Explaining Violent Extremism for Subgroups by Gender and Immigrant Background, Using SAT as a Framework

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Abstract
The principal object of this paper is to study the effects of extremist propensity, exposure to extremist moral settings and their interaction effect on political violence in sub groups by gender and immigrant background. The situational action theory, as outlined by Wikström is used as a framework. Although previous studies have found empirical evidence for this interaction effect in the light of general offending, no study so far has applied SAT to the study of violent extremism. In doing so, we will also address the stability of the interaction effect by gender and immigrant background. The present study is based on a large web survey on self-reported political violence as a measure for violent extremism. Strong support is found for the hypothesis that the effect of exposure to violent extremist moral settings is depending on the strength or weakness of individual violent extremist propensity. This indicates that exposure to violent extremist moral settings has the strongest effect on political violence for individuals with a high propensity to violent extremism. These results imply that SAT can be used to as a framework to explain individual violent extremism. This pattern is found for boys and girls of both native (Belgian) and immigrant background.
Introduction

Any act—delinquent or otherwise—depends on “something about the actor,” that is, something about his values, his goals, his interests, his temperament or, speaking inclusively, his personality, and it depends also on “something about the situation” in which he finds himself. Change either actor or situation and you get a different act/.../delinquent acts always depend on appropriate combinations of actor and situation...

— Albert K. Cohen and James F. Short Jr.1

The Situational Action Theory (SAT) is a general theory of offending, aimed at providing fundamental insights in the causal processes leading to acts of crime, or more generally, moral rule breaking.2 It is formulated as an ‘action theory’, or an abstract account of what moves people to action in certain circumstances or situations. Action theory has its roots in the sociological writings of James Coleman, Raymond Boudon and more recently analytical sociologists such as Peter Hedström.3 Action theorists consider individuals as reasonable causal actors. For instance, action theorists assume that humans have agency. In criminology, action theories explain why people commit acts of rule breaking. More specifically, SAT defines crime as acts of rule breaking, stated in law. While the definitional aspect of crime has been studied as a separate research topic, as the content of crime differs from time to time and from society to society, SAT takes the standpoint that the process of rule breaking may be similar. Committing an act of crime is committing an act that is prohibited by law. The only issue all different crimes have in common is the fact that they are prohibited. While mala in se may be rather stable in time, this is less the case for mala prohibita. The present article presents and applies this newly developed theory in the field of political violence/violent extremism/terrorism studies.

Aetiological research however, is concerned with a key question: why do people abide by the law and do not break rules, knowing that a sanction may be a possible consequence. Aetiological theory is thus restricted to explaining the key mechanisms involved in the deliberate and habitual violation of rules. SAT is an integrated theory that is developed in this domain of criminology. As such SAT combines contextual and individual theories into one situational framework that explains why people actually commit acts of crime in a given situation. The situational part of SAT explains how person - moral environment interactions bring about crime as an action alternative. The developmental part of SAT explains how people develop criminal propensities and how people tend to be become exposed to criminogenic moral settings. The developmental model treats

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what criminologists call the “causes of the causes” of rule breaking while the situational model explains the more direct situational causes of offending. SAT is a mechanisms-based action theory, meaning that it is interested in advancing our knowledge of how causes bring about action. Recent studies of adolescent offending offered empirical evidence for important elements of the theory. As SAT is a general theory of crime, an interesting question is the level of applicability to other types of crime, in casu political violence.

Wikström developed SAT as an answer to problems of causation and explanation in the search for causes of crime. Wikström argued that many contemporary criminological theories suffer from a poor understanding of causal mechanisms and a lack of integration of levels of explanation. As a consequence little is known about the actual causes of crime in contrast with the endless number of crime correlates. This contrast is due to a lack of general theories of action that integrate levels of explanation and assess both individual and environmental factors and their interaction as potential causes of offending. In adapting a general framework of action-oriented theory, Wikström argues that behavior of individuals should be seen as a consequence of the behavioral options that they perceive and the actual choices that they make. Those behavioral options are not chosen in a vacuum, they are a consequence of the interaction between individual moral attitudes and the social milieus to which actors belong. Individual characteristics and characteristics of social settings act as direct causes of actions that are undertaken, but only if they influence the perception of behavioral alternatives and/or processes of decision-making. Those factors that in turn influence individual and environmental causal factors can be seen as indirect causes or as ‘causes of the causes’.

We submit the thesis that criminology (or at least that segment that aims at explaining the aetiology of law breaking) and studies into violent extremism and terrorism suffer from similar problems. Although a lot of research has been conducted into violent extremism, the domain is still lacking overarching theoretical frameworks. Wikström and Bouhana argue that, “Although a lot is

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known about terrorism, one may feel as if little is understood.\textsuperscript{9} When examining the segment of the literature trying to explain violent extremism, various risk factors that are related to violent extremism can indeed be found.\textsuperscript{10} However, this risk-factor approach is not capable of identifying the real causes, generating confusion.\textsuperscript{11} Wikström and Bouhana state that in order to explain violent extremism the current risk factor approach has to be replaced by an approach focusing on explanatory mechanisms that link background characteristic of violent extremism to the real causal factors.\textsuperscript{12} In other words, they propose to apply the framework of SAT to the explanation of violent extremism and consequently conceptualize acts of violent extremism as the result of the interaction between an individual and the environment.

The philosophy of SAT can be applied to the explanation of violent extremism because one of the key assumptions of SAT, the definition of crime as ‘the breaking of moral rules as defined in the law’, can also be applied to violent extremism and more specifically to political violence as the behavioral component of violent extremism.\textsuperscript{13} When addressing violent extremism, there is some conceptual confusion on what exactly needs to be explained, since the differential interpretation of violent extremism prevents the establishment of a widely accepted definition. Wikström already addressed the same problem in the explanation of crime.\textsuperscript{14} By defining acts of crime as a special form of moral action, namely as the breaching of moral rules as stated in criminal law, conceptual discussions can be circumvented.\textsuperscript{15} Using this definition, the explanation of crime lies in the question why individuals breach moral rules of...
which they know it is against the law to do so. In other words, the focus rests on 
the breaking of the moral rule as defined in law, and not on the moral rule itself. 
What differs between types of crime is not the explanatory process but the 
content of the offence.

The same may be true for politically and religiously motivated violence. Although 
expressions of political violence differ, they are all violent in nature and violence 
refers to violations of the criminal law. Defining political violence this way has 
the advantage that all forms of political violence fall under the same umbrella, be 
it the throwing of rocks during a manifestation, the taking of hostages, or violent 
attacks. Furthermore, studying violent extremism as a moral action solves the 
problem of conflicting perceptions and definitions on what constitutes violent 
extremism and what not. The focus lies on the explanation of the fact that a 
moral rule as defined in the law is breached, and not on the question whether or 
not the moral rule itself is valid/(im)moral or whether or not it is righteous to 
breach that rule.

One key assumption derived from SAT is that, 1) the individual propensity to 
violent extremism and exposure to violent extremist settings can be seen as direct 
causes of political violence, and 2) the impact of exposure to violent extremist 
settings is contingent on the level of individual violent extremist propensity. SAT 
further argues that this key pattern should be similar in males and females, non-
immigrants and immigrants. Many samples are simply not large enough to test 
the stability of the person-environmental exposure interaction. The present 
study therefore fills a gap in the existing empirical literature on political violence 
by explicitly testing the independent effects of extremist propensity and exposure 
to extremist moral settings and their interaction in sub groups by gender and 
immigrant background. In other words, the present studies aims at testing a key 
proposition of SAT. In the current paper, we put the implications of SAT 
regarding gender, immigrant and political violence to the test. We investigate 
whether its core variables are similarly associated with political violence for 
Belgian and immigrant males and females, and whether the main and interactive 
effects of the independent variables hold in all sub groups.

The effects of violent extremist propensity, exposure to violent extremist settings 
and their interaction on violent extremism will be assessed. Although some 
previous studies found empirical evidence for this interaction in terms of general 
crime, no study so far, with exception of Pauwels et al., has applied SAT to the 
study of violent extremism. Furthermore, in doing so, this study also assesses

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16 Bouhana and Wikström, Theorizing Terrorism: Terrorism as Moral Action. A Scoping Study.
17 Borum, "Radicalisation into Violent Extremism I: A Review of Social Science Theories"; Mark 
Sedgwick, "The Concept of Radicalisation as a Source of Confusion," Terrorism and Political 
Exposure to New Social Media on Violent Extremism. An Integrative Quantitative and 
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Youths?"; Owen Gallupe and Stephen W. Baron, "Morality, Self-Control, Deterrence, and Drug Use: 
Svensson, Lieven Pauwels, and Frank M. Weerman, "Does the Effect of Self-Control on Adolescent 
Offending Vary by Level of Morality? A Test in Three Countries," Criminal Justice and Behaviour 
Anticipated Shame and Guilt Mediate the Effect of Socialization on Offending?" European Journal 
of Criminology 10:1 (2013): 22-39; Per-Olof H. Wikström and Robert Svensson, "When Does Self-
the question of how stable this interaction effect is by gender and immigration background, providing proof for the overall stability of SAT. Although attributes can never be causes, they can be an indication of underlying causes explaining why members of a particular group seem more susceptible to violent extremism. In this respect it is interesting that young males are more often involved in violent extremism compared to young females. On the other hand, female violent extremists become more and more visible. This raises the question whether the same explanatory mechanisms are at work for both groups. Although some studies have addressed the motivations of both men and women to join violent extremist groups, to our knowledge only a few studies so far have (identified and) compared causal factors and mechanisms for men and women.

Situational Action Theory in a Nutshell

As indicated above, the key arguments of SAT can also be applied to the explanation of violent extremism. SAT consists of a series of key propositions. First, the theory argues that crime is defined as: "an act of breaking a moral rule defined in criminal law." Following SAT, we define violent extremism as the commission of acts of violence as a means to political or religious goals. Second, Wikström argues that moral actions, including crime/political violence, are always the result of a *perception-choice process* based on the action alternatives a person perceives and the (moral) choice a person makes to carry out a specific action alternative. People engage in political violence because they, 1) come to see such acts as viable action alternatives, and 2) make the (moral) choice...
(habitually or deliberately) to carry them out.\textsuperscript{23} So, acts of political violence are only possible when somebody is in a situation that offers temptations or provocations for violent extremism and when this person actually observes this opportunity and perceives it as a possible action. The theory further posits that this perception-choice process is initiated and guided by relevant aspects of the individual/environment interaction, as is shown in Figure 1. The likelihood that a person will commit political violence depends on his or her \textit{propensity} towards violent extremism and its interplay with \textit{exposure} to violent extremist settings.\textsuperscript{24} This is the core argument of the SAT.

\textbf{Figure 1: Violent Extremism as the Result of the Interaction of Propensity and Exposure}

<table>
<thead>
<tr>
<th>Moral context setting</th>
<th>Moral context individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of exposure</td>
<td>High Propensity to violent extremism</td>
</tr>
<tr>
<td>Low level of exposure</td>
<td>Violent extremism ++</td>
</tr>
</tbody>
</table>

The construct of \textit{propensity} is defined as the general tendency of persons to perceive and choose crime/political violence as a valid action alternative. This is primarily determined by a person’s morality and secondarily by a person’s ability to exercise self-control.\textsuperscript{25} \textit{Personal morality} refers to individual moral beliefs (how right or wrong it is to break a rule stated in law), backed up by emotions of shame and guilt that guide the individual’s action alternatives. SAT argues that it is not one’s motives (either self-interest, rationality or altruistic), but one’s moral beliefs that guide the process of choice.\textsuperscript{26} If one’s moral beliefs are positively orientated toward violent extremism this person may come to see political violence as a viable alternative. \textit{Self-control} refers to the ability to act in accordance with the one’s own personal moral rules and emotions. In SAT self-control is defined as “the successful inhibition of a perceived action alternative or the interruption of a course of action that conflicts with an individual’s morality.”\textsuperscript{27}

\textsuperscript{24} Bouhana and Wikström, \textit{Theorizing Terrorism: Terrorism as Moral Action. A Scoping Study}; P. H. Wikström, “Explaining Crime as Moral Actions.”
The construct of **exposure** can be characterized as the total time present in criminogenic/violent extremist settings or in other words, settings that are conducive to crime/political violence. Exposure is a setting characteristic. The level of exposure is determined by the amount of time spent in criminogenic moral settings. Applied to the context of violent extremism, the context of exposure refers to the amount of time spent in extremist moral settings, which are settings in which the cultural transmission of extremist values is made possible.

Two key principles in SAT specify the role of moral rules and controls in crime causation. These principles are outlined below and made visible in Figure 2.

(i) The principle of moral correspondence
(ii) The principle of the conditional relevance of controls

The principle of **moral correspondence** states that if a person is motivated to do X and there is a correspondence between his or her personal moral rules and the moral rules of the setting, (i) he or she is likely to do X if the corresponding moral rules encourage doing X, but (ii) unlikely to do X if the corresponding moral rules discourage doing X. In these two cases of moral correspondence (either encouraging or discouraging X), controls are irrelevant for whether or not X will occur. The principle of the **conditional relevance of controls** applies in cases where a person is motivated to do X but there is a discrepancy between the guidance by the personal moral rules and those rules of conduct that apply in a particular setting. In such cases controls become causally relevant. The two ideal typical situations are (i) when a person’s moral rules discourage doing X, but the moral rules dominant in the setting encourage doing X, in which case whether he or she will do X depends on his or her ability to exercise self-control and (ii) when a person’s moral rules encourage doing X, but the moral rules dominant in the setting discourage doing X, in which case whether he or she will do X depends on the effectiveness of deterrence measures in the setting.
The basic arguments of SAT imply that the proximate determinants of violent extremism are (violent extremist) propensity, exposure (to violent extremist settings), and their interaction. However, the theory recognizes that other variables may also be causally relevant. These variables are supposed to operate indirectly, through their influence on propensity and exposure. Therefore, they are characterized as ‘causes of the causes’ and should consequently be analyzed as such. According to Wikström, relevant causes of the causes are social conditions or systemic factors, like inequality, segregation, poor social integration, and aspects of individual life histories, that can influence the development of a person’s propensity and a person’s exposure. Examples are neighborhood disadvantage, social integration, perceived discrimination, perceived alienation. Key questions that concern the causes of the causes of violent extremism are

- Why people have different violent extremist propensities (i.e., vary in their moral support for violent extremism and ability to exercise self-control),
- Why settings differ in their violent extremist features (i.e., in their extremist moral rules and their enforcements) and, crucially,
- Why certain kinds of people are exposed to certain kinds of settings.

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Bouhana and Wikström, Theorizing Terrorism: Terrorism as Moral Action. A Scoping Study; Wikström, “Explaining Crime as Moral Actions.”
Two Key Problems in Survey Studies of Political Violence: Causation and Control Variables

Two persisting problems exist in most contemporary studies of crime causation: that is (1) the problem of demonstratively establishing causation and (2) the use of statistical control variables.

Inability to demonstrate causality

The first problem is the inability to demonstrate causality in survey research. Although a regular association, and thus the ability to predict the occurrence of the event from the occurrence of an assumed cause, might be indicative of causation, there is far from any guarantee that this is the case. The best way to empirically establish causation is through manipulation, that is, by demonstrating that if C (or cause) is manipulated in certain ways E (or event) will always change in predicted ways. This can only be done through experimental designs. The more times and ways in which we can manipulate C and demonstrate that E changes in predicted ways the more sure we can be that we are dealing with a causal process. If it is a question of mere correlation, manipulating C will not produce changes in E because there is no causal process linking the (putative) ‘cause’ and ‘the effect’ that can be affected by our manipulations. For example, if we destroy or manipulate a barometer (or all barometers in the entire world) this will have no effect on the weather conditions because the barometer readings do not cause weather conditions (they are merely correlated with them). The present study does not claim to establish causation, but is instead interested in the regularity of a statistical pattern in four different samples. More specifically we want to assess the stability of the interaction between propensity and exposure as the core variable of SAT in the explanation of violent extremism, by gender and immigrant background.

The Use of Statistical Control Variables as Causes

The second problem is the use of statistical control variables that can never be seen as causes of offending, but are mere covariates. Statistical control is a statistical technique used to eliminate variance in dependent variables caused by extraneous sources. In evaluation studies, statistical controls are often used to control for possible variation due to selection bias by adjusting data for program and control group on relevant characteristics. Therefore, control variables are extraneous factors, possibly affecting an experiment, that are kept constant so as to minimize their effects on the outcome. In studies of causes of offending, we usually rely on non-experimental designs, and use statistical controls as an alternative to the experimental design. From that point of view, control of extraneous variables is often considered a necessary condition for establishing internal validity.

Probably two of the most cited statistical control variables are gender and immigrant background, as time-invariant covariates of offending. It is well established that males and immigrants commit more offences and more serious offences than females and natives in bivariate and multivariate studies of both
self-reported and officially recorded delinquency. One important task facing criminology is that of developing theoretical frameworks in which both gender and immigrant background differences may be understood and explained. Within SAT an explanation can be given for why gender and other attributes seem to be linked to action. First it is possible that boys and girls differ in their propensity towards a certain criminal action, second it is possible that they differ in their exposure to certain settings and third, it is possible that they differ in relevant causes of the causes. For general offending, evidence exists to substantiate all three options. Further, it is often assumed that these results are

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a consequence of the differences in the socialization of males and females.\textsuperscript{33} The same reasoning can be applied to other attributes, like immigrant background.\textsuperscript{34}

The problem with the common practice of including these kind of attributes as predictors is that they may confuse our search for causes and explanation of crime, and even more worryingly, they may give the impression that, for example, the fact that someone is male or black could be a cause of their crime involvement. SAT strongly opposes the idea that such (social demographic) background characteristics can ever be causes of behaviour. Empirical research by Wikström clearly showed that these kinds of characteristics do not contribute to the explanation of action.\textsuperscript{35} Instead, they must be understood as attributes, that correlate with offending but logically speaking can’t be causes.\textsuperscript{36} They are either factors that correlate with the outcome (symptoms) or factors that correlate with the causes of this outcome (markers).

These findings do not mean that characteristics or experiences that are relevant in violent extremism causation might not be more prevalent, for example, amongst males (such as, for example, poor ability to exercise self-control) but the point is that it is these characteristics or experiences that we should focus on as causal factors in our explanations rather than the fact that the person is male. In principle, if we can measure the real causative factors (e.g., the ability to exercise


\textsuperscript{34} The Initial Request for Participation Was Sent to the School Principals in the Second Part of August 2012 Both by Email and by Regular Mail Post. In Mid-September, a Second Request Was Sent. Schools That Did Not Reply after the Second Request Were Contacted by Telephone. Only Three Schools in Antwerp Were Prepared to Participate through a Paper-and-Pencil Questionnaire. In Most Cases Schools Were Only Willing to Participate If the Survey Was Put Online on the Educational Platform of the School. Therefore We Were Forced to Apply the Web Survey Design Also to the Sampling of Adolescents Who Were Still in Secondary Education at the Moment of Data Collection. Some Schools Allowed the Researchers to Hand out Flyers and Posters in Schools and to Introduce the Survey in Classes. This Method Convinced Six Additional Schools in Antwerp, Making a Total of Nine, and Six Schools in Liege. Often, There Were No Refusals for Substantive Reasons. The Practical and Organizational Constraints Nevertheless Constituted a Barrier to Participation. Schools Wishing to Review a Draft of the Questionnaire Had Access to the Document. These efforts resulted in around 200 students that filled out the paper and pencil study. Other schools preferred the websurvey.

\textsuperscript{35} Wikström and Butterworth, Adolescent Crime: Individual Differences and Lifestyles.

\textsuperscript{36} P.H. Wikström, “In Search of the Causes and Explanations of Crime”; P. H. Wikström, “Explaining Crime as Moral Actions.”
self-control and the exposure to criminogenic moral settings) there is no need to include attributes (e.g., sex) that at best are ‘markers’ of the real causative factors among the predictors in empirical studies.

This kind of reasoning has significant implications for how research should be conducted. We should only include factors in our explanations of acts of political violence which we can make a good case for that they are sufficient causes or part of a causal interaction. This is exactly the goal of the present study: to test the main and interactive effects of extremist propensity and exposure to violent extremist settings in four combined sub groups by gender and immigrant background.

Data

Data Gathering

Data was collected (1) through a classic paper-and-pencil survey of pupils in the third cycle of secondary education in Antwerp and Liege (ages 16 to 18), and (2) through a web survey of young adults—both students and young adults who have left school (ages 16 to 24). The paper-and-pencil survey was restricted to the cities of Liege and Antwerp for practical reasons: Liege and Antwerp are, except for Brussels, the two largest cities of Belgium (+100,000 inhabitants). All schools in the third cycle of the secondary education in Antwerp and Liege were contacted and invited to participate in the study. A total of thirty-four schools in Antwerp and thirty-two schools in Liege were contacted.

The web survey consisted of a self-administered questionnaire that is conducted online. Access could be gained through a link to the survey’s web page on Facebook. This survey mode requires almost no organization, does not cause disruption of working time and leaves the decision to participate entirely to the students. As the web survey was meant to reach both students and non-studying young adults, posters were placed visibly in different strategic places that attract a high number of the target population, such as popular pubs and bars. Additionally, flyers were distributed in buildings of virtually all faculties of the university and university colleges in Antwerp, Ghent, Louvain la Neuve, and Liège and pamphlets were distributed among the students. The central faculties and administrative services for students of all universities and university colleges of Flanders, Liege, and Louvain la Neuve were sent an email invitation with a request to circulate the web link to the questionnaire’s Facebook page. This method proved to be most effective. Many additional organizations, associations, and local youth clubs were contacted with a request to distribute the survey to their members, to reach youth who are no longer in school. This last tactic was particularly effective in Wallonia, where thirty-two youth associations were contacted for this purpose.

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37 Facebook.com/Radimedonline for the Flemish Survey and Facebook.com/Radimeducl for the French Survey.
Although the possibility of distributing the questionnaire via online platforms or mailing lists has significantly contributed to the survey response, one must still have some reservations with regard to the response. While web surveys seem to be increasingly popular in social science research, there are some questions left with regard to the systematic bias that might result from exclusively using the World Wide Web as a sample frame. We acknowledge that the researcher cannot completely monitor the processes of response selection and we must admit that we cannot verify the conditions under which the questionnaire is completed (the presence of others, anonymity, etc.). In addition, the initiative to participate in the survey is entirely left to the respondent. The impossibility of monitoring, response selection, self-selection, and under-coverage (internet availability) are important drawbacks. It should however be mentioned that these issues (preparedness to answer survey questions, willingness to report) are central to the more traditional survey modes as well. It is probably fair to state that the web survey may contribute more to explanatory research (studies of the causes and correlates) than to prevalence studies (studies that try to gain insight into the prevalence of attitudes and behavior). Still, web surveys are increasingly accepted as a valid and reliable tool of measuring self-reported delinquency with their data quality measuring up that of paper and pencil surveys.\(^{39}\)

The fact that the questionnaire web page was visible on Facebook meant that a high number of respondents could be reached in a very short time. The web survey was online between September 2012 and December 2012 and the response was huge, with 3,653 respondents in Flanders and 2,367 respondents in Wallonia, making a total of 6,020 respondents.

**Measurement: Independent and Dividing Variables**

*Extremist propensity* is a combined index of three separate morality and self-control scales. The morality scale used (alpha: 0.92) was measured combining three scales measuring support for religious, left-wing, and right-wing extremism. These items were originally used in a Dutch survey of attitudes towards extremism conducted by Van den Bos, Loseman, and Doosje.\(^{40}\) Two dimensions of Hirschi and Gottfredson’s conceptualization of self-control were used: impulsivity (alpha:0.63) and thrill seeking (alpha: 0.73).\(^{41}\) The items for the two scales were taken from the attitudinal self-control scale used by Grasmick.\(^{42}\) This kind of construct is tapping whether an individual has the

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capability to resist temptation and provocation. In the analyses high values correspond with high levels of extremist propensity.

*Exposure to extremist moral settings* is measured by a combined index of active exposure to extremist content entailing online extremist communication (alpha: 0.69) and actively searching for extremist contact (coded 1 if the respondent deliberately seeks contact with violent extremists and coded 0 if this was not the case). Active exposure refers to actively and deliberately seeking out certain violent extremist information and communication. Passive exposure on the other hand refers to accidental encounters with violent extremist content while doing other things online. This study only takes active forms of exposure to violent extremism into account since active forms of communication have a stronger impact on violent extremism than passives forms of exposure.43

Further, gender and immigrant background were used to divide the sample. *Gender* is coded as 0 for females and 1 for males. *Immigrant background* is coded 0 when both parents have a fully native Belgian background and 1 if at least one of the parents was born abroad.

**Measurement: Dependent Variables**

*Overall political violence* (alpha: 0.89) was measured by combining items that asked respondents if they have ever committed acts of political violence towards property and items that asked respondents if they have ever committed acts of political violence towards persons. The first set of items was derived from a Belgian study of nonconventional/illegal political participation by youth.44 The second set of items was derived from a youth survey conducted by the Swedish Council for Crime Prevention.45

**Strategy of Analysis**

The analyses were carried out using block wise Ordinary Least Squares (OLS) regression models. One key problem in criminological inquiries is the fact that the study of causes of offending and the study of their interactions almost exclusively relies on field studies (i.e. studies that make use of non-experimental designs). What is often ignored is the fact that the establishment of interaction effects is far more problematic in non-experimental studies than in studies that use an experimental design. McClelland and Judd reported these problems and found that very large data sets are needed to reliably find a substantial interaction effect similar to an interaction effect found in an experimental study.46 Therefore, McClelland and Judd concluded that scholars that find interaction effects in simple OLS-regression models with a sample size up to 800 respondents may be satisfied to find an interaction effect that exceeds 0.12.47

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43 Gallupe and Baron, "Morality, Self-Control, Deterrence, and Drug Use: Street Youths and Situational Action Theory."
47 Ibid.
Nowadays a lively discussion is going on about the use of OLS-regression models as a statistical tool to predict crime from theoretically derived variables. The main reason is that crime is a highly skewed dependent variable in many quantitative studies. The discussion is by and large fed by statistical arguments that refer to the violation of assumption in OLS-regression and not by theoretical arguments. As a consequence, scholars increasingly use logistic and probit models, negative binomial models and even Tobit regression models to explain individual differences in offending. Although we do acknowledge the importance of choosing a technique of analysis that suits the data best, we should be cautious towards a blind faith in more advanced and exotic statistical models, precisely because we often rely on samples that may not capture all the variance in the dependent variable and because reality is often so skewed that no perfect technique of analysis may be found to address the study of crime involvement. Often scholars use highly sophisticated techniques, while ignoring the elementary or more fundamental problems in their data. A major problem in non-linear models that do not pose restriction on the distribution of the dependent and independent variables is the difficulty of detecting interaction effects. Standard tests for compliance with regression assumptions where conducted, and no major violations were found. Since the dependent variable proved to be slightly skewed the analysis was repeated using negative binomial models resulting in similar patterns.

Results of Multiple Regression Analyses

In the first model that was run, both individual violent extremist propensity and exposure to violent extremist moral settings were used as independent variables.

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In the second model the interaction term of individual propensity and exposure was included in the model. As all models showed an improvement of the model fit, we only present the final model including the interaction term.

Table 1: OLS-Regression of Immigrant and non-Immigrant Males and Females

<table>
<thead>
<tr>
<th></th>
<th>Immigrant males</th>
<th>Belgian males</th>
<th>Immigrant females</th>
<th>Belgian females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B/beta (SE)</td>
<td>B/beta (SE)</td>
<td>B/beta (SE)</td>
<td>B/beta (SE)</td>
</tr>
<tr>
<td><strong>Exposure to violent extremist moral settings</strong></td>
<td>.877 / .237*** (.237)</td>
<td>-.439 / .149 *** (.099)</td>
<td>.086 / .055 NS (.067)</td>
<td>113 / .071** (.038)</td>
</tr>
<tr>
<td><strong>Propensity to violent extremism</strong></td>
<td>.407 / .069 (.303)</td>
<td>.573 / .143*** (.105)</td>
<td>.283 / .128*** (.082)</td>
<td>.172 / .116*** (.032)</td>
</tr>
<tr>
<td><strong>Interaction term</strong></td>
<td>.641 / .304*** (.138)</td>
<td>-.593 / .282*** (.070)</td>
<td>.139 / .120** (.050)</td>
<td>.155 / .126*** (.029)</td>
</tr>
<tr>
<td><strong>R²*100</strong></td>
<td>26.3</td>
<td>18.6</td>
<td>5.1</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>305</td>
<td>1200</td>
<td>739</td>
<td>1270</td>
</tr>
</tbody>
</table>

*: p<0.05, **: p<0.01, ***: p<0.001, NS: not significant

Table 1 presents the results for immigrant and non-immigrant males and females. From this table we can read both the unstandardized coefficients (B), the standardized coefficients (Beta), and the standard error (SE). Since we want to compare the effects of variables measured in different units of measurement, we will look at the standardized coefficients (Beta) of the main effects and interaction terms.51 Independent main effects of exposure are found in immigrant males, Belgian males, and Belgian females. Independent main effects of propensity are observed in Belgian males, immigrant females and Belgian females. However, the absence of a main effect does not mean that there is no effect. The main effects should be interpreted together with the interaction effects, which are significant and substantial in all groups. In other words, the effect of exposure to violent extremist moral settings is stronger for individuals with a high level of violent extremist propensity. The table also shows us the explained variance in the dependent variable explained by the variables introduced into the equations (R²*100). All of the models are significant. It is noticeable that the models score much better in explaining the variance in the dependent variable for the males then for the females. For immigrant and Belgian males, 263 percent and 18.6 percent is explained, while for the immigrant and Belgian females only 5.1 percent and 4.3 percent is explained.

Males and especially immigrant males seem to be most susceptible for exposure to extremist moral settings. This can be derived from the magnitude of the interaction term that is strongest in immigrant males.

These results can also be seen on the accompanying regression lines, as shown in Figures 3 and 4. In these figures we can clearly see the independent effects of...
both violent extremist propensity and exposure to violent extremist settings on political violence, as well as the interaction between both.

**Figure 2: Regression Lines for the Interaction Between Propensity and Exposure for Males**

- **Regression lines**
  - Interaction total active exposure/propensity for immigrant boys

  ![Regression lines for immigrant boys](image1)

- **Regression lines**
  - Interaction total active exposure/propensity for Belgian boys

  ![Regression lines for Belgian boys](image2)
Generally speaking, it is interesting to observe that the person-environment interaction holds for immigrant and non-immigrant males and immigrant and non-immigrant females. However, the effects of these factors are stronger and more present for males than for females. This may (partially) be explained by...
gendered socialization. Gendered social norms differentiate social controls and limit action alternatives for women. This can influence the options females perceive and the choices they make. For example, political violence is more strongly socially disapproved of for females than for males and the social settings females have access to is more strictly controlled.

Discussion and Conclusions

The major object of this study was to test a key hypothesis of SAT, namely the person-environment interaction in the explanation of political violence. To do so, we assessed the overall stability of the effect of the individual/environment interaction, in subgroups by gender and immigrant background. More specifically it was addressed to what extent exposure to violent extremist moral settings had a different impact on adolescents depending on the individual’s propensity in explaining individual differences in adolescent violent extremism. This study brings empirical evidence for the existence of a statistical interaction indicating that the effect of exposure to violent extremist settings is dependent on the effect of individual violent extremist propensity. Adolescents that rank high on individual violent extremist propensity are by and large far more susceptible to exposure to violent extremist moral settings than their counterparts with low individual violent extremist propensity, who by consequence are more resistant to exposure to violent extremist settings. Moreover, this interaction effect was reproduced in all sub groups by immigrant background and gender. This indicates that similar causal mechanisms are at work when explaining violent extremism of males, females, and both native and immigrant groups.

It should however be noted that the effect of exposure was much smaller for females and especially immigrant females as compared to males, even in case of a high propensity towards violent extremism. This indicates that females are less susceptible for exposure to violent extremist settings, at least through new social media, while the effects of propensity are similar across the subgroups. Gendered socialization could account for females having less access to unsupervised violent extremist settings and/or for females to be more orientated towards other kinds of settings. On the contrary, immigrant males seem to be more susceptible to external violent extremist influences, compared to females and even Belgian males. This may indicate that immigrant males do not only differ from females regarding socialization but also from other, Belgian males. Further, it is also possible that immigrant males differ in or are more exposed to the underlying causes (causes of the causes) of violent extremism, compared to members of the other groups. Further research into the explanation of violent extremism, especially this of (immigrant) females and immigrant males, should take this into account.

The fact that this study shows very similar findings in these sub groups suggests the relative strength of a major assumption derived from the situational action theory. As the situational action theory states to be a general theory of moral rule

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52 Moffitt, et al., Sex Differences in Antisocial Behaviour.
breaking, one should expect; 1) research findings to be identical across groups, and 2) the theory to apply to other forms of moral rule breaking then crime. Our results deliver on both expectations. This finding suggests the potential of the SAT framework as a general theory of offending and of violent extremism in particular. Considering the amount of measurement error that exists in survey research, one can be surprised to find identical results. The theory assumes on theoretical grounds that the mechanisms that link characteristics of individuals and settings to offending are the perception of action alternatives and processes of choice. A next challenge for robust empirical test of the theory will be to empirically establish the hypothesized relation between situational inducement and the processes of seeing crime as alternative.

The present study has, however, some limitations that need to be taken into account when interpreting the results. First of all, the study is cross-sectional and therefore causes and effects are measured at one point in time. The major advantage of our study is that is has a very high number of respondents, with almost equally numbers of respondents in all sub groups by gender and immigrant. While these differences exist, the pattern that arises from both studies, namely the interaction between propensity and exposure holds in both settings regardless of gender and immigrant background. While the interaction effect between propensity and exposure has been demonstrated before the stability of the interaction effect has never been demonstrated so detailed.55

This study has some implications for both theory and research. The need and importance of taking into account statistical interaction in both theory and research is hereby once again confirmed. As individuals are to a very large extent different on key social mechanisms, and are in their daily routines confronted with very different settings, it is normal to expect interaction, and to be suspicious to theories that simplify this reality. We argue that testing for interaction effects in social sciences is of great importance, and adds a strong nuance to the way reality has been modelled in statistical analysis. This study stresses that covariates of offending, such as immigrant background and gender should not be mistaken for causes of offending and that causal mechanisms that affect the frequency of offending are operating similarly across country borders, for males and females, for immigrant and non-immigrant youth.

Future studies should try to improve sound integrative theories that study all mechanisms that are involved in the explanation of political violence/violent extremism, but also the processes that lead to the development of propensity to extremism and exposure to extremist moral settings. In other words, it is of major importance for policy to disentangle the causes of the causes of political violence in sub groups as a critical test of propositions derived from truly interdisciplinary integrative theories that incorporate elements of cognitive neurosciences, cognitive psychology (beliefs), sociology and geography (exposure to settings). Some disciplines will be more useful to explain some of the causes of the causes of violent extremism, while other will be more useful in explaining direct and situational causes of violent extremism. Such studies should be conducted from a cross-national perspective in different cultural and structural environments.

settings to gain insight in the generalizability of propositions derived from theories.