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UNPACKING THE VICTIM-OFFENDER OVERLAP: ON ROLE DIFFERENTIATION AND SOCIO-PSYCHOLOGICAL CHARACTERISTICS

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Objectives: Provide insight into the victim-offender overlap and role differentiation by examining to what extent socio-psychological characteristics, risky lifestyles/routine activities and immersion in a violent subculture explain differences between victims, offenders and victim-offenders. Specifically, we measure to what extent anxiety and depression, negative peer relations, dominance, and self-control account for differences in adolescents' inclination towards (violent) offending, victimization or both, over and above risky lifestyles/routine activities or immersion in a violent subculture.

Methods: Building on the method proposed by Osgood and Schreck (2007), we use two waves of panel data from the Zurich Project on the Social Development of Children and Youths, a prospective longitudinal study of adolescents in Switzerland.

Results: Incorporating socio-psychological characteristics provides a more encompassing view of both the victim-offender overlap and victim versus offender role differentiation than routine activities/risky lifestyles and subcultural theory alone. Specifically, socio-psychological characteristics in particular differentiate between those who take on predominantly offender roles versus those who are predominantly victims.

Conclusion: Unpacking the victim-offender overlap and examining differences in socio-psychological characteristics furthers our understanding of the etiology of the victim-offender overlap.

KEYWORDS: victimization, victim-offender overlap, subcultural theory, risky lifestyles, routine activities

1. INTRODUCTION

Research on the association between victimization and offending has yielded strong correlations between the two (e.g., Berg et al. 2012; Hay and Evans, 2006; Hentig, 1948; Lauritsen and Laub, 2007; Lauritsen, et al., 1991; Ousey, et al., 2011; Jensen and Brownfield, 1986; Schreck, et al., 2008; Singer, 1981, 1986; Wolfgang, 1958). As Lauritsen and Laub (2007) note, little if any research has actually failed to demonstrate the association and it holds across time, place, subgroups, data-sources and type of crime. Unsurprisingly, it ranks among the most robust empirical relations in criminology (Reiss and Roth, 1993).

However, in their search for common correlates, few studies have explicitly considered that only part of the offender population also falls victim to crime and that not all victims also engage in offending. This lack of specificity has implied a restricted ability to account for unique processes and antecedents of overlap between offenders and victims or lack thereof (Schreck et al., 2008). That is, a focus restricted to victim-offenders to the neglect of how victims and offenders differ may mean losing vital information regarding the etiology of this relation. Additionally, the more individuals tend to adopt one role over the other, the greater the need for specific and separate theorizing and research to account for both phenomena (Schreck et al., 2008, p. 874).

Recently, various studies (e.g., Broidy et al. 2006; Daday et al. 2005; Schreck, et al., 2008; Mustaine and Tewksbury, 2000) have started to address this gap in the literature and revealed meaningful differences between victims, offenders and victim-offenders. Building on this research and using an analytical method proposed by Osgood and Schreck (2007; see also Schreck et al., 2008), the present study examines

what factors underlie the tendency to primarily take offender or victim roles in cases of violence. That is, our focus is not restricted to the victim-offender overlap, but in particular addresses factors that are associated with people's tendency towards victimization versus offending.

Extending earlier work, the present study goes beyond using routine activities/risky lifestyles and subcultural theory as explanatory factors by also examining a series of socio-psychological characteristics, such as anxiety, depression and social isolation, that may account for differences in offender versus victim role-taking. We hypothesize that these characteristics can discriminate between those individuals who tend to adopt victim roles and those who predominantly tend towards offending. In line with earlier work, we expect that routine activities/risky lifestyles and subcultural theory explanations discriminate in particular between the group of victim-offenders and their normative peers who have neither been victimized nor have offended.

To examine these predictions, we use data from the Zurich Project on the Social Development of Children and Youths (z-proso), a longitudinal study of a sample of urban Swiss adolescents containing extensive multiwave data on both offending and victimization. Analogous to Schreck et al. (2008), we focus on violent offending and victimization during adolescence as it has been associated with a variety of important negative life outcomes such as school failure, substance use, and juvenile arrests, and because identifying risk factors of violent outcomes is critical with regard to adolescent development.

Below, we first briefly discuss the dominant perspectives that have been used to account for the victim-offender overlap, i.e., routine activities/risky lifestyle theory and subcultural theory. We subsequently provide an individual differences

perspective that details how socio-psychological characteristics are likely to be related to victimization, offending or both. This is followed by an overview of our research design, method of analysis and presentation of the results. We conclude with a discussion of how our findings extend previous efforts and contribute to the literature, and provide suggestions for future research.

2. ROUTINE ACTIVITIES/RISKY LIFESTYLE AND SUBCULTURAL EXPLANATIONS FOR THE VICTIM-OFFENDER OVERLAP

The first major publication to draw attention to the fact that victims and offenders may belong to the same group of individuals was von Hentig's (1948) *The Criminal and His Victim* in which he argued that although the "doer-sufferer relation is put in our codes in mechanical terms (…), the relationships between the perpetrator and the victim are much more intricate (…). It may happen that the two distinct categories merge. There are cases in which they are reversed and in the long chain of causative forces the victim to assume the role of a determinant" (pp. 383-384).

Another early publication drawing attention to the overlap is Wolfgang's (1958) analysis of incident files of homicides. This study showed that victims and offenders were often no strangers to each other as killings were frequently the result of domestic quarrels, altercations over money, or motivated by jealousy or revenge, each of which implicate a prior social relationship between the parties involved. Importantly, the victims had often been the first to use physical force against their eventual slayers (Wolfgang, 1958).

These early works provided initial support for the idea that victims and offenders are not as distinct as was generally assumed and while most crime research

still tends to be either offender-focused or victim-focused, it is now commonly understood that offenders and victims overlap in various important ways (Jennings, Piquero and Reingle, 2012).

2.1 Routine activities/risky lifestyle theory

The most common theoretical framework to account for the victim-offender overlap is the routine activities/lifestyle perspective (Cohen and Felson, 1979; Hindelang, Gottfredson and Garofalo, 1978). The underlying idea is that risky lifestyles (Hindelang et al., 1978) and routine activities (Cohen and Felson, 1979) bring potential victims into contact with motived offenders and expose them to situations conducive to victimization. In addition, Osgood et al. (1996) found that unstructured socializing with (deviant) peers in the absence of authority figures also predicts participation in offending. Other studies report similar findings (Anderson and Hughes, 2009; Bernasco, et al., 2013; Bernburg and Thorlindsson, 2001; Hay and Forrest, 2008; Maimon and Browning, 2008).

Substance use, e.g., illicit drugs and alcohol consumption, which is also characteristic of risky lifestyles, is yet another factor related to both victimization (e.g., Felson and Burchfield, 2004; Gover, 2004; Lauritsen, Laub, and Sampson, 1992; Malik, Sorenson, and Aneshensel, 1997; Vogel and Himelein, 1995) and offending (e.g., Elliott, Huizinga, and Ageton, 1985; Elliott, Huizinga, and Menard, 1989; Zhang, Wieczorek and Welte, 1997).

2.2 Subcultural theory

An alternative perspective regularly used to account for the relation between victimization and offending is provided by subcultural theory/subculture of violence

explanations, which posit that violence occurs predominantly among groups that hold norms that support or encourage the use of force to resolve conflicts, such as gangs (Anderson, 1999; Berg et al., 2012; Berg and Loeber, 2011; Cohen, 1955; Jacobs and Wright, 2006; Lauritsen and Laub, 2007; Singer, 1981, 1986). According to this perspective, individuals alternate between offender and victim roles in areas characterized by disorganization and norms of violence (Schreck et al., 2008).

In early support of this idea, Wolfgang's (1958) study of homicide in Philadelphia showed that a quick resort to physical combat is a measure of daring, courage, defense or status and a cultural means of expression especially for lower-class males. In a similar vein, Singer (1981, 1986) argued that the association between victimization and offending is partially rooted in cycles of retaliatory violence that are driven by oppositional conduct norms. In the US context, subcultures of violence are often interpreted to be neighborhood-related and linked to neighborhood disadvantage and disorganization. For example, in a recent study, Berg et al. (2012) found that the reciprocal relation between victimization and offending was particularly strong in neighborhoods where a street culture predominates. In Europe, on the other hand, differences between neighborhoods tend to be less obvious and neighborhood context tends to exert a much smaller influence on the offending rate of its residents (Averdijk, Elffers, and Ruiter, 2012; Müller, 2008). Instead, subcultures of violence are more related to honor cultures expressed in violence-justifying masculinity norms, which are closely related to ethnic and socio-economic background (Cohen, 1972; Enzmann, Brettfeld and Wetzels, 2003; Ribeaud and Eisner, 2009).

Although most empirical evidence sides with theories that suggest that offending increases the risk of victimization (Ousey et al., 2011), a negative relation between victimization and offending has also been argued. For example, ethnographic

accounts (e.g., Anderson, 1999; Katz, 1988) suggest that the use of violence against others can be used to gain respect, demonstrate toughness, and avoid subsequent harassment and hence serves as a deterrent to victimization. Ousey et al. (2011) found evidence for the commonly found reciprocal positive relation between offending and victimization in a longitudinal model without controls added to it. However, when controlling for time-stable individual characteristics and dispositions, victimization turned out to be *negatively* related to later offending and vice versa. As will be argued in more detail below, we think that it may precisely be individual characteristics and dispositional factors that can account for differences between victims-offenders, non-offending victims, and non-victimized offenders.

3. VICTIMS, OFFENDERS AND VICTIM-OFFENDERS

Foreshadowing recent attempts to increase specificity in the victim-offender outcome variable, von Hentig (1948) argued that not all victims are alike in the sense that certain groups of victims are passive recipients of violence whereas others actively contribute to their own misfortunes. Hence, in spite of the fact that victims and offenders often belong to the same group, victims and offenders should not simply be treated alike in analytic frameworks.

Recently, several studies have started to examine how victims and offenders differ. For example, focusing on assault among undergraduate students, Mustaine and Tewksbury (2000) found that several factors differentiate victims and offenders. Whereas victimization was best predicted by a high exposure to potential offenders or likely criminal events and, to a lesser extent, by the potential victim’s alcohol use and lifestyle, offending, was best predicted by demographic characteristics and

participation in other illegal activities. Furthermore, Klevens, Duque and Ramirez (2002) found that victims tended to avoid risky activities, whereas victim-offenders did not.

For homicide, Broidy and colleagues (2006) found that victims with no prior offending history differed from the offenders on demographic characteristics and social contexts. In contrast, Daday et al. (2005), comparing victims and offenders of non-lethal violence, found that both victims and offenders live in socially disorganized neighborhoods and share risky lifestyles and violent behaviors.

Recently, Schreck et al. (2008) proposed a novel statistical approach to analyze tendencies to gravitate towards either violent offending or victimization. Based on a longitudinal study of U.S. adolescents, they found meaningful variation in the tendency toward either victimization or offending for age, drinking and attachment to parents. Older participants tended towards a victim role, as did those who got drunk frequently and those who were more attached to their parents.[1] Other variables, such as those reflecting risky lifestyles and emotional distress, were associated with a general exposure to violent encounters, whether as a victim or as an offender, but not with the differential tendency towards either victimization or offending.

In sum, recent research suggests that there may exist certain characteristics that predispose people towards offending but not victimization and vice versa.

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[1] Note that in the publication by Schreck et al. (2008), there is an error as the positive sign of the coeffecient (‘drunk’) in the body text (p. 892) should instead be negative (as it is (correctly) displayed in Table 5 of their publication) implying that being drunk is related to a tendency towards victimization instead of offending (Schreck, personal communication, September 5, 2013).

Nevertheless, as Broidy et al. (2006) argue, while a variety of theories can help make sense of the victim-offender overlap, there is little theoretical discussion of the conditions under which victim and offender populations diverge and such discussion would be an important step towards understanding the vulnerabilities that presage victimization, particularly where traditional measures of structural disadvantage, risky lifestyle and criminal involvement do not appear to be operative. Below, we explore the possibility that socio-psychological characteristics can account for these differences.

4. AN INDIVIDUAL DIFFERENCES PERSPECTIVE ON THE VICTIMIZATION-OFFENDING NEXUS

It was again von Hentig (1948) who was among the first to link individual dispositions to people's tendency towards victimization by proposing different 'psychological types of victim', such as 'the depressed', 'the wanton', and 'the tormentor'. He also suggested that individual-level variables could explain differences between victims and offenders. In the present study, we follow von Hentig's intuition and examine the possibility that specific socio-psychological characteristics account for differences in people's inclination towards offending, victimization or both, over and above risky lifestyles/routine activities or immersion in a violent subculture. Below, we draw out an individual differences perspective grounded in the idea of violent crime as social interaction.

4.1 Violent crime as social interaction

Exceptions aside, violent crime typically implies social interaction, and often also an

interpersonal relationship between the actors that precedes the interaction. As psychological characteristics of individuals influence the onset and development of their social interactions, and interpersonal behavior more generally, it is plausible that certain types of characteristics will also have an impact on how violent interactions come about and develop. If correct, this assumption implies that victims who do not double as offenders possess certain characteristics or traits that set them apart from the latter. More specifically, we argue that there is a constellation of different but related individual characteristics and behaviors that seem to work together to increase people's risk of victimization. Analogously, those offenders who are able to avoid getting victimized, in spite of their own engagement in delinquency and hence exposure to risk factors such as those embedded in risky lifestyles/routine activities and violent subcultures, are likely to be endowed with different sets of individual qualities than victims and victim-offenders.

4.2 Anxiety, depression and negative social relations

One of the few individual differences variables used in prior research on the victim-offender overlap is self-control. The core idea of self-control theory is that those who lack it tend to disregard the longer-term consequences of their behavior, which puts them at risk for crime (Gottfredson and Hirschi, 1990). Schreck (1999) reformulated the theory to also account for victimization by arguing that low self-control produces vulnerability to crime. For example, the disregard of long-term consequences makes it less likely that people will take precautions against victimization (Schreck, 1999). Several recent empirical studies support the claim that low self-control is predictive not only of offending but also of victimization (e.g., Daigle et al., 2008; Schreck, 1999; Schreck et al., 2006, Ousey et al., 2011; Piquero et al., 2005). In the present

study, we examine self-control in combination with a larger set of socio-psychological dispositions. In contrast to self-control, which on the basis of earlier work we expect to primarily influence the overlap between victims and offenders, these other socio-psychological characteristics are expected to discriminate in particular between victims and offenders.

While criminologists examining the victim-offender overlap have mainly focused on self-control, psychological research on peer victimization has also examined other variables. Importantly, some of this research (e.g., Swearer et al., 2001; Craig, 1998) distinguishes between victims, perpetrators and victim-perpetrators demonstrating meaningful differences between these groups. We think that these findings may extend to general victimization in meaningful ways and therefore draw from this literature to develop our individual differences perspective.

As most (violent) crime implies social interaction, it makes sense to assume that victims' emotional states and behaviors, in particular their internalizing problems, such as anxiety and depression, influence their risk of victimization. Specifically, youths with internalizing problems have been shown to display a lack of social competencies and heightened reassurance seeking, which, in turn, disturb interpersonal relationships (Rudolph, Flynn, and Abaied, 2008), and puts them at risk for victimization (see also Storch et al., 2005). Or, as Slee (1995, p. 57) phrases it, the "tendency to be victimized may encapsulate provocative behaviour which elicits aggression from others" (see also Felson, 1992). However, the proclivity to be victimized may also be associated with withdrawn behavior, such as the avoidance of interactions and lack of assertiveness (Storch et al., 2005). From the offenders' perspective, the fearfulness, withdrawal and social isolation of potential targets may trigger negative behavior towards them. Additionally, as anxious and isolated

individuals lack social support structures to help defend them and the social skills to avert or negotiate an attack, this may lead them to be viewed as easy prey. For example, Egan and Perry (1998), examining characteristics of third- and seventh-grade students making them vulnerable to victimization, found that behavioral characteristics such as perceived weakness, manifest anxiety and poor social skills contributed to victimization for children with low self-regard. The authors argued that these children may contribute to their own victimization by failing to assert themselves during conflict, which makes them more vulnerable targets (Egan and Perry, 1998). Various longitudinal studies have found that (young) victims of violence tend to suffer from higher degrees of anxiety and related internalizing problems and the evidence suggests that these problems indeed precede victimization (e.g., Fekkes et al., 2006; Hodges and Perry, 1999; Kochel et al., 2012). Although, as noted, similar research in criminology is less prevalent, some criminological studies have suggested that victimization is related to anxiety and/or depression (Boney-McCoy and Finkelhor, 1996; Silver, 2002; Silver et al., 2005).

Swearer et al. (2001) noted that anxious children often have difficulty initiating and maintaining social and peer relations, which may be the result of, or have an impact upon, feelings of depression. Additionally, over time these youths may come to view themselves as deserving of peer attacks which also contributes to symptoms of depression (see also Craig, 1998; Hawker and Boulton, 2000; Olweus, 1995; Slee, 1995). Pagani et al. (2008:42) argued in this respect that individuals experiencing socio-ecological risks such as being a victim of bullying tend to be less socially competent in establishing supportive relationships and avoiding peer rejection, consequently predicating depression.

Although the victim-offender may also possess negative psychological characteristics, we expect the contrast in socio-psychological differences between groups to be starkest between victims(-only) and offenders(-only) as opposed to the hybrid victim-offender group. That is, the offender able to avoid being victimized is likely to possess certain traits and skills that make him/her confident that he/she will not suffer from the violent behavior of others. Various studies on bullying have for example found that bullies who did not also report victimization experience less feelings of anxiety than bully-victims (e.g., Craig, 1998; Olweus, 1995; Swearer et al., 2001). In criminology, a link has been proposed between negative emotions and delinquency (Agnew, 1992), but most research in this field has focused on anger and less on feelings of depression. Although some research among inmates (Silver, Felson, and Vaneseltine, 2008) and adolescents (Beyers and Loeber, 2003; Kandel and Davis, 1982) suggests an association between depression and offending, other research has shown that this association is caused primarily by anger and not by depression. For example, Broidy (2001) found that a general measure for negative emotions (excluding anger) was related to *less* crime, while anger was associated with more crime. Moreover, when controlling for anger, Sigfusdottir et al. (2004) did not find a significant relation between depression and delinquency; the effect turned significant when anger was removed from the analysis.

We therefore hypothesize offenders who are not victimized to suffer less from internalizing problems, such as anxiety and depression, while simultaneously possessing better social skills. In addition, we therefore hypothesize these adolescents to be more liked, be more popular and less socially isolated than victims, i.e., to have less negative peer relations. Furthermore, we expect offenders to be more assertive and dominant compared to victims and offender-victims, thereby being better able to

navigate their way out of potential conflict situations without getting victimized or to simply be able to dominate others in these situations. Finally, we expect risky leisure activities and substance use, both characteristic of risky lifestyles/routine activities, and masculinity norms and membership of delinquent peer groups, which reflect violent subcultures, and self-control to discriminate in particular between the group of victim-offenders and their normative peers who have neither been victimized nor have offended.

5. METHOD

5.1 PARTICIPANTS

The data were drawn from an ongoing combined longitudinal and intervention study, the Zurich Project on the Social Development of Children and Youths (z-proso) (Eisner, Malti and Ribeaud, 2011). The target population consisted of all 2,520 children who entered the first grade in one of the 90 public primary schools in the city of Zurich, Switzerland, in 2004. Because the interventions occurred at the school level, a cluster randomized sampling approach was used, with schools as the randomization units. The schools were classified by enrollment size and socioeconomic background of the school district. Subsequently, a stratified sample of 56 schools was drawn. The final sample consisted of all 1,675 first graders in these schools, as well as their parents and teachers. At the start of the study, the mean age of the participants was 7.45 years (*SD* = 0.39).

The sample was 52% male. Eleven percent of the children were born outside of Switzerland, and in 46% of the cases both parents were born outside of Switzerland. In terms of educational attainment of the parents, 23% had little to no

secondary education, 27% had vocational training only, 29% had attended full-time vocational school or had earned a baccalaureate degree or advanced vocational diploma and 20% had a university degree.

Data were based on the two most recent waves (five and six) of the z-proso project, which will henceforth be referred to as T1 and T2. Predictor variables were collected at T1 by means of both the child and teacher interviews; T2 data regarded the dependent variables and were collected through the child interview only. At T1, when the mean participant age was 13.7 years (SD = 0.37), 82% of the youths from the original target sample (N = 1,366) and 76% of the teachers (N = 1,269) participated. At T2, with a mean age of 15.4 years (SD = 0.36), 86% of the youths from the original target sample participated (N = 1,447). The present sample included only those youths who participated in both waves. Parents were asked to provide passive consent, meaning that they could refuse their child's participation by actively notifying the research team and that no parental reaction was taken to mean that the parents consented to their child's participation. Questionnaires were completed in a classroom-setting after school. Participants received 30 Swiss Francs (approximately 30 USD) for their participation at T1 and 50 Swiss Francs (approximately 50 USD) at T2.

5. 2 DEPENDENT VARIABLES

Victimization and offending in the preceding twelve months were self-reported by the youths at T1 and T2 (see descriptions in Appendix A). The six victimization items included robbery, serious assault with a weapon, serious assault without a weapon but with injury, simple assault, sexual assault and sexual harassment. The six offending items included threat/extortion, robbery, serious assault

with injury, simple assault, sexual assault and sexual harassment (summary statistics and item parameters appear in Appendix B). One delinquency item (sexual assault) and one victimization item (sexual assault) yielded prevalence rates of less than 1%, which proved to be problematic for the analyses. We therefore removed these items, resulting in a total of five victimization items and five offending items included in the analyses.

Six of the items were originally coded as count variables (extortion perpetration, robbery perpetration, serious assault perpetration, robbery victimization, assault victimization with weapon and assault victimization without a weapon); the other four (simple assault perpetration, simple assault victimization, sexual harassment perpetration and sexual harassment victimization) were part of a bullying questionnaire and were measured using a frequency scale from 1 ('never') to 6 ('(almost) every day').[2] Similar to prior studies (Osgood and Schreck, 2007; Schreck et al., 2008), all items were recoded into a dichotomy of 0 ('did not experience violence') and 1 ('experienced violence'). Although recent studies have tended to use event rates of victimization or offending (e.g., McGloin et al., 2011; Schreck et al., 2012), we decided against this because the four items that were measured on the mentioned frequency scale did not include specific crime counts and could thus not be meaningfully transformed into a count scale. Removing these four items from the

[2] Because all victimization questions were asked in relation to violence among youths, they can be expected to mainly tap into victimization by other youths. The same was not the case for the offending items. However, a follow-up question to the offending item on serious assault with injury revealed that 91% of offenses were committed against persons between 10 and 18 years of age, suggesting that these incidents primarily occurred between youths too.

analysis would have meant that a large part of (and the most common) violent experiences by youths would be ignored.

We assessed the analytical properties of these items in two ways. First, we assessed whether the items represented an underlying tendency towards 'violent encounters' (i.e., the victim-offender overlap) by running a correlation analysis and a principal components analysis (PCA) (see Tables I and II). The results indicated that most of the victimization and offending items displayed a consistent pattern of positive correlations with each other. An exception was sexual harassment victimization, which displayed some low or even negative correlations. A subsequent PCA based on tetrachoric correlations showed high positive loadings on the first factor. Only the loadings for sexual harassment victimization were not satisfactory. Subsequent analyses revealed that these anomalies were due to the gendered nature of sexual harassment victimization. We therefore added gender as a predictor for the sexual harassment dummy indicator and also controlled for gender in our regression analyses. Second, the correlations provided an indication that the victimization and offending items displayed distinctiveness because the victimization items were more strongly associated with each other than with the offending items, and vice versa.

--Tables I and II about here --

5.3 PREDICTORS[3]

5.3.1 Risky Lifestyle

[3] When applicable, items of the predictor and outcome variables appear in Appendix A.

Risky leisure activities were measured with eight items referring to unstructured out-of-home leisure activities with friends without supervision by parents (e.g., "hang around and have fun with friends at the train station, shopping mall, or park"; α = .83). Answers were given on a 6-point scale from 1 ('never') to 6 ('(almost) everyday').

Substance use was assessed with four items that measured the frequency of tobacco, alcohol, strong liquor and marijuana consumption (α = .81). Answers were given on a 5-point scale from 1 ('never') to 5 ('daily').

5.3.2 Subculture of Violence

Three items measuring *masculinity norms* assessed the extent to which youths endorsed violence as a necessary means to defend themselves or those around them (e.g., "A real man must defend himself"; α = .69; derived from Nisbett and Cohen, 1996). Answers were given on a 4-point scale from 1 ('entirely incorrect) to 4 ('entirely correct).

Gang membership was coded "1" if the respondent was part of a group of friends that was involved in at least one of nine delinquent activities (threatening, assaulting, or fighting with other people; theft or burglary; robbery; extortion; drug dealing; carrying weapons; vandalism; substance use; other illegal activities) and "0" otherwise.

5.3.3 Socio-psychological Characteristics.

Anxiety and depression were measured through the Social Behavior Questionnaire (SBQ; Tremblay et al., 1991). The scale included eight items ranging from 1 ('never') to 5 ('very often') (e.g., "I was sad without knowing why"; α = .83).

Our measure for *self-control* included 10 items measured on a 4-point Likert scale from 1 ('does not apply at all') to 4 ('very much applies') (e.g., I act spontaneously, without thinking too much; α = .83), adapted from Grasmick et al. (1993) (see Ribeaud and Eisner, 2006).

Dominance towards others was measured through a one-item measure filled out by the teachers. Answers were recorded on a 5-point scale from 1 ('does not apply at all') to 5 ('very much applies').

We included two additional variables that measured *negative peer relations*. Isolation and popularity were each rated by the teachers on a 5-point scale from 1 ('does not apply at all') to 5 ('very much applies'). After reverse-coding the popularity item, a composite scale consisting of both items was computed (α = .73).

5.3.4 Control variables

We controlled for gender ("0" is female, "1" is male), ethnicity (with "0" signifying at least one Swiss parent, and "1" two non-Swiss parents), and socio-economic status (SES). The latter was based on coding the caregiver's current profession (Elias and Birch, 1994). This code was subsequently transformed into an International Socio-Economic Index of occupational status (ISEI) score (Ganzeboom et al., 1992). The final SES score was based on the highest ISEI score of the two caregivers.

5.4 ANALYTIC STRATEGY

We used the statistical approach proposed by Osgood and Schreck (2007) to examine specialization in offending, and which was later applied to the victim-offender overlap by Schreck et al. (2008). Because this method has been extensively described in these two publications and also in several subsequent studies (e.g.,

McGloin et al., 2011; Schreck et al., 2012), we restrict ourselves to a summary here.

The approach is grounded in item response theory (IRT), which provides a framework for modeling the relations between individual test items and the latent constructs the items are intended to measure (e.g., victimization, offending). Different from the usual practice of summing items to represent a construct, IRT estimates an individual's most likely position on the latent trait given his responses on the test items. The latent trait captures the construct on a continuous scale with equal intervals that is free from measurement error (Osgood, McMorris and Potenza, 2002). This is particularly beneficial for the study of self-report data on offending and victimization, because summative measures of these phenomena are typically skewed and overemphasize the less serious and less important forms of crime (Osgood et al., 2002). The method is further based on Raudenbush, Johnson and Sampson (2003), who developed a multivariate, multilevel IRT framework.

The model we used in the present study consisted of two levels, the first being the response of the respondent to each of the ten victimization and offending items (i.e., the IRT measurement model) and the second being the respondent.[4] The probability that an individual endorsed a particular item was modeled as a function of three factors. The first was a latent overall propensity for a combined tendency to be

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[4] The level 1 model is defined as (see Osgood and Schreck, 2007):

$$Log[odds(Y_{ij} = 1)] = \beta_{0j} + \beta_{1j}Diff + \sum_{i=2}^{I} \beta_{ij}D_{ij} \qquad (1)$$

The level 2 model is defined as:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}X_{1j} + \gamma_{02}X_{2j} + \ldots + u_{0j} \qquad (2)$$

$$\beta_{1j} = \gamma_{11}X_{1j} + \gamma_{12}X_{2j} + \cdots + u_{1j} \qquad (3)$$

$$\beta_{ij} = \gamma_{i0} \qquad (4)$$

involved in both offending and victimization, overall termed “violent encounters” (β_{0j}), which was based on the respondent’s item responses and which varied randomly across individuals. The second factor, and the one central to our research question, was the latent variable for role differentiation towards offending versus victimization (*Diff*). *Diff* returned a positive value for offending items and a negative value for victimization items. A predominantly offender role therefore yielded a positive value on β_{1j} whereas a predominantly victim role yielded a negative value. This variable varied randomly across individuals. Differentiation was completely separated from and thus not confounded with the overall propensity for violent encounters by group mean centering the item scores within individuals. The third factor regarded the severity of the crime-type (i.e., item difficulty) and thus reflected the base rate of an offense (β_{ij}). Rarer offenses will have lower values than more common offenses. Thus, a series of dummy variables with a “1” for the relevant item and a “0” otherwise was included and indicated which item reflected which answer (with one of the dummies excluded as the reference category). Models were estimated using HLM7 (Raudenbush et al., 2011).

6. RESULTS

We first examined the precision of our measures for violent encounters and role differentiation by means of their reliability. The results are displayed in Table III. For overall violent encounters, the reliability was .73 at T1 and .71 at T2, which can be regarded as moderate. The reliability for role differentiation was much lower at .43 and .45, which is in line with prior research (Schreck et al., 2008) and to be expected given that most respondents reported none or few violent encounters, thus providing

limited information about the contrast between offending and victimization. Our latent variable approach accounts for this limited reliability (see Osgood and Schreck, 2007).

Next, we assessed whether the tendency towards offending versus victimization was greater than could be expected by chance. To this end, we estimated the full variance of the latent variables for role differentiation in both waves (i.e., using models where explanatory level 2 variables were omitted). The approximate significance of the variance was examined using z tests, which were obtained by dividing the variance estimates by their standard errors (see Table III). This yielded values of 11.0 (= 3.30/.30) at T1 and 11.5 (= 4.59/.40) at T2. Given that the critical value for significant role differentiation at α =.001 equals 3.3, this means that there was a highly significant tendency towards role differentiation in both waves. The variance for role differentiation was comparable to, or even larger than, the variance for overall violent encounters, suggesting that role differentiation contributed considerably to the respondents' violence profiles. Consistent with the findings reported by Schreck et al. (2008), the variance for role differentiation increased somewhat over age.

--Table III about here --

Table IV provides a more intuitive description of the magnitude of the tendency towards role differentiation. It displays the observed distribution of offending and victimization for three groups of respondents: Those who tended towards offending (defined by scores at least 1 standard deviation above the mean on role differentiation), those who tended towards victimization (scores at least 1

standard deviation below the mean on role differentiation) and those with a mixed profile (scores within 1 standard deviation from the mean). Analogous to Schreck et al. (2008), we only included those youths who were the most useful for observing role differentiation towards a predominant offender or victim role; i.e., youths who endorsed between three and seven of the ten violent encounters (18% of the T1 sample and 14% of the T2 sample). The results show that those who tended towards offending had committed about half of the offenses described by the items across both waves, while they had experienced about one-fifth of the different types of victimization. Those with a tendency towards victimization had committed one-sixth of the offense items, while they had experienced two-thirds of the victimization items. Both patterns differed from respondents with a mixed profile, who had committed about one-third of the different types of offenses and had experienced a little over 40% of the victimization types. These findings suggest that, in line with our expectations, there are sizable differences between those with a tendency towards victimization and those with a tendency towards offending.

--Table IV about here--

In a subsequent step, we examined the extent to which role differentiation was stable over the two waves. To this end, we included violent encounters and role differentiation at both waves in our model and estimated the correlations among these latent variables (Table V). The stability in role differentiation was substantial across both waves (r = .72) and larger than the stability in violent encounters (r = .57).

--Table V about here--

In the last step of our analysis, we predicted violent encounters and role differentiation by our variables for routine activities/lifestyle, violent subcultures and socio-psychological dispositions. The results are shown in Table IV. Recall that our predictors were measured at T1 and our dependent variables at T2 to ensure correct measurement of the theorized temporal ordering. As prior research has focused on routine activities/risky lifestyles and violent subcultures as the primary correlates, our first model was restricted to these two perspectives. Analogous to previous findings, our results showed that risky leisure activities, substance use and violent subcultures in the form of masculinity norms endorsement and delinquent peer-group membership were significantly related to violent encounters. In contrast, the only variable to predict role differentiation in this model was masculinity norms with higher scores on this variable leading to offending role taking. Furthermore, being male predicted violent encounters and lower SES predicted a tendency towards victimization. In other words, the results for Model 1 roughly replicate those of prior research.

--Table VI about here --

In our second and final model, we went beyond the usual routine activities/lifestyle and violent subcultures explanations and also assessed the predictive value of socio-psychological dispositions. Suffering from anxiety and depression and having low self-control were associated with having experienced more violent encounters and thus were predictive of the victim-offender overlap. Interestingly, and in line with our hypothesis, suffering from anxiety and depression was also associated with a tendency towards victimization. In addition, being

dominant towards others was associated with a tendency towards offending. In contrast to our hypothesis, positive peer relations were not associated with role differentiation. Importantly, including the socio-psychological characteristics led to lower gamma's of the routine activities and subculture variables, and for the effects of risky leisure activities and delinquent peer group-membership on violent encounters to non-significance. This finding suggests that the effects of routine activities and violent subcultures may operate on offending and victimization *via* socio-psychological characteristics. In other words, as we hypothesized, the inclusion of socio-psychological variables beyond the commonly used routine activities and subculture of violence variables extends our knowledge of the factors underlying youths' tendency to enter into violent encounters and which role(s) they assume in them.

7. DISCUSSION

We argued that disentangling victim and offender roles is important for advancing our understanding of the etiology of the victim-offender overlap. Previous efforts have tended to emphasize the ways in which victims and offenders are alike, somewhat to the neglect of what sets them apart. Furthermore, most research has tried to explain the association between victimization and offending through demographic characteristics, routine activities/risky lifestyles and subcultures of violence, and much less through individual qualities that may determine the onset, development and outcome of violent interactions. However, as Lauritsen and Laub (2007:62) argued, in order to identify the mechanisms underlying the relation between victimization and offending, it is imperative to go a step further and examine types of heterogeneity that

are not captured by demographic and neighborhood characteristics, family and peer factors, lifestyle activities and subcultural norms. In this article, we did so by examining a series of socio-psychological characteristics in conjunction with the routine activity/lifestyle perspective and subcultural notions to explain differences between those who take on predominantly offender roles versus those who are predominantly victims..

We hypothesized that the socio-psychological factors we examined in particular would account for a differential tendency towards offending or victimization and as such extend routine activities/risky lifestyle and subcultural explanations. The results show that this was the case as the socio-psychological variables predicted the tendency to take on victim roles versus offender roles over and above routine activities/risky lifestyles and subculture of violence perspectives. Moreover, while not anticipated and exceeding our expectations, the results also indicated that certain psychological variables, i.e., anxiety and depression, also discriminate between the victim-offender group and those who did not offend and were also not victimized, implying that here too psychological variables can contribute to our understanding of the etiology of the victim-offender overlap in important ways. Furthermore, and in line with expectations, low self-control also predicted the overlap versus the non-involved. These findings warrant the observation that there are important differences between individuals who have been victimized without having offended, those that have offended without having been victimized, and those that have engaged in both or in neither.

Using psychological constructs to account for victimization could be interpreted as blaming the victim, but such interpretation would be erroneous. Arguing along similar lines as Schreck (1999), we interpret our results as indicating

that certain psychological characteristics increase people's risk to be targeted for crime and hence render them vulnerable and make them preferential targets. It would therefore be more productive to use these findings for designing policy and interventions that aid these individuals to reduce their likelihood of victimization. Schreck et al. (2008:894) noted that programs for violence reduction and prevention are often based on the idea that victims and offenders belong to distinct populations and address one group or the other but not both, and thereby ignore the fact that a large share of those who frequently encounter violence take on roles as victims as well as offenders. The findings of the present study underscore that differentiation between those who encounter violence as both offender and as victim, those that primarily fall victim to crime, and those that primarily offend is important. As our results indicate, the latter group differs from the former on a range of psychological variables, which hints at the fact that interventions tailored specifically to each group are likely to be more successful than interventions that are indiscriminate in this respect.

When interpreting the results a number of considerations and limitations should be borne in mind. Our variable for peer relations, which was not significant, was measured through teacher evaluations. These have been shown to have different views on youths' social relations than the youths themselves (Averdijk, Eisner and Ribeaud, 2013). Although teachers' views are valid in and of themselves, future research should investigate whether the views of different informants yield different results for this measure. Furthermore, we note that our operationalization of socio-psychological characteristics should not be interpreted as being encompassing. Future research should explore other potentially relevant characteristics, such as personality dimensions which have already been shown to be consistent predictors of

delinquency, such as agreeableness, conscientiousness and honesty-humility (Miller and Lynam, 2001; Van Gelder and De Vries, 2012), as well as trait level emotions incorporated in general strain theory such as anger and frustration (see Agnew, 1992). Individual differences in the experience of strain-related emotions such as anger and frustration may for example explain why some people resort to violent of offending after having been victimized while others do not (see also Agnew, 2002). It should also be noted that our sample consisted of youths and that most of the offending incidents occurred between youths. Furthermore, most youths in our sample reported few violent encounters, which limits the information that can be derived from the contrast between offending and victimization. Our findings, therefore, do not necessarily apply to older age groups and/or more delinquent groups. Hence, future research should replicate our results among older offenders to examine to what extent they can be generalized to these populations.

Finally, we acknowledge that the use of a self-reported delinquency measure carries as a limitation that it is prone to bias, such as recollection errors and over- and underreporting (e.g., Huizinga and Elliott, 1986). Nonetheless, we think that for the purposes of the present study self-report measures carry various advantages over alternative methods that outweigh the shortcomings. Specifically, self-report methods allow for the detection of forms of crime that are not picked up by official statistics because they are not reported (Krohn, Thornberry, Gibson and Baldwin, 2010).

8. CONCLUSION

It has become commonplace for researchers studying the victim-offender overlap to lament the fact that most studies have treated victims and offenders as separate

categories in spite of the strong empirical association between victimization and offending. However, it was over 60 years ago that von Hentig not only pointed out the association between victimization and offending but also went a step further by noting that certain victims who also engage in offending may differ from victims who do not in important ways. It was again von Hentig (1948) who hinted that individual characteristics, such as anxiety or depression, could influence people's risk of victimization. Ahead of his time, he argued that examining individual traits and psychological characteristics could advance our understanding of the victim-offender overlap. In another early publication, Wolfgang (1958, p. 4) added: "As personality and social environment are inseparable, so must the bio-psychological and sociological approaches to homicide and other problems also be interdependent".

Schreck et al. (2008, p. 873) argued that the more people adopt one role versus the other, the greater the need for specific theorizing and research to account for both phenomena: "As evidence of similarities between victims and offenders has mounted, it may be time to step back and evaluate the extent to which offenders and victims differ as well. The greater these differences, the more justification for specialized theories of criminality and victimization." We believe that the results of the present study emphasize the need for this type of specialization and can guide future efforts in the direction of individual-level variables to complement and extend research frameworks using routine activities/risky lifestyle and subcultural theory variables.

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Table I Tetrachoric correlations between offending and victimization items for T1 and T2.

	1	2	3	4	5	6	7	8	9	10
Offending										
1. Simple assault										
2. Serious assault	.58 [.63]									
3. Sexual harassment	.50 [.46]	.42 [.27]								
4. Extortion	.57 [.62]	.62 [.57]	.58 [.42]							
5. Robbery	.42 [.52]	.54 [.42]	.45 [.37]	.79 [.85]						
Victimization										
6. Simple assault	.76 [.72]	.44 [.40]	.30 [.25]	.46 [.12]	.28 [.27]					
7. Serious assault without weapon	.39 [.32]	.37 [.42]	.32 [.28]	.45 [.18]	.31 [.25]	.58 [.56]				
8. Serious assault with weapon	.35 [.34]	.38 [.34]	.37 [.18]	.41 [.18]	.45 [.10]	.38 [.61]	.55 [.62]			
9. Sexual harassment	.09 [-.01]	.20 [.05]	.47 [.44]	.17 [-.07]	.04 [.04]	.22 [.15]	.19 [.21]	.26 [.25]		
10. Robbery	.41 [.32]	.26 [.28]	.12 [.18]	.21 [.30]	.36 [.31]	.41 [.39]	.43 [.43]	.40 [.25]	.07 [-.08]	

Note. T2 correlations displayed in brackets.

Table II. Factor loading one-factor solution principal components analysis.

	T1	T2
Offending		
1. Simple assault	0.82	0.85
2. Serious assault	0.68	0.74
3. Sexual harassment	0.66	0.51
4. Extortion	0.83	0.72
5. Robbery	0.73	0.69
Victimization	0.73	0.73
6. Simple assault		
7. Serious assault without weapon	0.66	0.61
8. Serious assault with weapon	0.61	0.59
9. Sexual harassment	0.31	0.19
10. Robbery	0.49	0.54
Eigenvalue	4.45	4.09

Table III. Reliability and Variance of Overall Violent Encounters and Role Differentiation.

	Violent Encounters		Role Differentiation	
	T1	**T2**	**T1**	**T2**
Reliability	.73	.71	.43	.45
Variance (τ)	3.73 (.22)	4.11 (.24)	3.30 (.30)	4.59 (.40)
N of respondents	1,046	1,046	1,046	1,046

Table IV. Observed Distribution of Offending and Victimization, by Role Differentiation

	Observed Distribution of Violent Encounters			
Role	**Offender**	**Victim**	**Total**	***n***
T1				
Offender (> + 1 SD)	.48	.21	.35	76
Mixed (> -1 SD and < +1 SD)	.31	.45	.38	117
Victim (< -1 SD)	.15	.67	.41	54
T2				
Offender (> + 1 SD)	.53	.17	.35	59
Mixed (> -1 SD and < +1 SD)	.30	.42	.36	92
Victim (< -1 SD)	.15	.66	.40	50

ABBREVIATION: SD = Standard deviation

Table V. Correlations among Violent Encounters and Role Differentiation Across Two Time-Points.

	Violent Encounters		Role Differentiation	
	T1	**T2**	**T1**	**T2**
Violent encounters				
T1				
T2	.57			
Role differentiation				
T1	.07	.15		
T2	.18	.21	.72	

Table VI. Regression Results of Violent Encounters and Role Differentiation on Explanatory Variables.

T1 Predictors	Model 1				Model 2			
	T2 Violent Encounters		**T2 Role Differentiation**		**T2 Violent Encounters**		**T2 Role Differentiation**	
	γ	SE	γ	SE	γ	SE	γ	SE
Routine activities and subculture								
Risky leisure activities	.10**	.03	-.06	.05	.05	.03	-.09	.05
Substance use	.23**	.05	.10	.06	.17**	.04	.11†	.07
Masculinity norms	.19**	.04	.31**	.06	.11*	.04	.29**	.07
Member of delinquent peer group	.20*	.09	.19	.13	.17†	.09	.16	.13
Socio-psychological characteristics								
Anxiety and depression					.23**	.04	-.24**	.06
Low self-control					.40**	.07	.09	.10
Negative peer relations					.04	.03	.03	.05
Dominant					.03	.03	.16**	.06
Control variables								
Male	.56**	.06	.15†	.08	.66**	.06	.03	.08
Non-Swiss	-.07	.06	-.07	.08	-.04	.06	-.08	.08
Socio-economic status	.00	.00	-.01*	.00	.00	.00	-.01*	.00
N of respondents	1,046				1,046			

NOTE. γ is the HLM population average estimate and SE its robust standard error.

ABBREVIATIONS: SE = Standard error

† $p < .10$; * $p < .05$; ** $p < .01$ (two-tailed tests).

Appendix A. Specification of Variables

Victimization

Serious victimization questionnaire In the *past 12 months*, so since July 2010, has one of the following things happened to you? And if yes, how many times since July 2010?

- Someone took something from you while using violence or threatening with violence, for example your purse, bike or money [Robbery].
- Someone deliberately injured you with a weapon (e.g., a knife) or with an object (e.g., a stick) or through kicking you with heavy shoes [Serious assault with weapon].
- Someone hit you so seriously, that you got injured (e.g., a bleeding wound or a black eye). However, no weapon or object was used [Serious assault without weapon].

Bullying questionnaire How many times since July 2010 have other youths:

- hit, bit or kicked you or pulled your hair? [Simple assault]
- sexually harassed you (e.g., hit on you, groped you)? [Sexual harassment]

Offending

Offending questionnaire Since July 2010, have you ever:

- threatened anyone with violence to obtain money or goods? [Extortion]
- taken money or things from anyone while using violence? [Robbery]
- hit, kicked or cut anyone deliberately while injuring him/her? [Serious assault]

(follow-up question: If yes, how many times since July 2010?)

Bullying questionnaire How many times since July 2010 have you:

- hit, bit or kicked another youth, or pulled his/her hair? [Simple assault]
- sexually harassed another youth (e.g., angemacht, begrapscht)? [Sexual harassment]

Risky lifestyle

How often do you do the following things?

- Meet friends at night and do something together.
- Meet friends at someone's home without the presence of adults.
- Hang around at the youth center with friends, without taking part in organized activities.
- Go to a party in the evening with friends.
- Meet with friends at a café or a restaurant (e.g., Starbucks, McDonalds).
- Go out with friends to a bar or a club at night.
- Hang around in a park, at the train station or in a shopping mall and have fun with friends in the afternoon.
- Hang around in a park, at the train station or in a shopping mall and have fun with friends in the evening.

Masculinity norms

- A man is allowed to use violence when he is insulted.
- A real man is ready to use violence when someone says bad things about his family.
- A real man is strong and protects his family.

Anxiety and depression

Please indicate how you felt in the past month.

- I cried.
- I was fearful for no particular reason.
- I was unhappy.
- I felt lonely.
- I could not fall asleep at night.
- I was sad without knowing why.
- I was bored.
- I was worried.

Self-control

- I act spontaneously, without thinking too much.
- I try to get what I want, even if this causes problems for others.
- I enjoy doing dangerous things, just because it is fun.
- If I don't get what I want fast, I get angry.
- I enjoy going out and doing something rather than reading and thinking.
- I don't care if others are upset about something that I did.
- I lose control pretty easily.
- If I can, I like to do something with my hand rather than with my head.
- I always do whichever I like doing in that moment, without considering the consequences.
- Excitement and adventure are more important to me than security.

Appendix B. Offending and Victimization: Summary Statistics and Item Parameters

	T1			T2		
	% Yes	**γ_{i0}**	**SE**	**% Yes**	**γ_{i0}**	**SE**
Offending						
Simple assault [reference]	29%	[-.82]	.06	26%	[-1.07]	.06
Serious assault	10%	-1.12	.07	10%	-.97	.06
Sexual harassment	7%	-1.34	.07	6%	-1.32	.07
Extortion	1%	-2.56	.07	2%	-2.00	.06
Robbery	2%	-2.28	.07	2%	-2.02	.06
Victimization						
Simple assault	26%	-0.18	.06	20%	-0.24	.06
Serious assault without weapon	10%	-1.18	.08	7%	-1.18	.07
Serious assault with weapon	7%	-1.51	.08	5%	-1.48	.07
Sexual harassment	19%	0.14	.09	21%	.57	.10
Sexual harassment by gender	n.a.	-1.61	.12	n.a.	-1.96	.13
Robbery	8%	-1.36	.08	4%	-1.51	. 07
N of respondents		1,046			1,046	

NOTE. γ is the HLM population average estimate and SE its robust standard error.

ABBREVIATIONS: SE = Standard error