social comparison, the scenario would simulate feelings of relative deprivation among participants. Hence it was imperative to analyze whether or not the scenario had the proposed effect. In the context of the scenario more than 65 % believed the study opportunities at Twente University were at least “almost completely different” when compared to study opportunities at other universities, resulting in an average perceived inequality of 2.57 ( $SD = 0.85$ ) on the five-point Likert scale. Participants’ contribution of a negative valence of the perceived inequality, that is, when student were more unsatisfied with study opportunities at Twente University, was subsequently utilized as an indication of relative deprivation. On average participants indicated a significantly higher sense of dissatisfaction when they compared their own situation to that of students at other universities ( $M = 1.74$ ,  $SD = 0.95$ ) than when they compared their situation with fellow students of Twente University ( $M = 1.43$ ,  $SD = 0.75$ );  $t(71) = 2.33$ ,  $p < .05$ . Furthermore, a significant correlation was found between the perception of inequality and the degree of dissatisfaction resulting from the primary comparison;  $r(72) = .78$ ,  $p = .02$ . The highest degree of dissatisfaction was measured when participants were asked to compare the position of students at Twente University in general to the position of students at other universities ( $M = 1.94$ ,  $SD = 0.89$ ). Only 7 % indicated a sense of dissatisfaction when comparing their own situation with other students from Twente University (egoistical deprivation with in-group). This percentage more than triples (26 %) when they compared their own situation with that of students of other universities (egoistical relative deprivation with in-group). Overall, 29 % of respondents indicated a sense of dissatisfaction (rating at least a 3 or 4 on the scale), that is,

when they compared the general position of students at Twente University with that of students of other universities (fraternal relative deprivation). Correlations between the three measures of relative deprivation are shown in *Table 1*. Overall, the results suggest the scenario had the desired effect and form a solid foundation for further analysis.

*Table 1: Correlations among the relative deprivation variables*

Relative deprivation	Fraternal	Egoistical (in-group)	Egoistical (out-group)
<b>Fraternal</b>	-		
<b>Egoistical (in-group)</b>	.19	-	
<b>Egoistical (out-group)</b>	.63**	.30*	-

*Note: \*  $p < .05$  (2-tailed), \*\*  $p < .01$  (2-tailed)*

Base values of intention and perceived action radicality need to be determined in order to determine whether group influence affected participants' evaluation of the different behavioral options. Hence, a paired samples t-test was conducted to determine ratings of the indicated intent to perform a behavioral option, ratings of the corresponding perceived action radicality and finally whether two consecutive courses of action differed significantly in intent to act and perceived action radicality (i.e. whether a behavioral option was perceived as significantly more radical than another). Results will be discussed later in this paper. Finally, group choices and corresponding individual ratings need to be determined. Results, including individual ratings are displayed in Table 3.

*Table 2: Means, standard deviations and significance levels of Intent and Perceived action radicality as indicated by individuals without being influenced by a group*

Behavioral option	Mean Intent (SD)	Mean perceived radicality (SD)
(1) Do nothing	1.97 (0.98)	0.83 (0.92)



(2) Gather information	2.18 (0.84)	1.04 ( 0.88)*
(3) Talk about it	3.07 (0.83)**	1.40 ( 1.17)**
(4) Investigate counter action	1.88 (1.03)**	1.53 (0.89)
(5) Investigate and discuss counter action	1.54 (1.10)**	1.81 (0.99)*
(6) Urge to protest	1.57 (1.07)	2.21 (1.11)**
(7) Go to meeting	0.88 (0.99)**	2.22 (1.47)

Note: \*  $p < .05$  (2-tailed), \*\*  $p < .01$  (2-tailed). Significance level indicate a significant difference with the paired behavioral option. Thus the significance level at 2 refers to a significant difference between 1 and 2, and so on.

Table 2 shows that when participants were not affected by group influence they indicated, on average, “*Talk about it*” as the most probable behavioral option ( $M = 3.07$  on the five-point Likert scale). However, “*do nothing*” was rated as the least radical behavioral option ( $M = 0.83$  on the five-point Likert scale). Furthermore, results show the behavioral options line up in perfect ascending order regarding the perceived radicality. Table 3 shows participant’s ratings of the same possible courses of action after a group decision has been made. Excluding the group which chose option 3 and 7 the group choice caused a shift in what participants indicated as the most probable behavioral option. In the next section we will take a closer look at these changes.

Table 3: Group choice, corresponding Mean Intent and Perceived action radicality as indicated by individuals after the collective decision has been made

Behavioral option	Group choice									
	Individual		3 (n = 20)		5 (n = 28)		6 (n = 20)		7 (n = 4)	
	Int	Rad	Int	Rad	Int	Rad	Int	Rad	Int	Rad
(1) Do nothing	1.97	0.83	1.55	0.90	1.00	0.71	0.85	1.35	1.00	0.25
(2) gather information	2.18	1.04	1.75	1.05	1.67	1.07	1.60	0.90	1.25	0.50
(3) talk about it	<b>3.07</b>	<b>1.40</b>	<b>3.30</b>	<b>1.0</b>	3.21	1.46	3.10	1.05	<b>3.75</b>	<b>1.75</b>

(4) investigate counter actions	1.88	1.53	1.75	1.75	2.68	1.64	2.3	1.30	3.25	1.75
(5) investigate and discuss counter actions	1.54	1.81	1.75	1.55	<b>3.43</b>	<b>1.86</b>	2.75	1.26	3.25	2.00
(6) urge to protest	1.57	2.21	1.00	2.53	1.57	2.00	<b>3.30</b>	<b>2.16</b>	3.25	2.50
(7) Go to meeting	0.88	2.22	0.70	2.42	1.04	2.32	1.25	3.05	1.75	4.00

*Note.* Group Choice ratings are measured on day three; individual ratings on day one. Highest Intent ratings per chosen group action are displayed in bold.

### 3.2 Hypotheses

We expected that group influence causes an individual to show a higher intent to perform a chosen behavioral option when compared to when one is not influenced by a group (*H1a*). To test this hypothesis we conducted a repeated-measures ANOVA with within-subjects factor Progress (Individual, Discussion, Decision) and dependent variable Intent to act. Mauchly's test indicated that the assumption of sphericity had been violated,  $\chi^2(2) = 12.56, p = .002$ . Therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ( $\epsilon = .86$ ). Results show that intent to act was significantly affected by group discussion and group decision meetings  $F(1.72, 121.97) = 49.86, p < .000$ , as indicated by Figure 2.

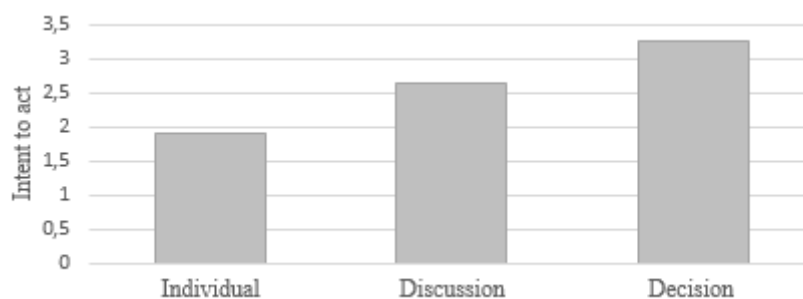


Figure 2. Effect of Progress on intent to act

A paired-samples t-test was conducted to make post hoc comparisons between the three conditions. Results show that the Intent to act was significantly higher after group discussion ( $M = 2.64, SD = 0.98$ ) than before group discussion ( $M = 1.91, SD = 1.18$ ),  $p = .001$ . Furthermore, the intent to act was significantly higher after the group decision was made ( $M = 3.26, SD = 0.87$ ) than after group discussion,  $p < .001$ . Results confirm the adoption of the current hypothesis.

We expected that the greater intent to perform due to group influence is directly linked to a decrease in perceived action radicality (*H1b*). To test this hypothesis difference scores were calculated for intent (Discussion – Individual and Decision – Discussion) and Perceived action radicality (Discussion – Individual and Discussion – Decision). Subsequently the correlations between difference scores in intent and difference scores in perceived action radicality were calculated. No significant correlation was found for the difference scores (Discussion – Individual) of Intent to act and Perceived action radicality  $r(72) = .06, n.s.$  Furthermore no significant correlation was found for the difference scores (Decision – Discussion) of Intent to act and Perceived action radicality  $r(71) = .05, n.s.$  Results reject the adoption of the current hypothesis.

To test whether the perceived action radicality changed over time in the first place, a repeated-measures ANOVA with within-subjects factor Progress (Individual, Discussion, Decision) and dependent variable Perceived action radicality was conducted. Mauchly's test indicated that the assumption of sphericity had been violated,  $\chi^2(2) = 17.00, p < .001$ . Therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ( $\epsilon = .82$ ). Results show that the perceived action radicality was not significantly affected by group discussion and group decision meetings  $F(0.09, 122.58) = 0.05, n.s.$

Following the previous hypotheses it was expected that the intention to perform a behavior option and the corresponding perceived action radicality after group influence is

directly related to the degree an individual identifies oneself with the group (*H1c*). To test this hypothesis first the mean social identity scores were calculated for the different phases of the experiment (Table 3).

Table 3. Mean Social Identity scores and standard deviations depending on progress

Mean social identity scores (Mean SI)		
Discussion ( <i>n</i> = 71)	Decision ( <i>n</i> = 71)	Plan of action ( <i>n</i> = 62)
2.22 (0.45)	2.30 (0.56)	2.38 (0.56)

Subsequently a correlational analysis was performed including Intent to act (Discussion, Decision), Perceived action radicality (Discussion, Decision) and Mean social identity (Discussion, Decision). No significant correlation was found between respectively the mean social identity score (Discussion) and Intent to act (Discussion),  $r(71) = -.15$ , *n.s.* and the mean social identity score (Discussion) and Perceived action radicality (Discussion),  $r(71) = -.01$ , *n.s.* A significant correlation was found between the mean social identity score (Decision) and Intent to act (Decision),  $r(71) = .277$ ,  $p = .02$ . Finally, no significant correlation was found between the mean social identity score (Decision) and Perceived action radicality (Decision),  $r(71) = .08$ , *n.s.*

The second part of our study concerned influences of leadership on the previously discussed dependent variables. We hypothesized that under the influence of leadership group members perceive a stronger sense of social identity when compared to group members that are not influenced by leadership (*H2a*). To test this hypothesis a one-way ANOVA was conducted with independent variable Leadership (Presence, Absence) and dependent variable Mean SI (Plan of action). Results show a non-significant main-effect of Leadership on Mean SI (Plan of action),  $F(1, 60) = 0.25$ ,  $p = .62$ . Therefore, results reject the adoption of the current hypothesis.

Next to last we hypothesize that group members which are not influenced by leadership will show a weaker intention to perform a chosen behavioral option when compared to groups which are influenced by leadership (*H2b*). To test this hypothesis a one-way ANOVA was conducted with independent variable Leadership (Presence, Absence) and dependent variable Intent to act (Plan of action). Results show a non-significant main-effect of Leadership on Intent to act (Plan of action),  $F(1, 60) = 0.05, p = .82$ , indicating no significant differences in Intent to act between Leadership conditions. Results again reject the adoption of the current hypothesis.

Finally, we hypothesized the weaker intention to perform a chosen behavioral option is directly linked to a higher perceived action radicality (*H2c*). To test this hypothesis an independent-samples t-test was conducted. No significant differences were found between the leadership-presence and leadership-absence groups,  $t(61) = -.51, n.s.$ , indicating the perceived action radicality did not significantly differ between Leadership conditions. Results therefore reject the adoption of the current hypothesis.

### **3.3 Follow-up analyses**

Follow-up analyses are performed to explore the differences in correlational between social identity scores and the different group assignments. Analysis is divided into two parts, exploring the different roles social identity play in the intent to act after group discussion and in the intent to act after a group decision has been made. First, a repeated-measures ANOVA with within-subjects factor Progress (Individual, Discussion) and dependent variable Intent to act was conducted to analyze the main-effect of group influence on intent to act after group discussion. Results show a clear significant main-effect of group influence on intent to act after group discussion,  $F(1, 71) = 26.03, p < .001$ . Subsequently, Mean SI (Discussion) was included as a covariate in order to explore if it explains part of the effect the group discussion has on the intent to act. Results this time show a non-significant main-effect of group

influence,  $F(1, 69) = 1.59, p = .21$ . Furthermore a non-significant interaction-effect of group influence and Mean SI (Discussion) was found,  $F(1, 69) = 0.08, n.s.$

Second, a repeated-measures ANOVA with within-subjects factor Progress (Individual, Decision) and dependent variable Intent was conducted to analyze the main-effect of group influence after a group decision was made. Results show a clear significant main-effect of group influence on intent to act after a group decision was made,  $F(1, 71) = 77.11, p < .001$ . Again Mean SI (Decision) was included as a covariate in order to explore whether the effect of group influence after a group decision was made depends on social identity. Again, a non-significant main-effect of group influence was found  $F(1, 69) = 0.31, n.s.$  Contrary to this finding a significant interaction-effect of group influence and Mean SI (Discussion) was found,  $F(1, 69) = 7.91, p = .006$ .

Additional analyses are performed to determine whether the removal of the emerged leader had a progress-related effect on social identity, intent to act and perceived action radicality, comparing both Leadership conditions over time.

First a repeated-measures ANOVA with within-subjects factor Progress (Decision, Plan of action), between-subjects factor Leadership (Absence, Presence) and dependent variable Mean SI was conducted. While previous analysis found no significant differences in social identity between leadership conditions a significant interaction-effect of Leadership and Progress was found,  $F(1, 59) = 10.44, p = .002$ , indicating different effects of the Leadership conditions on the development of social identity over time. Results however cannot be clarified using the current data.

Subsequently a repeated-measures ANOVA with within-subjects factor Progress (Decision, Plan of action), between-subjects factor Leadership (Absence, Presence) and dependent variable Intent to act was conducted. A significant main effect of Progress was found,  $F(1, 60) = 13.65, p < .001$ . Post hoc analysis found an increase in intent to act for both

the Leadership Absence as Leadership Presence groups, respectively from  $M = 3.30$  to  $M = 3.56$  and from  $M = 3.26$  to  $M = 3.50$ . As expected, no significant interaction effect was found,  $F(1, 60) = 0.00, n.s.$

Finally a repeated-measures ANOVA with within-subjects factor Progress (Decision, Plan of action), between-subjects factor Leadership (Absence, Presence) and dependent variable Perceived action radicality was conducted. In line with previous analyses no significant main- and interaction effects were found; respectively  $F(1, 60) = 1.73, n.s$  and  $F(1, 60) = 1.15, n.s.$

#### **4 Discussion**

The current research began by pleading for a better understanding of the social and psychological factors which lead to terrorism. Understanding these factors is essential to develop more effective, long-term and non-violent policies. When factors leading to the display of radical behavior can be identified governmental resources can be allocated to identifying radicals and potential terrorists in a premature stage, take appropriate action and hereby avert future terrorist attacks. In the current article a comprehensive analysis is presented of the relationship between the behavioral intent, perceived action radicality, Social Identity and leadership.

We expected that group influence would cause an individual to show a higher intent to perform a chosen behavioral option when compared to when one is not influenced by a group. A significant effect of group influence was reported. The nature of these findings need some elaboration. The hypothesis was analyzed on the basis of the participant's choice before they came in contact with the group. If groups subsequently choose a behavioral option which was perceived as more radical than the (indicated) most likely behavioral option by separate

individuals, it was concluded a group had ‘radicalized’ and were subject for further analysis. Most, but not all groups made a more radical choice. All groups however were included in the analysis. This choice of including all groups in the analysis is motivated by the assumption that, when using a rational-choice framework, individuals should be reluctant to commit real resources of time, money and risk taking to advance the cause of a larger group (McCauley and Moskaleiko, 2010). The rational choice for an individual who cares about the group is thus to do nothing, let others pay the costs, and benefit from any advance for the group as a free-rider (Varshney, 2003). In line with this, results should therefore show that participants, before coming in contact with the group, assigned the highest probability to the least (perceived) radical behavioral option. Analysis of these “base values” however showed participants were willing to make a more radical choice than expected, even without being influenced by a group. For this reason the groups that chose the same behavioral option as would be expected from the base values were also incorporated in the analysis. The primary finding that separate individuals were willing to make a more radical choice could be explained by the fact a situation was created in which feelings of relative deprivation were simulated amongst participants. This assumption is in line with Dubé and Guimond (1986), who stated that people who believe their entire group is deprived are more likely to participate and actively attempt to change the social system.

Secondly we expected that a greater intent to perform due to group influences is directly linked to a decrease in perceived action radicality. Results however show no significant correlation between the intent to act and perceived radicality. We found perceived radicality did not change significantly over time. If the increase of intention to perform the group’s behavior was inconsistent with an individual’s attitude one should expect a decrease of perceived action radicality due to cognitive dissonance (Festinger, 1957). In contrast to the increase in indicated intent to perform this suggests the indicated intent is a thought-out



'decision' and group members are increasingly willing to perform the group's behavior. Results indicate that individuals internalized group attributes and are therefore willing to act in accordance with group norms. The absence of an overall decrease in perceived action radicality could also be explained the two-dimensional nature of perceived radicality as can be explained by the increase in perceived radicality of the two passive "I won't undertake any action" courses of action. While we previously described radicalization as "the increase of money, time, risk-taking and violence in support of a (political) cause" (McCauley & Moskaleiko, 2008), it could also be argued that if a group decided to "do nothing" this would indicate making a more radical choice. This would be in direct contrast to the definition described above. However, the increase in perceived radicality of the two passive courses of action could also be explained because these courses of action differ (significantly) from the group's choice, which would again indicate an internalization of the groups' attitudes. This explanation however is outside the scope of the current study.

Our third hypothesis, that the intention to perform a behavioral option and the corresponding perceived action radicality after group influence is directly related to the degree an individual identifies oneself with the group, only held for the relation between intent to act, and, even more specifically; only held for the relation between the intent to act after a group decision was made and not after a group discussion. These different findings can partly be explained by the nature of the group assignments. The group discussion did not result in a collective "opinion" on what behavioral option was the best – the group decision did. After the group discussion the indicated intention thus still serves the individual interest, where the indicated intent after the group decision served the collective interest. It could thus be argued that the collective adoption of a behavioral option made individuals evaluate the behavioral options in light of the collective interest. The negating effect of social identity on the main-effect of group influence after a group decision is made underlines the importance of

Social Identity in explaining how an individual is influenced by a group. The most problematic feature of extremist or radical groups is precisely that their members identify strongly with a group that advocates and systematically pursues radical behavior (Hogg and Adelman, 2013). Furthermore Hogg and Adelman stated that identification with a radical group is particularly problematic for a society if members themselves express intentions to engage in in the group's extreme behavior. In the current research intentions were analyzed on an individual level. It can therefore be stated that the found effect of Social Identity on intent to perform the group's collective decision is a highly problematic one.

Following our last mentioned hypotheses we first expected that in leadership-presence group members perceive a stronger sense of social identity when compared to leadership-absence group members. While a significant interaction effect was found between the two conditions and social identity, pointing out different effects of social identity for the leadership-absence group and leadership-presence group, differences in social identity between groups were not significant. One could argue that changes in social identity between groups is just to the loss of one (any) group member. However, the fact that the leadership-absence group loses a group member compared to the leadership-presence group cannot be evaded. Further research could settle this argument by investigating whether the removal of another group member causes the same effect as the removal of the emerged leader.

Furthermore we hypothesized that group members in the leadership-absence groups will show a weaker intention to perform a chosen behavioral option when compared to the leadership-presence groups. Contrary to our hypothesis results showed an increase in intent to perform the groups' collective decision regardless of whether the emerged leader was present or absent. The continuous increase in intent to perform the group's behavior might be explained due to the internalization of the group's norms and values. A nice illustration of this assumption is made by Reicher's (1984) analysis of a riot in the UK in the early 1980s: a

crowd only took its lead only from norm-consistent actions of community leaders. Their influence however was clearly limited. The construction and identification of norms could therefore be explained as a dynamic process in which social context plays a significant role in shaping people's attitudes. Once the (group) norm has been identified, self-categorization produces normative behavior. Social categorization causes depersonalization, which in turn causes genuine attitude change in accordance with group norms (Hogg and Adelman, 2013). Results show that in turn the internalization of group norms and values explain the intent to perform the group's prescribed behavior. Thus, leadership or not, the individual will be moved by his or her own social identity.

The intent to choose a behavior option was an important dependent variable in the current experiment. Some final remarks are made concerning this concept. The primary underlying dimension characterizing an individual's intention is his or her estimate of the probability of performing a given behavior. As stated by Fishbein and Ajzen (2010) behavioral intentions, when appropriately measured, can account for an appreciable proportion of variance in actual behavior. A critical remark however needs to be made. The first comment deals with behavior (in)compatibility. Behavior incompatibility is the lack of compatibility between the elements defining the behavior and the elements involved in the measure of intention. According to Fishbein and Ajzen (2010) the most fundamental requirement for a strong relationship between intentions and behavior is a high degree of compatibility. Therefore behavioral intentions were operationalized as the probability to perform an actual behavior or, as formulated in the current research, a certain behavioral option. It could therefore be assumed that the intentions rated by the individuals are a good representation of actual behavior.

#### **4.1 Limitations**

For obvious reasons it is difficult, if not impossible, to conduct experimental research with real radical groups and behaviors. In the current study the mindset of individuals was framed by a hypothetical scenario which was designed to create feelings of relative deprivation. Using a hypothetical situation might however create difficulties in interpreting findings, because answers to i.e. a behavioral questionnaire might differ substantially from the behavior that is performed (consider i.e. your own New Year resolutions). To account for this irrationality it is important to note the differences between filling out a questionnaire and performing in a real-life situation. Fishbein and Ajzen (2010) provide two possible explanations for this inconsistency. First, suggested by Campbell (1963), intentions are verbal responses to a psychological object that are more easily performed than corresponding overt responses, but both are a function of the same disposition. A second explanation attributes literal inconsistencies in intentions are brought about by accessibility of different cognitions in hypothetical and real situations. Thus, on a questionnaire, individuals may express an intention to engage in a given behavior, but when they enter the real situation, their perceptions may change, producing a different intention.

Keeping in mind the first explanation suggested by Campbell (1963) it should be noted that not only intentions were measures but also the perceived radicality of the overt response. Radical behavior was operationalized by an individual's perceived action radicality, hereby taking into account individuals' differences in perception of radicality. Since the participants in the current study obviously are not real terrorists or radicals, living with a radical mindset, it is fair to assume that the more an individual perceived a behavior to be radical the more (psychological or physical) effort it takes to display the behavior. This way, in comparison to a situation in which it is just assumed that in example behavior B is more radical than behavior A, there is no doubt that when an individual indicated a high intention to perform behavior B and rates behavior B as more radical than behavior A, an individual is

really inclined to perform a more radical action and is thus already anticipating on an increased effort. Considering the second explanation it is obviously true perceptions (could) change in a real-life situation, producing a different intention. However, in light of the topic at hand, it would be wise to take a more generous approach to the significance of the indicated behavioral intent since ignoring signs of radical intent in real-life could potentially lead to the deaths of dozens of innocent civilians.

#### **4.2 Implications of current findings**

Our current study showed that removing a group's emerged leader did not result in a decline to act in accordance with group norms. However, counter-terrorism policies from important countries such as the United States focus mostly on 'decapitating' terrorist organizations (Price, 2012). While this may have a short-term destabilizing effect on the organization, sooner or later the organization will regroup and continue their attacks. The current study shows that individuals' intent to act in accordance with group norms keeps growing significantly regardless of this 'decapitation'. Furthermore the current study shows the significant role social identity plays in the intention to perform a group's collective decision. Since potential terrorist do not yet fully identify with groups within the terrorist organization the overall results show the need for a new, long-term strategy where special focus needs to be placed on an early identification of possible 'candidates' for recruitment by terrorist organization

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## Appendices

### Appendix A. Measures

#### Appendix A1. Organizational identification questionnaire

The next five questions concern your relation with Twente University. Rate each statement independently.

[0 = *Strongly disagree*; 4 = *Strongly agree*]

1. When someone criticizes Twente University, it feels like a personal insult.
2. I am very interested in what others think about Twente University.
3. When I talk about Twente University, I usually say 'we' rather than 'they'.
4. Successes of Twente University are my successes.
5. When someone praises Twente University, it feels like a personal compliment.

#### Appendix A2. Perception of inequality and Relative deprivation

Carefully read the following questions and answer in light of the current situation

[0 = Completely equal; 4 = Completely unequal]

1. Indicate to what degree do you think study opportunities at Twente University are the same as the study opportunities at other universities.

[0 = Completely satisfied; 4 = Completely unsatisfied]

1. How satisfied are you with your study opportunities at Twente University when compared to study opportunities of other students at other universities?
2. How satisfied are you with your study opportunities when compared to other students at Twente University?
3. How satisfied are you with the position of students at Twente University when compared to the position of students at other universities?

**Appendix A3. Intent to act**

Think of the consequences of this decision for you situation and visualize you future situation as a student at Twente University.

Below different choice options are presented. Indicate, under current circumstances, how likely it would be for you to make/perform the choice. Rate each choice option independently. There are no right or wrong answers, your first hunch is mostly the right one.

[0 = Very unlikely; 4 Very likely]

1. I accept the negative, I won't undertake any further action.
2. I will gather information about the consequences of this decision, I won't undertake any further action.
3. I will think of the possible consequences of this decision and will talk about it, in example, during lunch.
4. I will investigate the possibilities to counter this decision.
5. I will investigate the possibilities to counter this decision and will discuss these with fellow students.
6. I will urge students to protest against this decision
7. I will go to the meeting to exert infkuenace and to oppose the decision

**Appendix A4. Perceived action radicality**

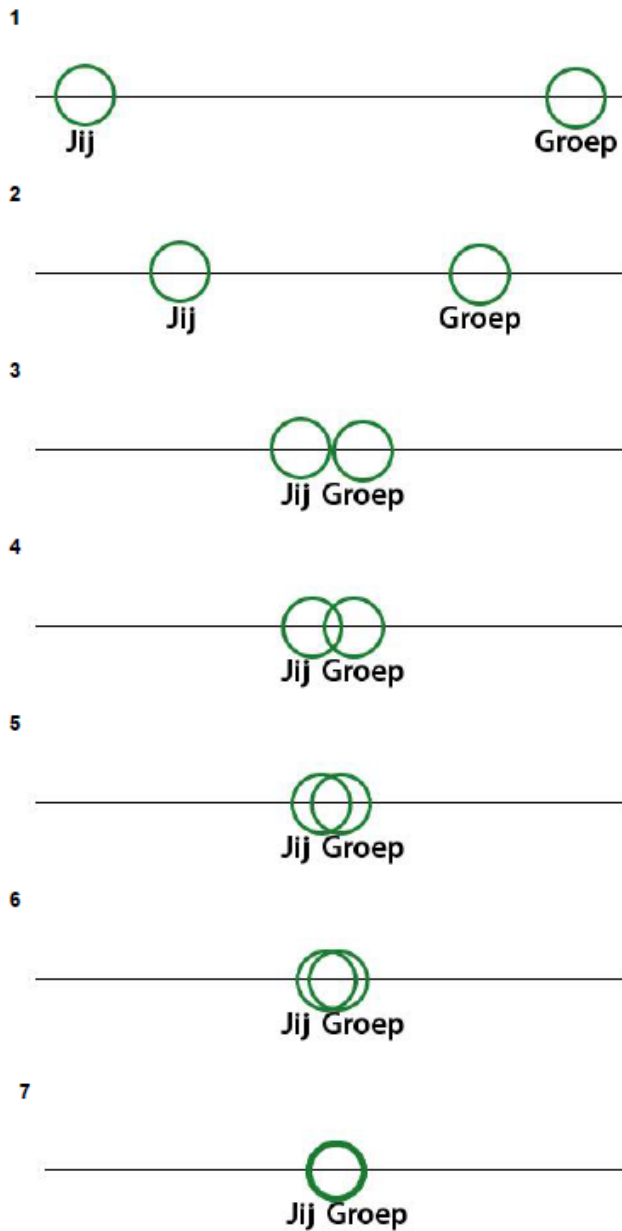
Below the different choice options are presented. Indicate, under current circumstances, drastic it would be for you to make/perform the choice. Rate each choice option independently. There are no right or wrong answers, your first hunch is mostly the right one.

[0 = Not al all drastic; 4 Very drastic]

1. I accept the negative, I won't undertake any further action.
2. I will gather information about the consequences of this decision, I won't undertake any further action.
3. I will think of the possible consequences of this decision and will talk about it, in example, during lunch.
4. I will investigate the possibilities to counter this decision.
5. I will investigate the possibilities to counter this decision and will discuss these with fellow students.
6. I will urge students to protest against this decision
7. I will go to the meeting to exert infkuenace and to oppose the decision

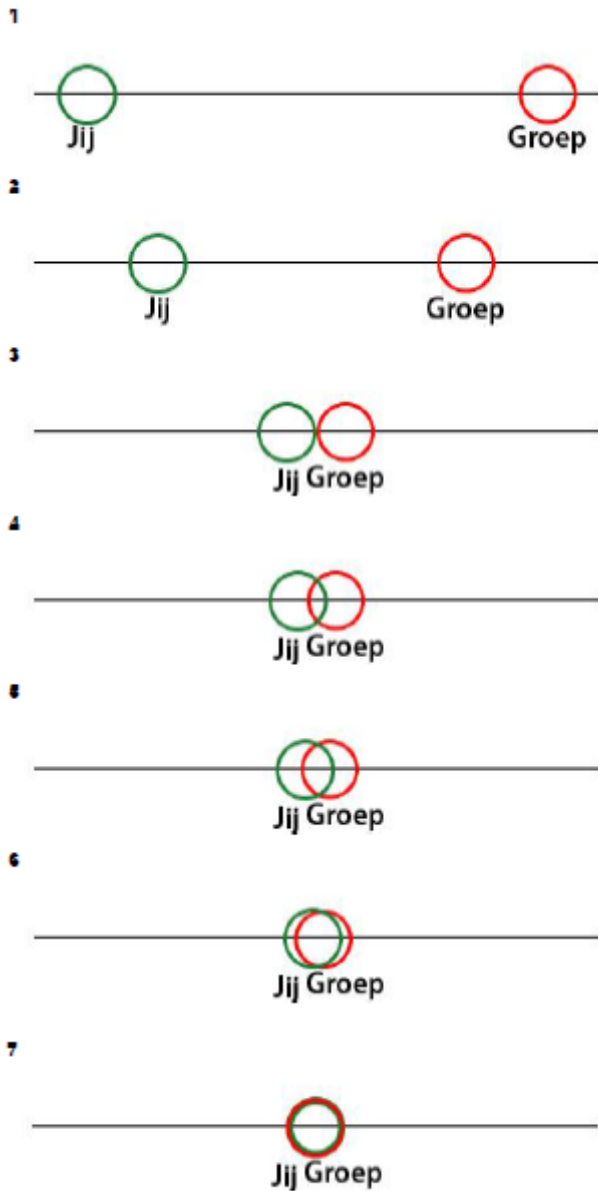
**Appendix A5. Inclusion of Others in the Self In-group**

Imagine one of the circles below to represent yourself and the other to represent other group members of your group. Indicate which picture best portrays how you feel with respect to your group.



**Appendix A6. Inclusion of Others in the Self Out-group**

Imagine one of the circles below to represent yourself and the other to represent a group of a *different university*. Indicate which picture best portrays how you feel with respect to the other group.



**Appendix A7 Social Identity Questionnaire**

The following statements consider you in the context of the group. Your answers has to describe what you think or feel *at this moment*. Do not argue your decision, your first hunch is mostly the right one.

[0 = Completely disagree; 4 = Completely agree]

1. I and other group members have much in common.
2. In the current situation I consider the group’s choice to be my own
3. The group’s success is my own success.
4. In the current situation the group’s norms and values are my own.
5. Between my group and groups of other universities there are many differences.
6. In the current situation I attach much value to my membership of the group.
7. In the current situation who I am is partly determined by my membership of the group.
8. I share a common faith with other group members.

**Appendix A8 Explicit leadership**

[1 = Group member 1; 4 = Group member 4]

1. Who was most influential during the group assignment?
2. Who presented the best arguments? / Who had most influence on the group decision?
3. Who could be the group’s leader?

**Appendix A8 Implicit leadership**

1. Distribute 12 credits between the 4 group members. Give most credits to the one with whom you identify most. Give each member at least 1 credit.  
Assign ‘0’ to your own group member number

Group member 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group member 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group member 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group member 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Distribute 12 credits between the 4 group members. Give most credits to the one who is most prototypical for the group. In other words, who is the impersonation of what represents the group. Give each member at least 1 credit.

Group member 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group member 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Group member 3                                       

Group member 4                                       

3. Distribute 12 credits between the 4 group members. Give most credits to the one who is best able to represent the group's interests. Give each member at least 1 credit.

Group member 1                                       

Group member 2                                       

Group member 3                                       

Group member 4                                       

4. To what degree did group feeling exist?

[0 = Not at all; 4 = Completely]

5. Distribute 12 credits between the 4 group members. Give most credits to the one who, in your eyes, is most responsible for the group feeling. Give each member at least 1 credit.

Group member 1                                       

Group member 2                                       

Group member 3                                       

Group member 4

## Appendix B. Scenario

In recent years political Netherlands is dominated by budget cuts. One budget cut after another is presented by cabinet Rutte II and approved by the House of Representatives. All layers of the population experience the negative effects of the budget cuts. To date, Higher and Scientific Education were spared. Until now. Following Prince's Day important decisions will be made concerning the degree of financial support Dutch universities will receive in the next 5 years.

Leaked documents show not every university will be affected by the budget cuts. Where in the past the government took responsibility of most of the funding for Dutch universities, in the future this will be the university's own responsibility. Twente University will endure the hardest blow while Leiden University and Utrecht University will be spared from the announced budget cuts.

The government contribution made sure smaller universities and colleges could be preserved. However, due to the current measure the position of small universities is severely threatened. If the measures are put through this will mean students at Twente University will have to pay an additional €782 to €945 in tuition fees. Furthermore the opportunities (without additional charge) to receive a master's degree and a PhD will be severely limited.

At Friday December 27<sup>th</sup> the Ministry of Education, Culture and Science (ECS) has organized a closed meeting at which a final decision is made. During this meeting each university has the opportunity to present their pros and cons to the current measure. Prime Minister Mark Rutte (former student at Leiden University), Minister Jet Bussemaker (Ministry of ECS; former student at Amsterdam University) and State Secretary Sander Dekker (Ministry of ECS; former student at Leiden University) will attend the meeting and will debate with two representatives of each university. Because of the relative size the relative size it is decided that small universities, including Twente University, can only send one representative to represent its interests.



## Appendix C. Experimental setting

### Appendix C1. Group setting



### Appendix C2. Emerged leader setting (experimental condition)



## Appendix D. Informed Consent

GW.07.130

Ik, ..... (naam proefpersoon)

Stem toe mee te doen aan een onderzoek dat uitgevoerd wordt door

Tom Jansen

Ik ben me ervan bewust dat deelname aan dit onderzoek geheel vrijwillig is. Ik kan mijn medewerking op elk tijdstip stopzetten en de gegevens verkregen uit dit onderzoek terugkrijgen, laten verwijderen uit de database, of laten vernietigen.

*De volgende punten zijn aan mij uitgelegd:*

1. Het doel van dit onderzoek is het onderzoeken van besluitvorming.  
Deelname aan dit onderzoek zal meer inzicht geven omtrent de manier waarop groepen tot een besluit komen
2. Er zal mij gevraagd worden aan een experiment mee te werken dat gespreid over 5 dagen ongeveer 4 uur zal duren. Tijdens deze dagen wordt gevraagd vragenlijsten in te vullen  
Het hele onderzoek zal ongeveer 240 minuten duren. Aan het einde van het onderzoek zal de onderzoeker uitleggen waar het onderzoek over ging.
3. Er behoort geen stress of ongemak voort te vloeien uit deelname aan dit onderzoek.
4. De gegevens verkregen uit dit onderzoek zullen anoniem verwerkt worden en kunnen daarom niet bekend gemaakt worden op een individueel identificeerbare manier.
5. De onderzoeker zal alle verdere vragen over dit onderzoek beantwoorden, nu of gedurende het verdere verloop van het onderzoek.

Handtekening onderzoeker: .....

Datum: .....

Handtekening proefpersoon: .....

Datum: .....



