Using Archival Data and Multidimensional Scaling to Explore Leadership: Examples
from Group Crime

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Abstract

Juvenile group behaviour is increasingly linked to criminal activity, both through
statistics and the media. The present paper discusses the methods used by Porter and
Alison (2001; 2005; 2006) for researching hierarchies, particularly leadership
behaviour, in juvenile criminal groups. The paper discusses available data sources,
advocating the use of archival sources such as law reports and media accounts for
exploring criminal leadership. Further, the paper talks the reader through the method
of Partially Ordered Scalogram Analysis (POSA), a multidimensional scaling
technique suited to exploring the concepts of interest here. The work discussed takes
the perspective that such behaviour is not "abnormal" or pathological but rooted in
normal processes of peer group dynamics. The methods draw upon social and
organisational psychology, to produce a model of leadership that would be applicable
to both criminal and non-criminal contexts.

The majority of street offenders, particularly juveniles, commit crime with co-offenders (Bureau of Justice Statistics, 1999). Therefore, juvenile group crime has been a growing concern for recent government and police initiatives that are targeted towards tackling anti-social behaviour and street crime. Recent press reports indicate links between incidents of group rape and juvenile robbery offences (BBC news, Jan, 2004) suggesting that muggers could be responsible for a large percentage of recent group rapes.

Porter and Alison (2001; 2005; 2006) highlighted that, rather than involving formal gangs, group violence is more typically rooted in "normal" peer attachments that can lead to delinquent behaviour through a process of mutual, supportive influence instigated by "contagious" individuals. This paper draws together their work on rape and robbery groups to explain instigation and influence in violent group events. Such processes have implications for criminal responsibility as well as for understanding the driving forces in these events. The present paper focuses on how the methods used in Porter and Alison's research can be particularly helpful for examining group properties of leadership. Since their model is rooted in classic social psychological theories it is argued that the model is applicable to groups in both criminal and non-criminal contexts.

Leadership

For social and organisational psychologists, the term "group" typically carries with it assumptions regarding the properties of the entity being described. For example, groups are said to have "structure", which, for Sherif and Sherif (1969) meant "an interdependent network of roles and hierarchical status's" (p.150). Exploring the roles, and behaviour associated with them, has proved a useful approach for

examining children's bullying (Salmivalli, 1999), both in terms of identifying children's involvement at a variety of levels, but also by creating an approach that shares responsibility for that behaviour, rather than simply pointing the blame towards instigators or "ring-leaders". Responsibility for the incident is attributed to bullies (who instigate), assistants (who join in), reinforcers (who encourage the bullying behaviour) as well as outsiders (who do nothing to stop the behaviour). It is recognised that influence over behaviour can come from a number of sources in differing degrees and "types", not simply the impetus of one individual.

While early leadership theorists sought to distinguish leaders from non-leaders (see Stogdill, 1948 and Mann, 1959 for early reviews), hypothesising differences in various traits (including physical and psychological attributes), later approaches recognised that leadership is better described and explored through behaviour (for example, see the Ohio State University leadership studies). Such behaviour could be expressed by any individual, rather than a "born leader" and could be expressed to varying degrees.

Porter and Alison (2001; 2005; 2006) draw on social and organisational psychology to highlight the importance of examining leadership in terms of both its qualitative and quantitative components: looking at different forms of leadership behaviour as well as the extent to which individuals can display that behaviour to differing degrees. In examining group crimes of rape and robbery, they focus on the behaviour of the group members throughout the incidents, in order to recognise the influence that each member may have over the crime as it advances through a number of stages. "Stages" were identified as i) the initial idea to commit the crime, ii) selection of the target (e.g., victim, premises), iii) initial approach to the target, iv) first criminal act (sexual or robbery), v) post-offence decision (e.g., what to do with

the victim or how to leave the scene), vi) first post-offence behaviour (e.g., leaving the scene, or "dealing" with the victim).

While similar to Salmivalli's (1999) participant role perspective, in that each group member's behaviour is explored (for leadership behaviour), this method also makes use of the chronology of the event, allowing leadership behaviour to be displayed at different times by different group members. This allows exploration of each group member's behaviour at each stage of the offence as well as measuring the amount and type of leadership behaviour each is expressing.

Studying Group Crime: The use of archival data

As Glassner and Carpenter (1985) point out, "the representativeness of a sample of active offenders can never be determined conclusively because the parameters of the population are impossible to estimate" (cited in Jacobs & Wright, 1999, p.152). In other words, it is impossible to know whether a sample of offenders or offences that are selected for research purposes are indeed fully representative of the whole population of interest, since by its nature, crime is often a "hidden phenomenon". Different data sources suffer different drawbacks in criminal behaviour research while affording a number of varied advantages, each of which should be considered by researchers with reference to their particular research questions.

Possible data sources

Crime and its perpetrators have been studied using a variety of sources of information, which are often limited by both methodological and ethical constraints. In psychological research, preference is given to controlled scientific experiments under laboratory conditions. However, this is not a practical, ethical or reliable way to

conduct studies of offending behaviour. The two most widely used sources of information for this purpose are interviews/questionnaires conducted by researchers with the offenders or victims first hand and the use of already existing data archives, where information on the offences has already been collected by other parties. It is argued that archival sources can provide a particularly useful source of data for studying group criminal offences by overcoming many of the problems inherent in alternative data collection procedures.

Disadvantages of alternative data collection procedures

As Alison, Snook and Stein (2001) explain, working "in the field" in "real world" enquiries means that researchers are not able to separate independent from dependent variables and must rely instead on making sense of complex multivariate phenomena. Clearly it is problematic to examine criminal phenomena in an artificial laboratory for both ethical reasons and limitations in generalising to real situations. It is, therefore, necessary to adopt unobtrusive measures (Lee, 2000).

One possible way of investigating criminal behaviour is to conduct interviews with, or distribute questionnaires among, suspected or known offenders. However, in studying group crime it would be preferable to interview every member of each sample group in order to rule out potential bias from one individual's perspective of the whole group's actions. Furthermore, even if interviews with every group member were conducted one could never be sure if the offenders were telling the truth or accurately recalling events, especially when they were interviewed some time after committing the crime. Such an interview process would also be time consuming, in terms of the actual interview time and also in gaining access to appropriate

individuals.   Many individuals may be incarcerated and so the permission of the institution, as well as the individual, would need to be obtained.

Furthermore, potential sample targets may be under the age of 16 and, thus, ethical concerns would need to be met such as parental permission or, indeed, having a parent or guardian present during the interview, but this would likely affect the interviewee's responses. Indeed, even the very presence of the researcher can interfere with this type of data collection process (Webb, Campbell, Schwartz, & Sechrest, 1966). The fact that the researcher has designed the interview to elicit particular information and also how comfortable the interviewee feels in disclosing details of a very sensitive nature would affect the information gained. This may also be true of other potential sources of interview data, such as police interviews with witnesses, victims or offenders.   Any account given of a particular event may vary according to the perspective of the account giver, their motive for giving the account, or who the account is given to (Alison, Snook, & Stein, 2001).

Victim statements may also suffer from a distorted viewpoint or selective remembering/reporting. As group rape and robbery are highly traumatic events involving potentially large numbers of individuals, the victim may not have been witness to certain important interactions between the offenders during the offence. Police reports, on the other hand, whilst being concerned with establishing the true facts, are often inclined towards building a case against the offenders and so may focus only on particular aspects of the offence that are deemed important in this task, rather than information that researchers need in order to answer their research questions.

Advantages of law reports and media accounts

Two sources of archival data that avoid many of the problems outlined above are law reports and media accounts of cases of group crime. In comparison to statements and accounts recorded by the police, the majority of law reports and media accounts are based on evidence presented in court. Thus, they avoid many of the problems inherent in police statements because the details will have had to undergo particularly stringent legal scrutiny in order for them to have arisen in the courtroom. These cases are also based on multiple sources of evidence such as victim statements, offender statements, forensic evidence, and witness statements, rather than only from a single source (the victim or an offender). This means that any biases that may occur from one particular source are diluted by the inclusion of other evidence and so many of the problems inherent in gaining the data in other ways, such as those mentioned above, are countered. Furthermore, that this information has already been collected and collated into a narrative summary of the event means that the time taken for a researcher to collect and code this form of data is dramatically reduced. This data is also already in the public domain so access is relatively easy, especially through electronic resources, and there are typically no ethical concerns over confidentiality, anonymity or permission of the offenders and victims.

The majority of media cases, and all law reports state whether the offenders have been convicted, thus cases can be selected for sampling on the basis that the facts that are reported have been considered to be true by the judge and jury. Furthermore, in the case of media articles, they are often high profile cases that have attracted examination by more than one reporter, in more than one publication so these different sources can be collated to reduce personal bias of a single reporter. It is also possible, for a percentage of cases, to collect both the media articles and the

court reports for study, again decreasing the likelihood of any personal bias by the writer towards particular aspects of the cases.

Disadvantages of law reports and media accounts

As discussed above, the majority of the cases reported in the media, and all of the law reports, are solved cases where the offenders have been caught and convicted. While this allows for examination of the offenders and also increases the reliability of the case details, it is possible that the sample may offer only select examples of offenders or behaviours that led to being caught, rather than generalising to those crimes that are unsolved, or even unreported.

However, when formulating a theory, it is important to base initial research on known facts to give more credence to the conclusions. Once a model has been formed on the basis of reliable material it can then be tested across other, possibly less reliable, cases. Ensuring a large number of cases from a variety of sources and countries may reduce the likelihood of selective differences between the cases available and those not included in the sample.

Nevertheless, archival sources, particularly media sources where the journalists report on evidence collected by others, may be subject to inaccuracies. Since the data was initially collected by individuals for purposes other than research, the information collected and presented may be incomplete due to selective editing on the part of the writer. This presents a problem in that we cannot know for sure that something did not occur. Furthermore, the nature of the media accounts can often be sensationalist. However, Lipsedge and Littlewood (1997) examined a sample of domestic siege incidents through media accounts. While they acknowledged that their sample may be restricted in that it may involve a higher number of incidents ending in

violence or occurring in close proximity to the local media, they nonetheless found it a useful sample for study.

Doubtless there are problems with archival data. Information may have been recorded incorrectly and only certain aspects may have been highlighted (Alison, Snook, & Stein, 2001). Where possible, multiple sources of the same case should be obtained for analysis (for example, media articles by different reporters, in different publications as well as cross-referencing the different sample sources, as outlined earlier). The errors introduced by unreliability are most likely to add noise to the system, thereby reducing the possibility of finding support for any models tested. However, if hypotheses are based on a solid theoretical grounding and previous sound research, it is argued that support for hypotheses is more likely to exist despite the data, rather than because of it.

Data treatment: developing coding dictionaries

Given the rich, contextual, "qualitative" form of the raw archival data, there are a number of important steps and considerations to reduce it to a form that is suitable for analysis, but that retains reliability and validity. First is the development of a suitable coding dictionary for examining the behaviour of interest. The use of a mapping sentence (Shye, Elizur & Hoffman, 1994) can be particularly useful. A mapping sentence is a tool used in Facet Theory to "map out" the research domain and framework in a form that makes semantic sense. For the present purposes, a mapping sentence can be used in order to formalise the hypothesised leadership properties, termed *facets* (the different offence stages, from initial idea through to post-offence behaviour) and the *elements* within them (the different forms of leadership potentially displayed during each stage: decisions, actions and orders). All possible combinations of behaviour across the stages can then be clearly seen,

showing how each group member *could* behave in the crime. The mapping sentence also shows how the *range* of potential combinations produces a scale of leadership behaviour from no leadership (displaying none of the behaviours in the crime) to high leadership (making all the decisions and giving orders to group members to carry those decisions through). In the mapping sentence, this is termed the *common range* of the leadership scale and corresponds to the different degrees of leadership that can be displayed by each individual.

Porter and Alison drew on previous research and social/organisational psychological theories of leadership, to construct a mapping sentence to outline a number of elements that would constitute leadership. Importantly, the mapping sentence was theory-driven, providing support for its elements. Further, the data was considered during the mapping sentence's construction, meaning that the model reflects the data that it is exploring. For example, the framework allowed for, and included where necessary, the category of "both action and order". For example, the coding framework employed to identify leaders in rape groups included the category of "both ordered the disposal of the victim and carried out that disposal" to describe offenders who either gave an order for a group member to assist them in the disposal or where two victims were involved and the leader carried out the disposal of one while ordering another group member to dispose of the second victim. The data did not necessitate inclusion of this category for any other crime stages, or for identifying leaders in robbery groups.

Porter and Alison's mapping sentence explored leadership at each stage of the offence, as discussed earlier. At each stage, leadership behaviours could be classified as either decisions (person did not make the decision; person did make the decision) or a style of communicating those decisions (participative action or autocratic order-

giving, with the latter being a more extreme form of leadership). The more leadership behaviours a person engaged in throughout the offence, the higher their score would be on the mapping sentence and, therefore, the more leadership he/she was said to possess.

Once a coding dictionary has been constructed it can be used to code all data cases in the researcher's sample. However, the inter-rater reliability of the dictionary must be determined, with a significant Cohen's Kappa value signifying that two independent coders' judgements are sufficiently similar to suggest the dictionary is adequate for reliable future replication.

Using Partially Ordered Scalogram Analysis (POSA) to assess leadership

Once the data is coded according to the mapping sentence, each group member will then have a profile of their leadership behaviour throughout the offence (describing their leadership behaviour at each stage of the offence). A Multidimensional Scaling (MDS) technique called Partially Ordered Scalogram Analysis (POSA; Shye, et al., 1994) is of particular value for analysing these "profiles".

POSA not only compares individuals (or cases) on a number of variables simultaneously, but orders the cases with respect to both their *qualitative* and *quantitative* variations. POSA is, therefore, particularly suited to analysing both style and degree of leadership behaviour.

POSA can be used to both test and develop scales of measurement, for example, of leadership behaviour. The resultant scale can then be used to explore how the elements used in that scale relate to each other (for example, how the properties combine to produce different measurements on the scale). Cases (for example,

people) can then also be compared with respect to how they score on the scale both qualitatively (style of leadership) and quantitatively (degree of leadership). POSA can, therefore, be used to explore how particular leader behaviour is employed in combination by individuals in groups, by exploring how the scale elements relate to each other. It can then also be used to identify leaders and structure in those groups, by examining where each group member sits on the scale.

Summary/discussion of Porter & Alison's results

Instigation

The properties of POSA as a technique allowed for measuring each group member's style of leadership (in terms of their decisions, actions and orders) and also the degree of leadership they displayed (how much they were involved throughout the offence stages). Porter and Alison (2001; 2006) identified leaders in 95% of rape groups and 98% of robbery groups, where one group member (labelled the leader) made more decisions, exhibited more initial actions and gave more orders than other group members. These leaders were, therefore, not defined by traits, characteristics or even specific role legitimacy, but through their ideas and behaviour. The fact that the group members followed this individual through the course of the event, joining in with the leader's actions and carrying through the leader's ideas, further supports this individual's leadership.

Leadership as an event-specific process of behaviour

Previous studies of instigation in delinquent groups have employed very simple criteria to identify leaders and have not explored leadership further in any systematic theoretical way, for example, by examining the processes of leadership in

delinquent groups. Warr (1996) and Reiss (1986) examined instigation in terms of the first suggestion to commit the crime. The work of Porter and Alison (2001; 2006) builds upon this further to examine instigation not simply as an initial stage but as a series of influential behaviours that impact upon the group's behaviour throughout each stage of the event. Instigators are not only identified in terms of their ideas and decisions but also the processes of participation and order-giving by which they actually turn these ideas into group action.

The work of Porter and Alison (2001; 2005; 2006) has also measured leadership in terms of individual behaviour in a given situation. This means that the model allows for leadership to be situation- and/or group-specific, rather than assuming that leadership is a stable trait of the individual. Warr (1996) has shown that offenders do not consistently assume the role of instigator over time. This demonstrates that both the situation and their relative position in the group in which offenders are participating at the time play a part in determining which role they play in a delinquent event. Thus, one individual's leadership may vary across different types of situation, depending on the activities, goals, and even the actual members, of the group at any one time. For example, group members may be willing to follow an individual in one situation but be unwilling to follow the same individual when different goals are at stake. Alternatively, while one set of group members may be willing to follow a particular individual, the same individual may not inspire such behaviour from a different set of people. Given the instability of leadership, the leaders identified by Porter and Alison's theory are identified through their charisma in the sense that they inspire others to follow, but rather than this charisma being measured as a stable trait, it is a characteristic attributed to the leader by his/her particular group in the specific situation under study. The methodology, therefore,

allows examination of leadership in the specific event of interest, at a specific point in time rather than a general level of ability or personality.

Degrees of leadership and hierarchical structures

The extent to which leaders (and non-leaders) involve themselves in the different crime stages was also measured in degrees, as indicated by the differing number of stages for which different leaders made decisions, displayed initial actions and gave orders. This allowed for leadership to, potentially, be displayed by any group member to different degrees rather than a simple trait that is present or absent. In other words, while it may have been hypothesised that a particular individual would emerge as influential throughout the crime, Porter & Alison's model does allow for different individuals to make decisions, display actions and give orders dependent on the stage of the crime. In this way, hierarchical structures beyond the simple leader/follower distinction can be explored. Indeed, while the majority of both rape and robbery groups indicated the presence of a leader who displayed a higher degree of involvement than his/her group members, the patterns of intra-group differences in leadership degrees were not uniform across all groups in the studies (see Porter & Alison, 2001; 2006). Specifically, three types of hierarchy were demonstrated: dichotomous leader/follower structure, leaders with lieutenants and also linear structures, where every group member has a different influence input. However, dichotomous structures were the most frequent across both crime samples.

Approximately 70% of robbery groups (Porter & Alison, 2006) and 80% of rape groups (Porter & Alison, 2001) demonstrated a dichotomous leader/follower group structure. The dichotomous structure indicated the presence of only two levels of

involvement: the level displayed by the leader and that shared by the remaining group members (the remaining members being equal to each other). Thus, most commonly, the criminal groups involved only one influential role, suggesting that the remaining group members merely agreed with ideas, imitated actions or followed orders, rather than displaying any personally creative input. These followers waited for, or allowed, the leader to take the initiative at each stage before committing to the acts themselves.

There are several possible explanations of why this dichotomous structure emerged. For example, the high level of leader involvement may reflect a certain level of leader dominance in that he/she is able to control the other group members, either verbally or through his/her own physical action. While for some leaders this may be an attempt to assert their status and attract respect through risk-taking behaviour, other leaders may simply be trying to maximise their own rewards from the crime. However, all group members may have similar goals, but the individual who achieves the leadership role is simply the most successful. This suggests that all group members are competing for the leadership role, demonstrating similar dispositions and aims.

Alternatively, the followers may not be willing to act without the direction or model of the leader, using the leader to overcome certain psychological restraints that they may have against enacting the behaviour themselves. Here, followers do not wish to compete for the leadership role but are either unwilling to act first, lacking the risk-taking or impulsivity to act, or lack the initiative or creativity to act first. It is most likely that group members are not in competition for the leader role since, typically, leaders in both the rape groups (Porter & Alison, 2001) and the robbery groups (Porter & Alison, 2006) were consistently influential throughout the crime through decision making as well as active participation. The non-leaders do not offer

their own initiative but are willing to follow the initiative of others. The psychological reasoning processes associated with "following" are discussed in further detail later with respect to the style of leadership most frequently employed by the leaders identified in this work.

The remainder of the criminal groups in Porter and Alison's (2001, 2006) samples demonstrated evidence of more dispersed, lieutenant and linear, hierarchies, where other group members, besides the leader, displayed influential involvement at some crime stages, but to a lesser degree than the leader. Again, there are several potential explanations for these hierarchical structures.

Those groups with more dispersed influence, having linear hierarchies or lieutenants, may indicate more equality between group members as demonstrated by their more equal participation and influence scores. This suggests that the group are working as a team towards shared goals. This is in line with Bartone and Kirkland's (1991) military units, where the units that showed the most cohesiveness had leaders who delegated to lieutenants. Yukl (1981) explains that such roles indicate leaders "giving away power". Rather than leaders ordering these group members to carry out tasks, the lieutenant is a trusted individual allowed to carry out tasks on his/her own volition. Thus, even the presence of a lieutenant may indicate co-operative relations between the group members. In the criminal context, Donald and Wilson (2000) found that ram raiding teams, while having a leader, also often included an "apprentice" who assisted the leader and, on some occasions, when the leader did not take part in the actual raid, made decisions at the scene. Such an apprentice was typically closely connected to the leader, such as a relative or close friend.

Similarly, the dispersion of influence among these sample group members could indicate a form of modelling or behavioural contagion, where group members take

initiative from the leader. Here, rather than group members acting within a specific trusted lieutenant role, members who simply observe the leader's behaviour may feel encouraged to display initiative in the later stages of the crime themselves. Such modelling processes are discussed in detail below with respect to the leader-follower interaction.

Alternatively, dispersion of influential involvement could indicate the presence of more than one group member attempting leadership over the group. In groups with no formally organised structure, more than one group member may compete for respect and status. Carter, Haythorn, Shriver, and Lanzetta (1951) demonstrated that leaders who emerge within groups, rather than being appointed, do so through energetic action and by attempts to encourage the other members to accept their leadership. Carter et al. (1951) noted that emergent leaders had to establish their positions by strongly supporting their own proposals in competition with other potential leaders. The present sample of groups, being based upon peer-group associations, is unlikely to involve appointed leaders. Thus, those who wish to emerge as leaders must show involvement and willingness to act upon their ideas themselves in order to convince others to follow suit.

Leader-follower interaction

Porter and Alison's (2001, 2005, 2006) leadership model also allowed examination of the style of leadership, through the use of decisions, actions and orders. A low presence of order giving and a high presence of initiating action in the studied groups showed that, in both rape and robbery, the leader typically encouraged the participation of his/her group members to join him/her in the crime through "leading by example". This produces a "contagious" spreading of criminal behaviour

to the group members through a modelling process rather than obedience. This is somewhat contrary to the common conception of dominating criminal gang leaders influencing through fear tactics. In reality, the leaders of the groups under study were typically juveniles inviting peer involvement. Participative leadership is beneficial for both parties in the interaction. Adolescents have a strong need for companionship, acceptance and status among their peers. Leaders can establish popularity and respect in their group by being the first to act and engage in risk-seeking behaviours. Non-leaders can increase their own status and popularity by conforming and are able to displace some of their responsibility for committing the crime. By leading through action, the leader offers social support to those who want to follow by making the behaviour seem more acceptable while the non-leaders, through their following, provide social support for the leader that he/she is behaving in an acceptable way.

Whilst it is common to point the "blame" at the instigator, or leader, the leader-follower relationship outlined above may contradict this idea. While it is true that leaders are the instigators of the crime and that social pressures to follow this leader can exist, followers are not completely powerless at the mercy of these leaders, but have the choice to act or not. Moreover, followers are, most often, willing to imitate leaders after no more encouragement than merely witnessing them initially engage in the behaviour.

It is also argued that, in the absence of overtly appointed leaders, leadership is implicitly bestowed upon an individual by the nature of the fact that others actually follow him/her. This means that, were it not for the followers, the leader would not have been able to assume this role and he/she may not have carried out the crime. The process of being followed offers social support for the leader's actions, indicating that the followers agree with the actions and ideas. This may legitimise the crime for

the "leader" and propel him/her on to further behaviour. Thus, whilst the leader

instigates the crime, the followers are likely to perpetuate the event through a process

of normalisation and a lack of effort to question the moral "rightness" of the

behaviour. Therefore, the crime cannot simply be blamed upon the leader, but degrees

of responsibility lie with all the group members, from those who support the leader to

those who do nothing to stop him/her. This idea is reminiscent of Salmivalli's (1999)

participant role approach to children's bullying, where all those aware of the incident,

including bystanders, are given shared responsibility for the bullying behaviour.

   In contrast to the high frequency of participative leadership, only a minority

(approximately 5%) of Porter and Alison's rape and robbery groups involved leaders

who employed the strategy of order-giving to influence their group members. Order-

giving involves an asymmetric dominance-submission relationship that is based upon

the power of one individual to command his/her subordinates. The low frequency of

order-giving is likely to be a function of the characteristics of the groups under study,

particularly in terms of their young age. Young offenders have looser, more informal

hierarchies where leadership is based on activities rather than individuals (Decker &

Curry, 2000). Thus, leaders of youth peer groups are unlikely to have legitimate

authority with the power to give their group members orders. Further, Hawley, Little

and Pasupathi (2002) found coercive influence strategies to be far less productive than

pro-social strategies. While children who used coercive strategies generally achieved

the group goal, the satisfaction of both the influencer and the followers was low and

future relationships were jeopardised. Indeed, in such asymmetric relationships, non-

leaders can feel mistreated, under-valued and that they are doing more than their fair

share of work while the leader obtains more than his/her fair share of the rewards. In

such instances followers will feel resentment towards the leader, are less likely to feel

loyalty, are less cohesive and are more likely to use the leader as a scapegoat if the group is unsuccessful. Thus, order-giving is unlikely to foster a friendly, co-operative working environment and is, therefore, less likely to bring group success. However, in the present work, a minority of groups did view themselves as belonging to established gangs, where the leader was reported to have a formal role with the right to command his gang and demand their loyalty.

Cases of non-leader unwillingness and reluctance

Whilst the majority of followers in the sample were willing to participate in the crime, a small minority of cases had at least one member who was unwilling or reluctant at some stage. Unwillingness and reluctance was more likely at the more serious stages of the crime (either in deciding to commit the crime at all, or in the disposal stages). This is most likely because these stages involve the most severe criminal behaviours, with the disposal sometimes involving murder.   This unwillingness and reluctance to participate demonstrates that these individuals do know that the behaviour is wrong and that they have higher internal restraints against committing such behaviour.

Summary

The POSA methodology allowed for rape and robbery groups to be studied through archival data in terms of leadership behaviour, allowing leaders to be identified and their style of leadership to be explored. The identified leaders were shown to most frequently adopt a participative leader style, providing a model for their group members to follow through a process of "behavioural contagion". The common conception of criminal gang leaders may be of a dominating leader who

influences through fear tactics or to overtly impose structure or role behaviour on the group members. However, in reality, the leaders of the groups in Porter and Alison's (2001; 2005; 2006) samples were typically juveniles inviting mutual co-operation and working to secure peer involvement and acceptance. This suggests that such groups involve a mutually beneficial friendship, with followers most likely allowing the leaders to take the initiative since the knowledge that they are conforming to group norms increases followers' feelings of security regarding their own behaviour.

The fact that a leader can be identified in criminal groups has implications for breaking down those groups, or encouraging behavioural change in a pro-social direction. It is evident that the leader is the instigator of subsequent group behaviour and so removal of the leader from the group may remove the initiative for criminal behaviour. Alternatively, in order to change the behaviour of the whole group it may only be necessary to focus on changing the behaviour of the leader. The change will then be spread to the other group members through his/her leadership and influence. For example, Lewin (1947), in his studies of group decision making, believed that when a person's attitude was anchored within a group it was necessary to change the group as a whole before one could change the attitude.

The majority of juvenile criminal leaders successfully influenced their group members through leading by example (acting as a role model). This has implications for how to effect behavioural change in young people. The fact that youths are willing to follow a leadership figure has implications for mentoring schemes for working with "at risk" youth (young males with no legitimate role model). In light of the current work, programmes that aim to encourage pro-social behaviour and discourage antisocial behaviour may benefit from the use of mentors. However, such

mentors must be seen to be in a position of high prestige and possess qualities that youth find appealing in order for them to accept the mentor as a role model.

Concluding remarks on the methodology

The present paper has discussed a methodology for studying the process of leadership from a behavioural perspective; organising data from archival sources and analysing using multidimensional scaling. While it has been argued that the methodology is useful for examining leadership processes, the limitations of the method must be made clear.

While the method has been used to identify leaders, the behaviour used for this identification is based upon the researcher's initial theoretical perspective of what constitutes leadership. Thus, the results must be regarded in the theoretical context. In other words, the methodology does not allow exploration of specific effectiveness of leadership styles, measurement of actual influence over individuals or motivations for using or responding to particular behavioural styles. The methodology uses a hypothetical/theoretical construction of these ideas to explore evidence for their presence and usefulness for describing the data. This means that use of such methodology must be based on solid theory, derived from understanding of the relevant literature and previous research.

Further, the results provide a measure of what is happening in the particular data under study. However, given that the model has been useful for exploring behaviour in two types of crime (rape and robbery) it may prove promising for studying group behaviour in other contexts. For example, other forms of group behaviour, both criminal and non-criminal, could be explored simply by adjusting the mapping sentence to fit the context. However, any adjustments need to be considered

in terms of both their theoretical support and also the methodological considerations of POSA. For example, the elements within the mapping sentence must be theoretically related to the overall scale measure (e.g., all the elements must theoretically indicate leadership) and must be in a consistent direction (e.g., scoring high on every element indicates higher leadership). As long as the theoretical and methodological considerations are solid, the methodology should provide a flexible and adaptable way of studying group behaviour across a number of different contexts.

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