Peer Processes and Adolescent Behaviour

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Abstract

While research suggests that peer influence can lead to increases in undesirable behaviours of adolescents, there has been little focus on the specific mechanisms of influence. A relatively small literature examining social interactions between peers has found that the discussion of rule breaking topics by pairs of boys relates to how much problem behaviour the boys engage in. This research is limited by its reliance on a set of similar samples from a North American population base. This thesis explored the relationship between social interaction and behaviour with sample from New Zealand Aotearoa. Nine pairs of Year 10 boys were recruited primarily from two high schools. A half-hour conversation was video taped for each pair. These conversations were coded on the basis of the nature of the talk between pairs of participants following the coding system proposed by Poe, Dishion, Griesler and Andrews (1990). The coded behaviours were analysed and compared to measures of previous rule breaking behaviours. The duration of rule breaking talk was found to correlate with the level of previous rule breaking behaviour. It was not clear whether the amount of rule breaking talk was related to the amount of laughter following it. Possible explanations are discussed. While generalisations from these results are limited by an unexpectedly small sample size, they show similarity to the previous research findings. The findings, the difficulties in recruitment to the research and the implications of these for future research are discussed.

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What it might be to be Antisocial.

Antisocial behaviour is behaviour that runs counter to the accepted rules and norms of society (Andrews & Bonta, 2003). The forms of behaviours labelled antisocial will vary across different cultures, places and times. For example, to some, lowering one's gaze may be interpreted as a sign of respect for the speaker while to others, this same behaviour may be thought of as a sign that the listener is not paying attention and is therefore disrespectful. Ultimately, behaviour is antisocial when it is unacceptable to the immediate community.

Andrews and Bonta (2003) provide four definitions of criminal behaviour. These are:

1. "Legal: Behaviours that are prohibited by the state and punishable under law.
2. Moral: Behaviours that violate the norms of religion and morality and are believed to be punishable by supreme spiritual beings.
3. Social: Behaviours that violate the norms of custom and tradition and are punishable by the community.
4. Psychological: Behaviours that may be rewarding to the actor but inflict pain or loss on others. That is, criminal behaviour is antisocial behaviour." (p. 38)

While the first definition is tautological and not of much real use, the other three definitions give more insight into what is meant by "antisocial behaviour." The second and third definitions share with the first the element of violating norms or rules. The difference is that the second and third definitions provide more information regarding the context in which rules, laws and norms exist, including moral or religious beliefs, and cultural practices or traditions.

As well as the violation of norms, the other common feature of antisocial behaviours is the consequences that they produce. This is touched on in the fourth definition of criminal or antisocial behaviour given above. For the individual antisocial behaviours usually lead to short term gain. For the community the consequences of antisocial behaviour are usually a loss. For example, in a robbery, the thief profits from what is stolen while another member of the community loses access to the stolen item and the community must face the cost of dealing with the

robbery. In the longer term the individual committing the antisocial behaviour may suffer a reversal of the consequences from a gain to a loss in that the thief may face incarceration or ostracism from the community.

The long term consequences of antisocial behaviour for communities and societies are varied. In western communities, incarceration of an individual is a common long term consequence of criminal behaviour. Incarceration of the criminal is an advantage for the community in some ways because no more crime committed by the criminal directly affects the community for the duration of the prison sentence. In fact the individual is excluded from the community. The criminal is supposed to leave prison less likely to commit further acts of antisocial behaviour. Both of these represent a gain for the majority. The only way that the community stands to gain in the long term is if antisocial behaviour in the individual stops. The problem is that prison has variable effects on people as some are actually more likely to commit crimes after being in prison (Andrews & Bonta, 2003). This is a loss to the community as is the cost of incarceration itself. The cost per prisoner is projected to be $253 per day or over $90,000 per year in New Zealand for the year 2007 to 2008 (Hill, 2007).

Having discussed some of the long term consequences of antisocial behaviour for the community, focus now shifts to the consequences of these behaviours for the individual. Many longitudinal studies conducted in psychology shed light on some of the long term results of antisocial behaviours on individuals and those immediately around them. Findings from the Dunedin Multidisciplinary Health and Development study suggest that children with severe antisocial behaviour problems often have numerous difficulties in adult life. They tend to have higher rates of mental health problems, substance dependence, the commission of drug-related and violent crimes, as well as more family, financial and work related problems (Moffitt, Caspi, Harrington, & Milne, 2002). Increased likelihood of violence towards women and children are also features of this set of outcomes (Moffitt et al., 2002). The research above is supported by research by Fergusson, Horwood and Ridder (2005) which also suggests that children with the most severe conduct problems are likely to face adverse consequences as adults. In particular, the top five percent of children with conduct problems tend to commit more crimes and be imprisoned more in adulthood than children in the lower 50% of severity (Fergusson, Horwood, & Ridder, 2005). They are also more likely to become dependent on illicit drugs and face more mental

health issues in adulthood (Fergusson, Horwood, & Ridder, 2005). The long term consequences of conduct problems are substantially worse for children who also face socio-economic disadvantage, adverse family environments and have lower IQ scores and attentional problems (Fergusson, Horwood, & Ridder, 2005). The findings of the longitudinal research described above suggest that the consequences of antisocial behaviour, especially in severe cases, are particularly poor for the individual and those around them.

The two main features of antisocial behaviours are the contravention of the norms, rules and beliefs of the immediate community as they stand at the present time, and the positive and negative outcomes of the behaviour itself. As discussed above, it seems that the consequences of antisocial behaviour in the short term are usually a gain for the individual and a loss for the community. To extend the fourth definition given by Andrews and Bonta (2003) the long term consequences for the community are mixed, but for the individual are a loss, especially if the history of antisocial behaviour is more severe.

The costs of antisocial behaviour to society and the individual are high. The monetary cost of keeping people in prison, and social costs such as broken families, fear and insecurity drain resources. This high cost has led many researchers to study how antisocial behaviour comes about so it may be managed better for the good of the community.

The Development of Antisocial and Prosocial Behaviours

The Oregon Social Learning Centre's (OSLC) social learning model is one of the most strongly evidenced models of antisocial development. The model claims that learning antisocial behaviour begins in the family context when the child is still young. Before they can communicate with words, babies have to rely on quite aversive behaviours, such as crying, to display their needs such as hunger or discomfort. Parents' reactions to their child's behaviour determine which behaviours are repeated. If parents respond only to the baby's crying, the baby learns that crying is the way to get their needs met. When crying alone provokes parental response it is likely that antisocial processes will continue to emerge in early childhood (Patterson, 2002). If parents respond at a very inconsistent rate to crying this strengthens the crying, because the child learns that sometimes they need to cry for half an hour

before they get their parent's attention. Parents may reinforce antisocial behaviour unwittingly by providing positive consequences for it.

The following research examined in detail the way consequences such as those discussed above can affect a child's behaviour. Snyder and Patterson (1986) examined the effects of mothers' responses to their children's behaviour with two mother-infant dyads. The aim of the study was to search the natural interactions between mother and child for patterns of behaviours and consequences. Once found, Snyder and Patterson wanted to see if different consequences would change the likelihood of the behaviour patterns occurring again. The dyads were observed through a one-way mirror for eight, one-hour sessions over three weeks (Snyder & Patterson, 1986). The mothers were instructed to play with their children for the duration of the session (Snyder & Patterson, 1986). The first dyad was a four-year-old daughter and 34 year old mother and the second was a five and a half year old son with his 36 year old mother. Both children were in the normal range of behaviour according to the mothers' report on the Child Behaviour Checklist (Snyder & Patterson, 1986). The sessions were coded in real time by two coders. The code focused on a variety of verbal and nonverbal behaviours (content) and the emotional valence that occurred alongside them. The 25 content codes were separated into 'positive,' 'neutral' and 'negative' consequences according to the nature of the behaviours (Snyder & Patterson, 1986). Behaviours like 'endear' and 'comply' were coded as positive and behaviours like 'verbal attack' and 'coerce' were coded as negative (Snyder & Patterson, 1986). As well as these content codes, behaviour could be coded negative or positive consequences according to its emotional valence. If behaviour was negative and/or the emotional valence was negative it constituted a negative consequence. Positive consequences were identified similarly. Snyder and Patterson identified several patterns of behaviour-consequence during the interactions. One pattern was 'mother request-child comply' while another pattern was 'mother disapprove-child coerce.' They found that the consequences for the children's reactions would alter the probability of the child repeating that behaviour in the same situation next time (Snyder & Patterson, 1986). Positive consequences from the mother, as described above, led to an increase in the probability of the child repeating the behaviour the next time. For instance, positive consequences from the mother to the child's compliance behaviour in response to the mother's request led to a probability of .77 for the first dyad and .76 for the second that the child would

comply next time the interaction was repeated (Snyder & Patterson, 1986). Negative consequences from the mother lowered this probability to .50 for the first dyad and .14 for the second (Snyder & Patterson, 1986). Consequences had similar effects for aversive child behaviours. In the second dyad's interactions, positive consequences for the mother disapprove-child coerce pattern led to a probability of .42 that the child would coerce his mother next time she showed disapproval (Snyder & Patterson, 1986). The authors point out that positive consequences also include the removal of negative antecedents. In other words, stopping the mother from disapproving functioned as a positive consequence for the child's coercive behaviour (Snyder & Patterson, 1986). In all of the patterns neutral consequences had no statistically significant effect on the patterns of behaviour (Snyder & Patterson, 1986). This research suggests that the consequences that parents apply to the behaviour of their children have very important effects.

Some young children who are following this kind of antisocial trajectory will learn new coercive strategies like tantrums or physical attacks that result in them getting what they want (Patterson, 2002). These new behaviours are usually learnt from parents. When distressed by their child's behaviour some parents may escalate their own coercive behaviour in the hopes of stopping their child's behaviour (Patterson, 2002). Sometimes this is effective as a display of anger may stop the child's tantrum. The long term result is the child learns that they can escalate their behaviour to control their parents. If parents give in to their children's strengthened aversive behaviours, the behaviours are reinforced (Patterson, 2002). The OSLC researchers call this type of interaction between parents and child 'the coercive family process' (Patterson, 2002). Repetition of coercive interactions over the course of a day creates many opportunities for children to learn that antisocial behaviour is effective. Observational research has found that repetition also leads to the escalation of antisocial behaviours, especially towards more violent behaviours such as hitting (Snyder & Stoolmiller, 2002). Children learn how to be antisocial, because they contribute to a parenting environment that supports it and parents do not have the skills to manage it. Learning antisocial behaviours leaves fewer opportunities available for children to learn more appropriate behaviours.

The term coercion appears frequently throughout papers that discuss the OSLC social learning theory of antisocial development. Patterson, Littman and Bricker (1967) shed some light on the features of coercive behaviour. They argue that

coercive behaviours elicit responses from a narrow range of behaviours (Patterson, Littman, & Bricker, 1967). The responses elicited also have very high probabilities of occurring (Patterson et al., 1967). For example, threatening another child to make them get off a swing leaves the threatened child with few choices about how to respond. The threatened child also needs to respond quickly because of another feature of coercive behaviours. That is, coercion requires immediate response, because inherent in the coercive act is the threat of further aversive behaviour (Patterson et al., 1967). Aversive behaviours escalate if the threatened child does not comply with the threat. A final feature of coercive behaviour according to Patterson et al. is that submission is reinforcing to assertive/coercive behaviours. The authors argue that little behaviour other than coercion is reinforced by the recipient crying or moving away.

According to Patterson (2002) the main difference between parenting that develops antisocial processes and parenting that develops prosocial behaviour can be seen very early in the child's life. As mentioned above, parents who attend to their baby only when it cries strengthen coercive behaviours. In contrast to this, more skilled parents will attend to their baby's cries, as well as all the other behaviours that babies engage in (Patterson, 2002). The baby gradually learns that other behaviours, such as reaching out for objects, will result in their needs being met. The baby does not have to rely solely on crying and is ushered out of an antisocial developmental trajectory.

Other factors also related to prosocial development such as the family management practices are described in the following paper. Patterson and Stouthamer-Loeber (1984) examined the relationship between four aspects of family management and delinquency. The four family management practices had been identified in previous literature with conflicting results as relating to child delinquency. The practices were monitoring, effective use of discipline, positive consequences and problem solving. The sample was 73 ten-year-old boys, 76 thirteen-year old boys and 57 sixteen-year-old boys and their families. Almost all of the boys were identified as Caucasian. Data was collected with a variety of methods including questionnaires, home observations, video taped tasks, teachers and school records and structured interviews. Measures of delinquency were collected from police contacts according to youth court records and self report via questionnaire. Measures of the four family management practices were correlated with the measures

of delinquency from across the three age groups. The first analysis showed that the family practices were interrelated with a median correlation coefficient of .45 (Patterson & Stouthamer-Loeber, 1984). The authors suggested that parents unskilled in one area of family management were also unskilled in the other areas (Patterson & Stouthamer-Loeber, 1984). Monitoring correlated with police contacts and self-reported delinquency strongly with r = .55 and r = .54 respectively (Patterson & Stouthamer-Loeber, 1984). Effective discipline correlated with the measures similarly, but with lower coefficients r = .30 and r = .35 (Patterson & Stouthamer-Loeber, 1984). There was no relationship between problem solving and positive consequences and delinquency. The authors suggest that these two practices may be more associated with learning prosocial behaviours than with avoiding delinquency directly (Patterson & Stouthamer-Loeber, 1984). The results of the study showed that the older participants had significantly more unsupervised free time, more frequent police contacts and higher self rated levels of delinquency (Patterson & Stouthamer-Loeber, 1984). Alongside these, scores for parental monitoring were significantly lower for the older participants (Patterson & Stouthamer-Loeber, 1984). This study provided evidence that monitoring is a crucial family management practice that relates to reduced delinquency.

With the addition of parental monitoring, positive reinforcement and effective discipline as well as a supportive parent-child relationship, the child learns to be socially competent. This means they are able to interact in appropriate ways with parents and peers, unlike their antisocial counterparts.

Young antisocial children are much more likely to rely on antisocial behaviours, such as aggression and coercion as described next. Patterson, Littman and Bricker (1967) examined how aggressive behaviours played out in two nursery schools in Eugene, Oregon. The schools each had 18 children enrolled aged between 34 and 46 months old. There were nine boys and nine girls in each school. Observers were present in classrooms for a total of 33 sessions over nine months for each school. Each session lasted two and a half hours. Aggressive acts and their consequences were described and recorded as they happened onto personal recording devices. During the period of observation the observers successfully recorded 2,583 acts of aggression and the consequences that followed (Patterson et al., 1967). The researchers found that in each school there was a small proportion (between two and five) of students who accounted for the majority of aggressive acts, averaging about

three acts per hour. One of the nursery schools had a lower total 'group output' of aggressive behaviour perhaps owing to a more structured school environment (Patterson et al., 1967). In terms of consequences, aggressive behaviours such as bodily attacking others or attacking with an object, were overwhelmingly met with positive consequences (Patterson et al., 1967). In this case positive consequences were defined as the receiving child submitting, crying or withdrawing. For young children interacting with their peers, aggressive behaviour is an effective method to gain resources. The mean probability of bodily attacks being met with positive consequences was .81 across all sessions for School C, while for School P the mean was 0.83 (Patterson et al., 1967). For attacks using an object the mean probability for School C was even higher, .86 and at School P, .89 (Patterson et al., 1967). The researchers found support for the hypothesis that positive consequences for aggression would result in the aggressor repeating the same behaviour towards the same victim. Seven of nine high rate aggressors showed this pattern of behaviour (Patterson et al., 1967). Twelve of the children who were frequent victims of aggressive behaviour began using aggressive behaviour of their own to respond to attacks (Patterson et al., 1967). The data collected from these children showed dramatic jumps in the number of aggressive acts employed over time (Patterson et al., 1967). This happened to the point where all acts of aggression were being met by counter aggression. These children had learnt to be aggressive from their peers. This is not the case for the high rate aggressors as these children had already learnt aggressive behaviour from their homes (Patterson et al., 1967). The interactions with their non aggressive peers would have strengthened their aggressive, antisocial behaviours. One of the most important consequences of these children relying on aggressive behaviour in preschools is rejection from their non-aggressive peers.

Rejection by the majority of peers continues antisocial development (Snyder, 2002). As children enter preschool or kindergarten, they have their first experiences of interacting with large numbers of peers. In most cases, children who lack prosocial skills and instead rely on antisocial behaviours are quickly rejected by their peers (Snyder, 2002). In contrast to this, skilled peers will be learning how to negotiate conflict and competition while maintaining positive relationships with peers (Snyder, 2002). Unskilled children miss out on this learning opportunity, and are likely to face other challenges, such as academic failure and rejection by teachers (Snyder, 2002). While aggression works in the short term for aggressors by causing others to do

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things that the aggressor wants, the long term consequences of antisocial behaviour are usually poor as peers choose to associate less with aggressive children. As well as rejection from prosocial peers, antisocial behaviours increase the likelihood that children will come to associate with other children who promote this kind of behaviour (Snyder, 2002). This comes about because young people selectively associate with peers, dependant on how much social reinforcement is provided by these peers. As mentioned above, this process is evident within the first five years of life. Snyder, Horsch and Childs (1997) studied a group of young children in a preschool setting. Their first aim was to examine how children's preference for certain peers related to the nature of the interaction between them. Secondly the authors wanted to look for any differences in how aggressive children associated with their peers. The sample was made up of African American children aged between 49 and 62 months old. There were 37 boys and 35 girls. Twelve boys and 11 girls were identified as aggressive according to teacher report on the Anger-Defiance scale of the Kohn Problem Checklist (Snyder, Horsch, & Childs, 1997). The children in the sample rated their preference for their peers using a three-point scale. Peer association was measured by observing the children during the free play sessions of the preschool. Association was defined by the physical proximity and physically or verbally interacting with a peer "such that both parties' behaviour is interdependent" (Snyder, Horsch, & Childs, 1997, p. 147). Interactions were considered terminated when children switched partners or when there were ten seconds without interaction. The content of the interactions were also coded during the free play sessions using a code similar to the one used in Snyder and Patterson (1986). The results of the study suggest that both aggressive and non aggressive children selectively associated with peers. The amount of association and degree of preference for peers was found to correlate with the amount of positive consequences from the peer relative to all the other behaviours from the peer (Snyder, Horsch, & Childs, 1997). The coefficient for this correlation was in the order of .65 for both aggressive and non-aggressive preschoolers(Snyder, Horsch, & Childs, 1997). Although this suggests that aggressive children were sensitive to the social environment, they were less likely to form mutual relationships than other, non-aggressive children (Snyder, Horsch, & Childs, 1997). Eighty five percent of the non-aggressive children formed strong mutual relationships whereas only 43% of the aggressive children did (Snyder, Horsch, & Childs, 1997). Aggressive children were more likely to be in 'unilateral' relationships

which were unlikely to last very long (Snyder, Horsch, & Childs, 1997). Snyder et al. report that aggressive children were more likely to have mutual relationships with other aggressive children. Dyads with either one or both aggressive members had conflicts that occurred three times as often, lasted twice as long and were judged to be 50% more aversive than conflicts between non-aggressive dyads (Snyder, Horsch, & Childs, 1997). The final aspect of the study examined how association with aggressive children would effect observations and ratings of aggressive behaviour after two months. Children who spent more than 30% of their time with aggressive children showed increases in their own aggressive behaviour according to both observation and teacher report (Snyder, Horsch, & Childs, 1997). This study provides many findings about the social behaviours of aggressive children. Particularly interesting and pertinent is the increase of aggressive behaviour of those children who spent substantial time with aggressive peers. Peer influence becomes the central focus for the social learning model as children enter adolescence.

  Greater influence from peers is the next potential stage of antisocial development. Peer influence is often discussed in the research literature in negative terms. Bender and Losel (1997) point out that peer influence can be beneficial as it aids some adolescents in making the transition to prosocial adulthood, while for others it has been found to lead to increases in problem behaviours. The authors studied a sample of 100 German adolescents from residential institutions from age 15 to 17 (Bender & Losel, 1997). Sixty six adolescents in the sample were male, and 34 were female (Bender & Losel, 1997). Problem behaviour was evaluated by self report at ages 15 and 17. Data from age 15 were used to form the baseline. The aim of the study was to examine the interaction between changes in externalising behaviour over the two years with social variables such as clique membership and rated satisfaction with social support received. The results suggested boys with the highest baseline problem behaviour were most negatively affected by clique membership and high ratings of satisfaction with peer social support (Bender & Losel, 1997). This was demonstrated by the level of self reported problem behaviour remaining at a high level two years later (Bender & Losel, 1997). For boys with very high levels of problem behaviour not being in a clique resulted in less problem behaviour at the two year follow-up, although the size of this effect was small (Bender & Losel, 1997). Interestingly, boys with low levels of baseline problem behaviours were most likely to increase these behaviours if they were not members of cliques, and perceived their

social support to be lacking (Bender & Losel, 1997). From their data the authors could not conclude whether the boys who felt they were lacking in social support had joined antisocial cliques or if disruptive behaviour was a way of compensating for social rejection (Bender & Losel, 1997). This study highlights the complexity of the term peer "influence." Many different variables interact to produce both positive and negative effects of peer influence.

Further research suggests that associating with antisocial peers can increase antisocial behaviour. The following study provides evidence for the effect of antisocial peer influence, and displays the complexity of the effects. Vitaro, Tremblay, Kerr, Pagani and Bukowski (1997) examined the effects of friendship with disruptive children on problem behaviour over three years. They divided their sample of 720 Canadian boys into groups based on teacher reports of deviant and disruptive behaviours at age six. The groups were labelled highly disruptive, moderately disruptive, moderately conforming and highly conforming. They also formed similar groups out of the boys' friends based on how aggressive they were rated by their peers. Measurements were taken at ages 11, 12 and 13 years. They found that moderately disruptive boys who had aggressive friends showed increases in deviant behaviour over time (Vitaro, Tremblay, Kerr, Pagani, & Bukowski, 1997). This particular group were more delinquent than any other group of moderately disruptive boys who did not have aggressive friends (Vitaro et al., 1997). Moderately disruptive boys with no friends were protected from this effect (Vitaro et al., 1997). Highly disruptive boys did not show significant variation across the different levels of aggressive friendships (Vitaro et al., 1997). The same is true for the moderately conforming and highly conforming groups of boys. It seems, based on these results, that for the majority, peer influence may not have a very strong effect on behaviour. It may also be that for the highly disruptive boys in this study, there was no room for increases in deviancy to be measured, as they were already in the highest group and the measures could have been confounded. For the moderately disruptive boys peer influence had a measurable effect on behaviour.

Antisocial peer influence is only one of many factors that impact on antisocial development during adolescence. It is important to attempt to control for variables such as previous levels of antisocial behaviour, so the unique effects of associating with and being influenced by other antisocial individuals can be seen. The following study examined the long term outcomes of antisocial peer association with a sample

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from New Zealand while controlling for a number of possibly confounding variables. The authors had identified a problem with studies like those mentioned above. The problem was that in longitudinal studies it is difficult to be sure that change occurs because of the measured variable rather than a non-observed variable. A variable must be measured to gauge its influence, but in some cases this is impossible, such as with genetic predispositions. The statistical procedures used in the present study allowed the authors to avoid having to estimate the effects of non-observed variables that could effect antisocial development. Fergusson, Swain-Campbell and Horwood (2002) used data from the Christchurch Health and Development Study, a 25 year longitudinal study that gathered information from a cohort of 1,265 children born in 1977. They controlled statistically for non-observed variables, and measured 'time dynamic covariates.' The time dynamic covariates were variables that correlate with problems later in life, such as adverse life events, unemployment between ages 18 and 21, ages of leaving school and leaving home (Fergusson, Swain-Campbell, & Horwood, 2002). When including these variables in analyses they found a reduced but still significant effect of antisocial peer association during ages 15, 16 and 18 on behaviour at age 21. More antisocial peer association lead to increases in property and violent crimes and drug use (Fergusson et al., 2002). The results clearly suggested a trend whereby greater association during adolescence lead to worse outcomes later in life at age 21. As the age of the cohort increased, the power of peer association weakened. This was reflected by the risk ratios which decreased as the sample aged. This study shows that even when accounting for a myriad of other variables that lead to problems at age 21, antisocial peer influence has unique effects that cannot be explained by other means.

For some children, association with antisocial peers promotes antisocial behaviour, but it is not clear what aspect of spending time with antisocial peers does this. 'Peer influence' is seldom defined in concrete terms that would explain what feature of peer interaction leads to the influence on behaviour. One possible explanation is that antisocial behaviour is promoted in some way by how young people talk to each other. It will be argued that talking about breaking rules has a powerful role in bringing antisocial young people together. Furthermore, rule breaking talk will be shown to have an effect of increasing antisocial behaviour just as does peer influence.

Deviancy Training

Deviancy training is a term used by the researchers of the OSLC. Deviancy training is the process of reinforcing talk about breaking the rules in an interaction between adolescent peers. The reinforcement of rule breaking talk is usually done with laughter (Dishion, Spracklen, Andrews, & Patterson, 1996). An example of deviancy training is one peer saying "we can tip cars over" and that verbal behaviour being reinforced by his friend laughing. Research has suggested that laughter is a powerful reinforcer for rule breaking talk (Dishion et al., 1996). This research made use of video tapes of conversations between 186 pairs of 13 year old boys from the Oregon Youth Study (OYS). The video tapes followed a uniform set of instructions and lasted for half an hour each. Participants in the OYS brought friends from outside the study that were not related to them to complete the interaction task. The researchers conducted a matching law analysis on the content of the video taped conversations. The matching law proposes that the amount of a behaviour of a specific kind that occurs will match the amount of reinforcement available for the behaviour (Dishion et al., 1996). For example, as the amount of laughter available for rule breaking talk increases, the amount of rule breaking talk itself will increase. The balance between rule breaking talk and prosocial talk will shift, based on which gets the most laughter from friends. Dishion et al.'s (1996) analysis of the conversations demonstrated a strong relationship between laughter and rule breaking talk, where laughter accounting for 84% of the variance of rule breaking talk. Deviancy training is the process of rule breaking talk being contingently reinforced by laughter. It is possible that this form of interaction between peers may explain some of the effects other researchers have described as peer influence. Almost all of the studies on deviancy training have been based on only one sample of participants. This study was the Oregon Youth Study (OYS) which began in 1983, when the participants were 9-10 years old. The sample was made up of 206 boys which represented a 74.4% recruitment rate. The participants were recruited from schools in a high crime area of Oregon. Demographically, the sample was mostly European and had lower socioeconomic status than the American average for that time. The families were 42% with both parents present, 32% with one parent present while the remaining 26% were step families. Data were collected from age 9 to age 24. During this period the retention rate was 94% probably because of the incentives used to keep youths and their families in the study (Capaldi & Patterson, 1987).

Rule Breaking Talk

Rule breaking talk is a term used to describe the discussion of antisocial behaviour. Given the large breadth of antisocial behaviours, rule breaking talk can include discussion of any number of topics. While it can take many forms, the most significant feature of rule breaking talk is the endorsement of deviant activities. This can include inciting others, comparing antisocial exploits, and making light of antisocial behaviour. This example of rule breaking talk incites the listener to break rules: "We could go to the lake, let's skip school" (Poe, Dishion, Griesler, & Andrews, 1990). An example of comparing antisocial exploits is saying "I have a special tutor because the teachers are afraid of me" (Poe et al., 1990). The following example makes light of antisocial behaviour "Yeah right, we're gonna stay away from drugs" followed by a wink and a smile (Dishion, Spracklen, Andrews, & Patterson, 1996). The addition of the wink and the smile changes the rule following properties of an anti-drug statement into a joke that makes light of a possible antisocial behaviour. The statement becomes a discriminative stimulus to use drugs (Dishion et al., 1996). Rule breaking talk also includes the victimization of others such as "Put a collar and a leash on her like the dog she is" (Poe et al., 1990). The key feature of this example of rule breaking talk is inciting behaviour that is counter to the accepted rules of society. Rule breaking talk can vary widely in terms of form, but its function is the promotion of rule breaking or antisocial behaviour in a positive light.

The Relevance of Rule Breaking Talk to Antisocial Development

Rule breaking talk can identify adolescents with behaviour problems from adolescents with no behaviour problems. To test how verbal behaviour can differ between these groups, the boys from the Oregon Youth Study were organised into three groups based on arrest status. The three groups were based on whether neither, one or both boys in the video tape pairs had been arrested previously, referred to as 'Neither' 'Mixed' or 'Both' respectively. On average, dyads in the 'Both' category engaged in more rule breaking talk than other groups; four times as much as 'Neither' and two times as much as the 'Mixed' group (Dishion, Spracklen, Andrews, & Patterson, 1996). The first difference between delinquent and non delinquent adolescents is the amount of rule breaking talk done in conversation. The second difference goes back to the role of laughter. Dishion et al. (1996) expected that the

role of laughter in conversations would differ based on the arrest status of the dyad. Laughter would reinforce rule breaking talk for the 'Both' group, and would reinforce normative talk for 'Neither' group. The findings of the study support the hypotheses. 'Both' arrested dyads selectively responded to rule breaking talk with laughter, whereas 'Neither' arrested dyads did not. This contingency was shown to be statistically significant $z = 5.52$, $p < 0.5$ (Dishion et al., 1996). For 'Neither' arrested dyads, laughter only occurred in response to normative talk ($z = 5.81$, $p < 0.5$) (Dishion et al., 1996). The conversations of delinquent youths can be distinguished by a greater amount of rule breaking talk, and a reliable contingency between rule breaking talk and laughter.

As well as discriminating between adolescents with and without behaviour problems, rule breaking talk has also been used to predict future problem behaviour. Many researchers have found that the prior level of problem behaviour is the best predictor of future levels of problem behaviour. Studies have shown that rule breaking talk can add to predictive models of problem behaviour already based on prior levels of problem behaviour. Results from the OYS suggested that boys in friendships that reinforced rule breaking talk increased their delinquent behaviour over the two years following measurement, as compared to non rule breaking reinforcing dyads (Dishion, Spracklen, Andrews, & Patterson, 1996). A similar increase in problem behaviour was seen with boys who had no measurable delinquent behaviours but did reinforce rule breaking talk (Dishion et al., 1996). Further support for this is a correlation of $r = .38$ between rule breaking talk and delinquent behaviour measured two years later (Dishion et al., 1996). It is important to point out that not all youths who engage in serious problem behaviour show this pattern of rule breaking talk. In all of the studies there have been a small number of participants who are excluded because they did not do any rule breaking talk within the video taped sessions. For the majority these conversation sessions, although short, provide useful information for predicting future levels of problem behaviour.

This research is supported by the findings of a study conducted by Granic and Dishion (2003). With observations from a sample of 48 boys and 54 girls, deviancy training was used to predict problem behaviour at age 18. Baseline measures of childhood delinquency, coercive family processes and deviant peer association were taken at age 15 (Granic & Dishion, 2003). Four months after this data was collected, the adolescents took part in the peer interaction task. This provided data on deviancy

training. By including the baseline measures in their analyses, the researchers could pinpoint the effect that deviancy training had on the outcome variables. The first outcome variable was authority conflict as measured by numbers of arrests and out of school placements (Granic & Dishion, 2003). The second was substance abuse, measured by arrest records for drug related crime, school disciplinary action related to drugs and being in a drug rehabilitation programme (Granic & Dishion, 2003). The researchers took care to avoid self report data in all of their measures as it is prone to bias (Church, 2003). After controlling for the baseline measures in a regression analysis, rule breaking talk still accounted for unique variance of the outcome variables (Granic & Dishion, 2003). This finding strengthens the evidence for rule breaking talk to predict future problem behaviour. This relationship is present even when already accounting for some of the strongest predictors of future problem behaviour, namely childhood delinquency, association with deviant peers and coercive family processes.

These two studies provide evidence that rule breaking talk has a significant effect on behaviour. Engaging in rule breaking talk and participating in friendships that reward rule breaking talk are related to increases in problem behaviour.

To further understand the effect of rule breaking talk, discussion turns to an explanatory model of rule breaking talk that has been put forward (see Patterson, Dishion, & Yoerger, 2000). Using structural equation modelling (SEM) the researchers created a model that predicted the growth of new forms of problem behaviour among adolescents from the OYS. First, the influence of early involvement with deviant peers was examined. This was measured by parent and teacher and self report on respective forms of the CBCL, as well as a measure of time spent wandering. The construct for the new forms of problem behaviour was made up of data about numbers of intercourse partners, substance use and number of arrests. This model of early involvement with deviant peers predicted 29% of the variance of the growth of new forms of problem behaviour (Patterson, Dishion, & Yoerger, 2000). The second step was to include deviancy training into the model. Deviancy training was measured by reinforcement of rule breaking talk, time spent with deviant peers and the general level of antisocial behaviours among the peer group (Patterson, Dishion, & Yoerger, 2000). When deviancy training was included in the model, as a mediator, the predictive ability of the model increased. The mediational model

accounted for 53% of the variance of growth in new forms of problem behaviour (Patterson, Dishion, & Yoerger, 2000).

Another predictive model has used rule breaking talk, but in a novel setting. Snyder et al. (2005) examined rule breaking talk among kindergarten children, rather than among adolescents, where it is usually studied. The paper found that measures of rule breaking talk and role taking amongst 267 kindergarten children were predictive of problem behaviour one year later (Snyder et al., 2005). The researchers created a predictive model to understand the influence of various aspects of antisocial behaviour. In their model, deviant behaviour measured at the start of the study predicted association with deviant peers. This in turn predicted the level of rule breaking talk and deviant role taking in a half hour long play session. The measures of rule breaking talk predicted the appearance of problem behaviours in new settings including the home, school and playground (Snyder et al., 2005). For example, some children began to display problem behaviours at home where, previously, these behaviours had been unseen. This paper strengthens the evidence for a connection between rule breaking talk and problem behaviours. Not only this, it also has implications for understanding the role of peers in the early development of antisocial behaviour.

Rule breaking talk is the crucial element of deviancy training. It has been included in statistical models predicting problem behaviour. The result for these models has been increased predictive ability. Considering the similarities between the findings of studies that examine the effects of deviancy training and antisocial peer influence, it seems likely that the two are closely related. Deviancy training may be one of the main features of antisocial peer influence.

Rule Breaking Talk versus Attractor State

The majority of the research conducted examining rule breaking talk has used the same measure of rule breaking talk. That measure is the deviancy training construct which is made up of the proportion of rule breaking talk to total talk and the proportion of rule breaking laughter to total laughter. There has been some suggestion that another measure created from similar procedures may also be effective in predicting antisocial behaviour. This measure was created from a dynamic systems view of antisocial development.

Granic and Patterson (2006) provide a detailed explanation of the role that dynamic systems principles can play in understanding antisocial development. The authors discuss the potential usefulness of comparing different timescales. They point out that multiple timescales can be related and they argue that moment to moment interactions can influence how a person develops (Granic & Patterson, 2006). Theoretically, it was thought that repeated interactions create stable patterns of behaviour called attractor states. Numerous states can exist at one time. The more a state is activated, the more influence it will have on behaviour. The authors suggested that rule breaking talk could be a potent attractor state for some of the boys who engage in antisocial behaviour, when they interact with other peers. Frequent interactions organised around rule breaking talk could lead to an increase in antisocial behaviours.

In the research described above, Granic and Dishion (2003) compared the predictive utility of the duration of rule breaking talk with a measure of an attractor state of rule breaking talk. They conducted the research with a similar methodology as previous studies, with the aim of comparing how pairs of boys talked with each other and how this related to measures of problem behaviour. A measure of rule breaking attractor state was formulated. The authors examined the differences across 'bouts' of rule breaking talk from the conversation task (Granic & Dishion, 2003). A 'bout' was defined as the duration of time that one or both of the participants were engaged in a rule breaking utterance, from the beginning of the utterance until either a non rule breaking behaviour was coded, or there was a pause of three seconds (Granic & Dishion, 2003). Instead of examining a measure of rule breaking talk from across the entire half hour conversation, the authors could look at the variation of the bouts from within the half hour conversation. They hypothesised that if the pairs showed an increase in the length of rule breaking bout during the task, the participants were demonstrating that rule breaking talk was an attractor state for them (Granic & Dishion, 2003). To see whether the length of bouts increased (or decreased, or stayed the same) Granic and Dishion plotted lines of best fit onto graphs of each bout of rule breaking talk plotted in succession. A positive slope to the line of best fit indicated a strong attractor state, whereas a negative or neutral slope indicated a lack of an attractor state (Granic & Dishion, 2003). Interestingly, measurements of laughter, rule breaking or otherwise, had no impact on the slope of the line. The findings of the study suggested that, controlling for baseline antisocial behaviour and association

with deviant peers, the slope measure of rule breaking talk was predictive of antisocial behaviour three years later (Granic & Dishion, 2003). The duration of rule breaking talk was not predictive of future antisocial behaviour (Granic & Dishion, 2003). The implications of this study were that rule breaking talk may represent a potent attractor state for some young people. The attractor strength was a useful predictor of future rule breaking behaviour even when controlling for the most strongly supported predictors.

The Current Research

Most of the information about rule breaking talk published over the past fifteen years has come from the results of one longitudinal study (including the following: Dishion, Andrews, & Crosby, 1995; Dishion, Nelson, & Bullock, 2004; Dishion, Nelson, Winter, & Bullock, 2004; Dishion & Owen, 2002; Dishion, Spracklen, Andrews, & Patterson, 1996; Patterson, Dishion, & Yoerger, 2000; Poulin, Dishion, & Haas, 1999). Other studies have been conducted using different samples, but they are only few in number, and for the most part the samples share similar characteristics of the OYS sample. The features of the sample of the OYS limit the generalisation of its results. It was important to replicate some of the past research on rule breaking talk with different samples. The aim of the current study was to examine the relationship between rule breaking talk and levels of problem behaviour within a sample of male adolescents from New Zealand. It was hoped that gathering data from a sample that is different from the Oregon based studies may increase the generalisation of the results. This study examined the strength of the relationship between rule breaking talk in a half hour conversation between two friends and measures of problem behaviour. Problem behaviour was measured through several means, such as parent's report and from teacher's report. The study replicated as closely as possible the methods and measures used in the parts of the OYS that focused on deviancy training. This study also examined differences between the uses of different measures of rule breaking talk, such as the deviancy training and slope constructs. The primary hypothesis of this study was that boys who engage in more rule breaking talk will show more rule breaking behaviour on measures of their behaviour as compared to boys who engage in less rule breaking talk. This will provide evidence to support the findings of previous research from the OSLC.

<center>Method</center>

Participants

  The initial sample of primary participants was to include 40 male adolescents aged between 14 and 15 years old. The sample was to be recruited from the Year 10 of two New Zealand high schools. Each of the primary participants selected a friend to take part in the conversation part of the study. These friends were also male, and selected from Year 10 of the same school as the primary participant.

  The actual sample recruited for this study included nine pairs of boys. Eight of the pairs were recruited from Year 10 of two different New Zealand high schools. The last pair was recruited from a Tough Love parenting support group and were also in Year 10.

Apparatus

  Consent forms

  Two types of consent forms were used. The first was given to the students who would be primary participants. This form included information sheets explaining the participants' role in the study, confidentiality and the right to withdraw. Signed consent was requested from both the participants and one of his parents or caregivers. Home phone numbers and good times to call were also requested on the forms. The primary participant and his consenting parent were asked to rank the three friends that the he 'spent most of his time with.'

  The second type of consent form was given to the friends of the primary participants identified on their consent forms. The second type of form was similar to the first in that it offered information on the study and it requested signed consent from both the boy and one of his parents or caregivers. No other information from parents or teachers was to be collected regarding the friends' behaviour. Copies of both of these forms can be found in the appendices.

  Room Description

  The video taped conversations took place at the two high schools. At the first school unused classrooms were used. The classrooms were set up with a table and two chairs facing a video camera. The video camera was placed about one and a half to two meters from the table on a tripod so that both participants sitting on the other

<center>20</center>

side of the table could be recorded. Session instructions and conversation topic lists were placed on the table (these are included in the appendices). A sheet of paper was attached to the front of the table or to the wall behind the chairs with an identification number written on it so that the pairs could be identified easily on the tape.

At the second school an interview room in the school office was used to video tape the conversations. The room was set up in the same manner as at the first school.

Topic Lists and Task instructions.

The two topic lists used in this study were adapted from the measures used in the OSLC studies. The OSLC versions included lists of different issues that young people face. Participants in these studies were asked to select topics that had been an issue for them over the past month, and then rank them in order of how often they came up. The most commonly occurring issue was the one selected for discussion. This form was changed for this study so that the topics were simply listed and participants were instructed to choose the one they felt was an issue for them. The two topic lists were entitled 'adolescent issues' and 'family issues.' The lists had 36 items each and included such things as 'how to spend free time.'

The instructions explained which topics would be discussed and how the participants would take turns introducing and discussing the topics that they chose. The task instructions also explained that each part would last five minutes and if they were to run out of things to discuss on the topic, they were allowed to relax and talk about whatever they liked. The exception to this is that they had to leave the other topics they had chosen for the time when they were asked to talk about them by the facilitator.

Video Camera

The video camera used was a Sony Digital Video Camera Recorder. The conversations were recorded onto 90 minute 8mm video cassette tapes. Two conversations were recoded on each tape.

Coding Technology

The recorded conversations were transferred from video tape into computer files. The actual coding was done using Windows Media Player, pieces of lined A4 paper and a blue ballpoint pen.

Coding was done according to the Topic Code Manual (Poe, Dishion, Griesler, & Andrews, 1990). This coding manual was created by the researchers at the OSLC specifically for the purpose of coding the content of peer conversation tasks. The code has four categories of verbal behaviours: following the rules, breaking the rules, laughter and pauses. Conversations are coded continuously, with all verbal behaviour being coded on the basis of the priority of the code. Laughter has the highest priority in the conversations, followed by rule breaking talk, then following the rules talk and finally the pause code represents an absence of verbal behaviour. All talk is coded dichotomously, that is, it either follows the rules or it does not. Examples of rule following talk are discussing school and home life, problem solving strategies or giving rationales for behaviour. Examples of rule breaking talk are discussions on drug use, illegal activities, victimizing women and others, and getting in trouble at school. The last two categories for coding, laughter and pause, are designed to capture the responses to both rule breaking and rule following talk.

Measures

To gather information from parents and teachers about the primary participants' behaviour Child Behaviour Checklist 6-18 (CBCL; (Achenbach & Rescorla, 2001) and Teacher Report Forms (TRF; (Achenbach & Rescorla, 2001) were used.

Information from the parents was collected over the phone. In order to make the phone calls brief enough to avoid being aversive the specific questions in the rule breaking, aggressive and depressive scales of the CBCL were completed. The depressive scale questions were included to break up the rule breaking and aggressive scale questions.

Procedure

Consent from Schools

Initial contact was made with the high schools through third parties. Meetings were arranged with either the principal or the contact staff member to outline the specific details of the study. At the first school consent was received after the initial meeting.

At the second school the principal required further information regarding what was involved. The principal also came up with some ethical concerns regarding the study. After the study was explained again, and the ethical concerns were addressed

the principal put the matter of the school participating in the study before the Board of Trustees to decide. The approved university ethics proposal and a letter from one of the thesis supervisors were included in the information supplied to the Board. Once all of the board members had examined the information and consented to the study the principal gave his own consent. This procedure took some time, while this was being organised, an initial sampling was taking place at the first school.

Recruitment

Class lists for Year 10 were given to the researcher by the Year 10 Dean at the first school. The initial sample from the first school was 40 boys chosen randomly from the class lists. Between four and five boys were selected from each class. More boys were selected from the bottom half of the class streams to counter the expected lower return rates from these boys. The consent forms were sent out by the school and received back at the school office. The rate of return for this initial sample was 10% (4 consents) after one week. On the basis of this low rate, the remainder of the Year 10 boys (110 boys) were sent consent forms. The return rate was even lower, at 4.5% (5 additional consents). The total return rate was 6%, far below what was expected by the researcher and his supervisors.

Following on from receiving initial consent forms, the consent forms for the friends were sent out to the boys selected on the initial consent forms. On the consent forms the three friends that the primary participants spent the most time with were chosen by both a parent and the participant. Consent forms were sent out to friends that were listed by both parents and participants. Exclusionary criteria for the friends were if they were female. In all cases there was agreement between the friends chosen by parents and adolescents. Only 26 forms were sent out because there was some overlap between friends selected as some friends were chosen by two of the primary participants. The return rate for consent from friends was 3.8%, yielding only one pair of participants available for the study.

The low recruitment rate meant that the no findings could be drawn so the sample was abandoned and a different recruitment procedure was used. By this time the second school had just given consent so the above procedure was only used at the first school.

Alternative attempts at recruitment

To remedy the low recruitment rate in the initial sampling the recruitment procedure was changed. With appropriate ethics approval the researcher organised to give a talk at both of the schools to introduce the broader topic of the study to the Year 10 boys. This ten-minute talk included an introduction of psychological research and an explanation of the procedure for participating in the study. The presentation was designed to be light and humorous and to build rapport between the researcher and the pool of possible participants (the lecture slides are included in the appendices). Another change to the procedure was the use of incentives for getting consent forms completed and returned. The first 20 pairs of boys who got their consent forms in were each offered a free movie ticket. Participants were asked during the school presentation to organise themselves into pairs when they were filling the forms in and simply write the name of their partner on the bottom of the consent forms. Recruitment was complete when both of the partners handed their consent forms in. The new consent forms were handed out at the end of the talk at the schools.

Revised Consent Forms

In order to streamline the recruitment procedure further it was decided to change the consent forms used. Instead of having two types of forms, one for the primary participant and one for the friend, a standard form was created. The information sheet given remained unchanged from the one used in the initial sampling given to the primary participants. Consent was requested from parents and the participants themselves. Phone numbers and good times to call were collected for all consenting participants because at this point it was undecided which of the pair would fulfil the role of primary participant and so have more information gathered about him. Instead of asking the boys and their parents to list the three friends that he spends most of his time with, participants were just asked to give the name of their 'partner for this study.' This is a departure from the procedure used in the previous research. It was necessary to simplify the procedure so that the forms would be easier to fill in and a larger sample could be collected.

Alternative Attempts at Recruitment Continued

At the first school most of the students elected not to take a consent form at the end of the presentation. About 20 forms were given out. From this ten forms were

returned to the school office. Within the ten forms there were three matched pairs where both partners had their consent forms in. The remaining four forms did not have partners. Phone calls were made to the participants whose partners had not returned consent forms to ask them to encourage their friend to get a consent form in.

At the second school consent forms were given out to all of the Year 10 boys at the conclusion of the presentation. From this pool of 70 Year 10 boys, four consent forms were received. There was one pair of participants and two consent forms that did not have partners. Phone calls were made to the participants to remind them to ask their partners to return their consent forms.

At both schools, the most effective means of following up on the pairs in which only one half had consented was to ask the Year 10 Dean to provide support. The result of the second sampling attempt was a total sample of eight pairs (16 year 10 boys) five pairs from the first school (10.7%) and 3 pairs from the second (8.6%). It was decided that it was worthwhile to proceed with this sample.

Other attempts to gather participants

Given the small size of the sample gathered from two schools attempts were made to recruit more participants. Two other high schools were approached near the end of the academic year. The Principals (or their representative in one case) explained that they were too busy to begin to organise the research process and the researcher was asked to try again midway through the following year.

Another attempt was made to recruit participants from a school for children with difficult to manage behaviour. The attempt to gain consent involved many steps. After discussing the research with one of the organisers of the school the research was discussed at a board meeting. The school had a number of different organisations involved in it, and the children who went there were also under the care of these organisations. An initial application was made to the Research Access Coordinator of the Ministry of Social Development. A small change to the methodology of this study was proposed and accepted by the university ethics committee. The change was basically to ensure that the identities of the students at the school would be protected to the highest degree possible. Ultimately the Research Access Coordinator denied access to the school "primarily on operational grounds" before the other two government organisations involved had been properly approached.

While this application was in process, attempts were made to examine the possibility of recruiting participants from local Tough Love support groups. These groups are run to support parents who are having difficulties with their adolescent children's behaviours. The first attempt at recruiting from Tough Love was not successful. However, on the second attempt one pair of participants was recruited. Three different groups organised by location where approached by a third party and the research was explained. Parents were invited to call the researcher if they thought their children would be interested. One parent called the researcher and it took four weeks for the consent forms to be returned from a pair of boys and their parents. The pair of participants was added to the sample.

A further attempt to gather participants was conducted with Youth Horizons Trust in Hamilton and Auckland. Initial discussions led to some early success with managers agreeing to allow the research to be conducted on the basis of certain agreements (such as notifying Youth Horizons if the research was to be published). Youth Horizons staff approached potential participants to examine interest in participating in the research. A sample of about eight pairs of boys expressed interest, but it was soon discovered by the researcher that the boys were all under CYFs care. This meant that consent would be required from the Ministry of Social Development for the research to proceed. Having been unsuccessful in this process before, it was decided to abandon any further attempts at recruiting participants.

The Conversation Task

This task involved the pairs of participants coming out of class to take part in a video taped conversation. One pair was video taped at a time. The deans at the schools organised with the pairs when they would do the conversation task. The pairs came to the designated room and were greeted by the researcher. The participants were asked to take a seat behind the desk, facing the camera. The participants received their free movie tickets. They were then instructed to select the topics that they wished to discuss during the task. The researcher explained the task and reminded them of their right to withdraw, the limits of confidentiality and to remain seated for the duration of the task. The participants were asked if they had any questions. The initial task of planning a 'fun activity' was then introduced and the researcher turned the camera on. An identification code was read out, the participants were reminded to plan a fun activity for five minutes and then the researcher left the

room and closed the door. Outside, the start time was marked down and five minutes was timed. After five minutes the researcher knocked, re-entered and asked how the conversation was going. Next the researcher asks the boy seated on the left to introduce and discuss the adolescent issue that he chose. The participants were asked to 'try come up with the best way to handle the situation the next time it comes up,' and they are reminded of the five minute time limit. The researcher leaves the room again and closes the door. This procedure is repeated until all the sections of the conversation task are completed. The participants were to take turns introducing and discussing their topics: left boy's adolescent issue, right boy's adolescent issue, left boy's family issue, right boy's family issue. The final five minutes is spent planning a party. The camera remains on for the entire thirty minute task, although the tapes end up running for around 32 minutes, given the extra time of the researcher coming in and introducing new topics. At the conclusion of the task the participants were free to wait for the end of the period, which usually took ten or so minutes.

Parent Phone Calls

Phone calls were made to the parents of the participant that was to have information gathered about him. These participants were chosen on the basis of where they sat during the conversation task (the boy seated on the left became the 'primary participant'). Phone calls were made after the conversation task had been completed, during the times that parents had selected as appropriate to call. The researcher introduced himself and reminded the parents of the study their son had participated in. The data gathering purpose of the phone call was explained and parents were asked if the time was appropriate for this. If necessary the researcher rang back at a better time. The parents were instructed to answer the checklist in accordance with their view of their son's behaviour of the last six months. The answering options were explained as they were on the CBCL forms and the descriptions of behaviour were read through. Parent's responses were recorded during the task onto a CBCL form.

Teacher Reports of Behaviour

Home room teacher reports of participants' behaviour were gathered using the Teacher Report Forms of the CBCL. These forms were given out and collected by the Year 10 Deans at both schools.

Coding

   Procedure

   Before coding the video tapes the conversations were captured from the video camera and converted into computer files using standard Windows-based movie making software. The procedure for coding the conversations was explained in the Topic Code provided by the Oregon Social Learning Centre and can be found in appendices. The basic procedure was to preview five minute chunks of the conversations, and note down areas of antisocial talk and laughter. Then the five minutes is watched again, and all behaviours are coded continuously on a sheet of paper. The start time and finish time of each type of verbal behaviour are noted. When one or both participants shift from one category to another the bout is finished and a new one begins.

   Codes

   There are four main codes in the Topic Code. These are 'rule breaking talk,' 'normative talk,' 'laughter' and 'pause.' All behaviour in the conversation task is coded into one of these categories. The first two categories are made up of many different codes. Rule breaking talk includes discussion of gross activities, using drugs, illegal activities, and other behaviours like using obscene language or engaging in inappropriate activities like singing a song or showing off to the camera. A complete list can be found in the Topic Code in appendices. The category of normative talk also includes many more specific codes, but in practice any talk that is not rule breaking in anyway is coded as normative. There is a hierarchy for deciding which code takes precedence when two different codes could be used. At the lowest level is pause. Pause represents an absence of any behaviour that could be coded. Then normative talk is coded. Rule breaking talk takes precedence over normative talk and laughter takes precedence over rule breaking talk. For example, if one participant is talking about doing homework, this is coded as normative talk. If the other participant begins doing the fingers to the camera, then the normative talk bout is finished and the rule breaking behaviour is coded. If the first participant then starts laughing, the rule breaking bout ends, and the laughter is coded. Pause can only be coded if neither participant is talking or doing any other behaviour that can be coded. In the Topic Code the codes are constructed so that behaviour can be coded for each

participant individually, or both participants at the same time. This means that a code of both participants laughing can be differentiated from just one participant laughing.

Reliability

Another coder coded a randomly selected ten minutes from each participant to examine the reliability of the coding. This equated to a total of 26% (70 minutes) of the tapes. The second coder only coded the rule breaking elements of the portions of the conversations. Agreement between coders was decided on the basis of both agreeing that the rule breaking bout occurred, that both coded the beginning within 2-5 seconds of each other and the code ended with 2-5 seconds of each other. The average interrater agreement was 74% agreement. This is comparable to the average interrater agreement of 78% given in the Topic Code itself.

Analyses

Rule breaking talk

The codes from the talk were added for each five minutes to give a total duration in seconds of talk, laughter and pause for each pair for the entire 30 minute conversation. These variables were then broken down into total durations of normative talk and rule breaking talk, laughter following normative talk and laughter following rule breaking talk. Rule breaking talk and laughter could then be broken down further to show the duration each participant and both participants contributed.

Rates of behaviour

The rate per minute of rule breaking and normative utterances was calculated by counting the beginning of each bout. A bout of talk was defined as the amount of time one or both of the participants behaviour was coded as either rule breaking or normative. The bout ends when one of the participant's behaviour changes to a different code, or there is a three second pause.

Rates of reinforcement

The percentage of reinforced behaviours was calculated by counting the number of bouts that are followed by laughter. A bout is defined as explained above. The percentage of reinforced responses for each pair in each category of behaviour, rule breaking and normative, was counted.

Proportions of laughter to rule breaking talk

The proportion of laughter that followed rule breaking talk, and the proportion of talk that was coded as rule breaking were calculated for each pair. Comparison of these measures shows the degree to which laughter was contingent upon rule breaking talk for the entire sample.

Rates of reinforcement for individual topics

The frequencies of occurrence and reinforcement for each rule breaking topic were calculated based on the definitions of specific topics from the Topic Code.

Ratios of Talk to Laughter

Ratios were calculated to show the duration of laughter in response to normative talk and in response to rule breaking talk. This was calculated by dividing the duration of each type of laughter by the duration of corresponding talk.

Measures of rule breaking talk

Three measures of rule breaking talk were used. They included the total duration of rule breaking talk, the deviancy training construct and the slope construct.

Duration of rule breaking talk

This measure was calculated by counting the total duration of all talk that was rule breaking for each pair.

Deviancy training

A similar method was used to calculate the scores for the construct of deviancy training to that used in previous research. The following equation explains the process:

$$RBt/Tt + RBl/Tl$$

Where RBt is the duration of rule breaking talk, Tt is the total duration of all talk, RBl is the duration of rule breaking laugh and Tl is the total duration of all laughter.

Slope analysis

The coded data from the conversations was organised to examine the pattern of 'rule breaking bouts' for each pair. A bout is defined as the amount of time that one or both participants' talk was continuously coded as rule breaking. The bout ends when one of the participants engages in behaviour other than rule breaking or there is a three second pause. Each bout is organised sequentially, and then these data are put into a time series plot so that the X axis shows sequential bouts and the Y axis shows the duration of the bouts. The slope value is then calculated using simple regression analysis. The beta value of the line of best fit is the rule breaking slope measure.

Measures of behaviour

The information gathered from the parents and teachers of the participants regarding their behaviour was scored according to the guidelines in the manual for the ASEBA scales (Achenbach & Rescorla, 2001). The information yielded scores on rule breaking behaviour and aggressive behaviour. Total externalising scores were calculated by adding scores on the rule breaking and aggressive scales. Total externalising scores were given from parent report and teacher report and added together to form the level of prior rule breaking behaviour.

Verbal Behaviours

     All of the codes from the Oregon Youth Study coding procedures were used when coding the behaviour from the participants in this study. Figure 1 shows the total duration of normative talk, rule breaking talk, normative laughter and rule breaking laughter for each pair of participants. With the exception of Pair 9, all pairs had much higher total durations of normative talk as compared to other behaviours. Two of the nine pairs of participants produced about 14% more rule breaking talk each than would be expected if the talk was divided evenly across all pairs. Pairs 6 and 9 produced just over half (50.4%) of the rule breaking talk measured from the entire sample.
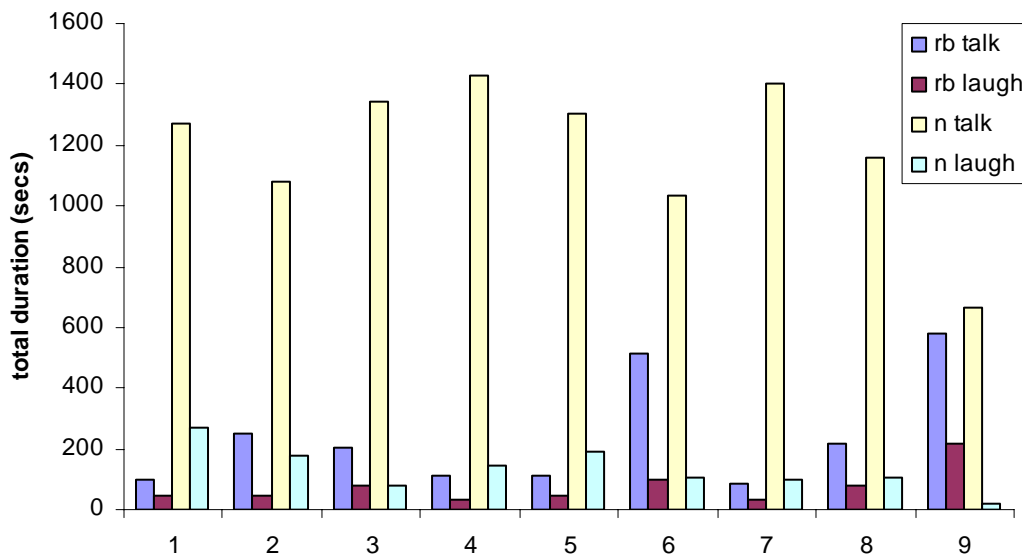
Figure 1. The total durations in seconds displayed for each category of coded behaviour for each pair of participants. In the legend 'rb' stands for rule breaking and 'n' stands for normative.

Bout Duration

     'Bouts' of behaviour were calculated. A bout begins and ends with a shift in code from or a three second pause. Because bouts of behaviour are taken as dyadic measures a bout does not end when the speaker changes from one participant to the

other. The mean bout duration for each category of behaviour (except pause) was calculated for each pair and is presented in Figure 2. Normative talk had the longest mean bout for all pairs of participants. In almost all of the pairs mean rule breaking bouts were the second longest. The mean duration of all laughter bouts, both rule breaking and normative are similar with a trend of the mean rule breaking bout being slightly longer.

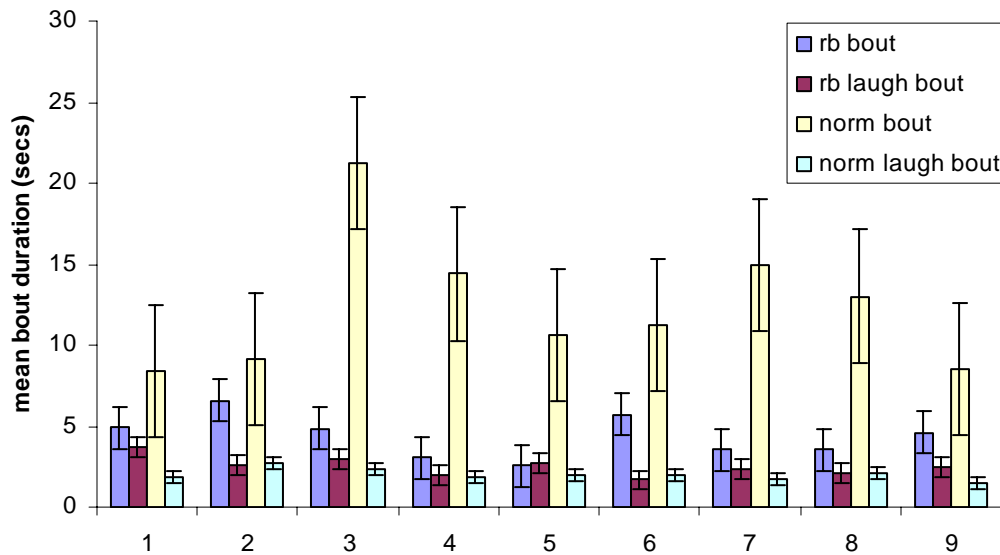Figure 2. The mean bout duration in seconds for each category of coded behaviour for each pair of participants. Error bars show the area above and below each value equal to one standard deviation.

Frequencies of Bouts

The dyadic rates of initiation of rule breaking normative talk bouts were calculated. The bouts of talk were defined the same as described above. Because bouts are not discrete occurrences and have duration, they confound the measurement of frequency. Longer bouts mean that there can be fewer bouts in the same amount of time and therefore lower the frequency. To count the frequency of bouts of verbal behaviour the beginning of each bout was used. Table 1 shows the average number of bouts each pair started per minute during the conversation task. The average rate of normative bouts was 3.4 bouts per minute. The average rate of rule breaking bouts for the sample was lower, at 1.8 bouts per minute.

Table 1

Average number of normative and rule breaking bouts
initiated per minute by each pair during the conversation
task.

Pair	Normative bout per minute	Rule breaking bout per minute
1	5.0	0.5
2	4.0	1.6
3	2.1	1.5
4	2.9	1.2
5	4.2	1.5
6	3.1	3.0
7	2.9	0.8
8	3.2	2.2
9	2.7	4.1

Rates of Reinforcement

The number of bouts that were followed by laughter were counted for each
category of talk. Figure 3 shows the percentage of bouts in each category that were
reinforced. Four of the pairs reinforced normative bouts more frequently than rule
breaking bouts. Most pairs have similar percentages of bouts reinforced in each
category, in the range of 40 to 70%. Pair 1 and Pair 9 are noticeably different from
the other pairs. Pair 1 showed an extremely high percentage of normative bouts
followed by laughter (89.7%). Pair 9 on the other hand had an extremely low
percentage of normative bouts followed by laughter (17.5%).

Proportions

The proportions of rule breaking talk duration to the duration of total talk were
calculated for each pair. The average proportion of all talk that was rule breaking
according to duration was .17 (sd = .14). The proportions of rule breaking laughter to
total laughter were also calculated for each pair. The time spent laughing after a
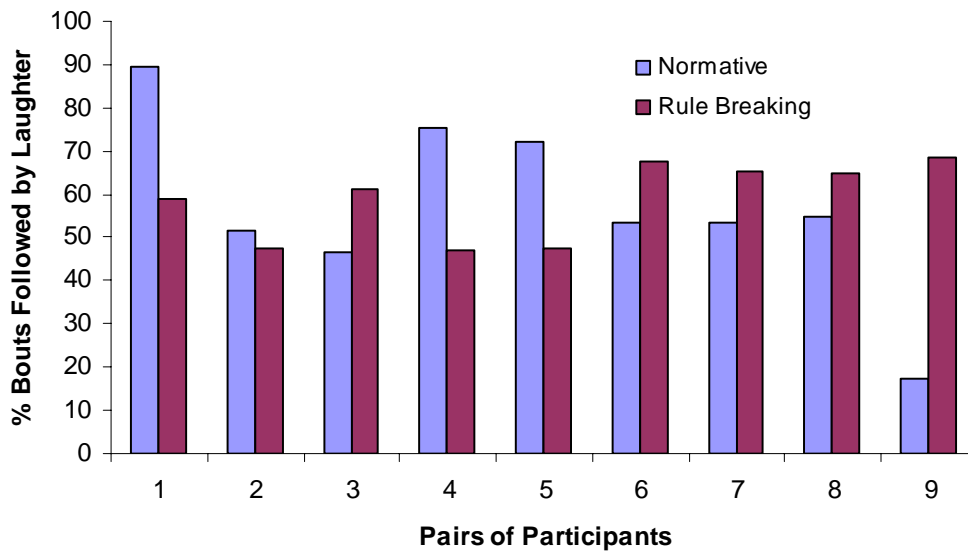
Figure 3. The percentage of normative and rule breaking bouts reinforced by laughter for each pair.

rule breaking comment out of all time spent laughing had an mean value of .38 (sd = .24).

Figure 4 shows the proportion of rule breaking talk duration for each pair graphed against the proportion of rule breaking laughter duration. As can be seen one pair (Pair 9) had a much higher proportion of both rule breaking talk (.46) and rule breaking laughter (.91). The correlation coefficient for this relationship r = .85. The relative amount of rule breaking laughter accounted for 72% of the variance in rule breaking talk. This is a strong relationship, but is seems that it depends on only one data point. If this point (on the far right of the graph) had not been included the relationship between proportions of talk and laughter that were rule breaking would be much weaker (r = .57) and less variance would be accounted for (32%).

Ratios of talk to laughter

Figure 5 shows the ration of laughter that occurred after a normative talk (shown on the left bar) and laughter that occurred after a rule breaking talk (the right bar). This was calculated from duration of coded verbal behaviours for each pair of participants. Almost all pairs are similar in that the ratio of laughter for rule breaking talk was much higher than the proportion of laughter for normative talk across the
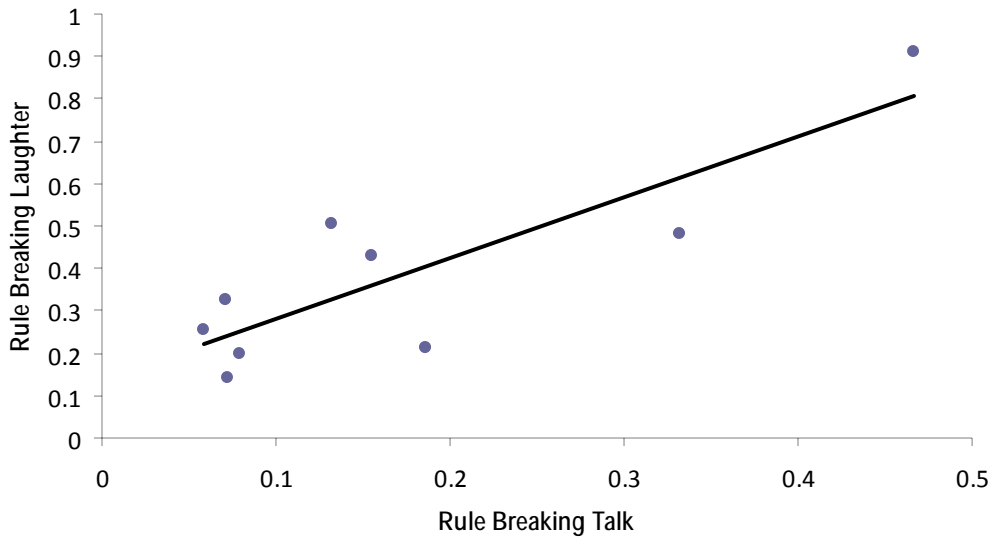
Figure 4. Proportion of talk that was rule breaking and proportion of laughter that followed rule breaking talk for each pair. The equation for the line of best fit in this graph is y = 1.4346x + 0.137.

Figure 5. Ratios of laughter elicited for each category of talk from each pair of participants.

sample. Pair 2 and Pair 6 data show a much lower ratio of talk to laughter following rule breaking talk. For all pairs the ratio of laughter to rule breaking talk was larger

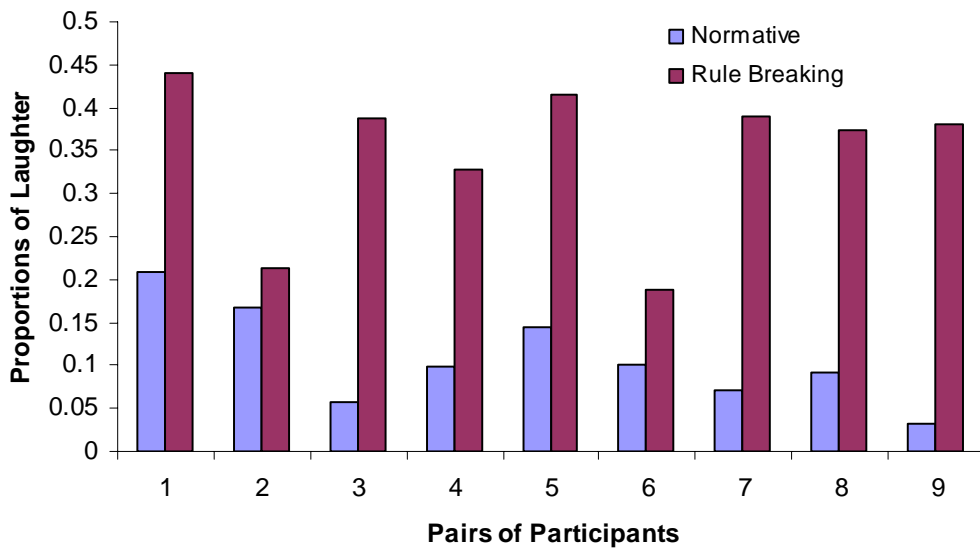than for laughter and normative talk. The mean ratio of normative talk to laughter for the sample was 60:7 seconds and the mean ratio of rule breaking talk to laughter was 60:20 seconds.

Reinforcement for Rule Breaking Categories

This analysis was completed by counting the number of rule breaking verbalisations from each category of the Topic Code for all participants. The percentage of reinforced rule breaking verbalisations was calculated by counting the number of verbalisations that were followed by laughter. Table 2 displays the topics, and the frequencies of verbalisation and reinforcement.

Table 2

Rule breaking topics, their frequencies of occurrence from all pairs and the percentage of each verbalisation for that topic that was followed by laughter.

Rule Breaking Category	Frequency	% Reinforced
Inappropriate Behaviour	140	69%
Gross Activities	33	60%
Drug Use	99	55%
Illegal/Rule Breaking	85	55%
Victimising Others	68	49%
Victimising Women	59	49%
Obscene Language	51	33%
Inciting Rule Breaking	6	-
Being Victimised	1	-

'Inappropriate behaviour' had the highest frequency count (140) and had the highest percentage of reinforcement (69%) compared to the other rule breaking categories. 'Gross activities' occurred less frequently than most of the other categories, only 33 times, but had the second highest percentage of reinforcement (60%). The other categories had similar frequencies and rates of reinforcement, with the exception of the two categories at the bottom of the table. 'Being victimised' and

'inciting rule break' verbalisations occurred relatively infrequently so the percentage of reinforced verbalisations was not calculated for these categories.

Correlations

Correlations between different measures of rule breaking talk and the measure of rule breaking behaviour were compared.

Duration of Rule Breaking Talk

The total duration of rule breaking talk for the half hour conversation task for each pair was correlated with prior rule breaking behaviour. A higher score on the rule breaking construct indicates a more severe level of problem behaviour. Figure 6 indicates that there is a positive relationship between the rule breaking construct and the duration of rule breaking talk. As the duration of rule breaking talk each pair displays increases, so does the level of prior rule breaking behaviour. The correlation coefficient for the relationship between talk and prior level of behaviour is $r = .38$.
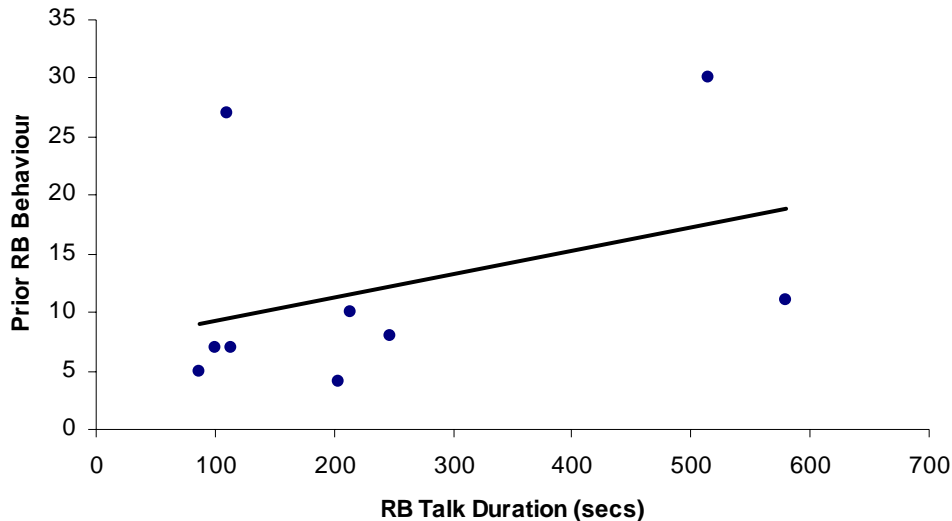

Figure 6. Total durations of rule breaking talk from each pair graphed against the measures of prior rule breaking behaviour.

Deviancy Training

Deviancy training was calculated according to the equation presented in the method section. The construct itself was made by adding the duration of rule breaking

talk divided by the duration of total talk, to the duration of rule breaking laughter divided by the duration of total laughter. The deviancy training scores can range from zero to two. A score of two would suggest that all of the talk the pair did was rule breaking and all the laughter the pair did had followed rule breaking talk. A score of zero would indicate the opposite; none of the talk or laughter the pair did was rule breaking.

Figure 7 shows a weak positive relationship between the rule breaking construct and the deviancy training construct. The correlation coefficient is $r = .22$.
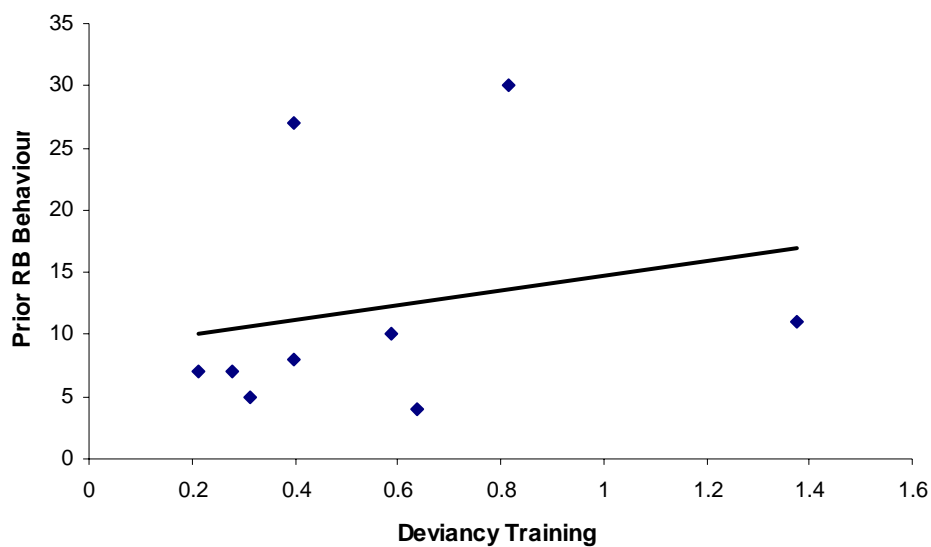
Figure 7. The deviancy training construct for each pair and the level of prior rule breaking behaviour.

Slope measure

The rule breaking attractor state measure was calculated following the procedure set out in Granic and Dishion (2003). The first step is to measure the duration of each rule breaking bout. A bout is defined as the time from the beginning of rule breaking utterance until another coded behaviour occurred, or there was a three second pause on the tape. Each bout is then plotted one after the other on a line graph, and the slope of the line of best fit was calculated. Hypothetical data are used in Figure 8 to demonstrate how these graphs appear.

In Figure 8, the y axis shows the duration of each bout in seconds and the x axis shows the number of bouts. The bouts are simply charted in order of occurrence. The

degree of slope indicates the strength of the attractor state. The line of best fit for Figure 8 is sloping positively, with a value of 0.94, suggesting that rule breaking talk

Figure 8. Hypothetical slope data showing an overall increase in the duration of each consecutive bout of rule breaking talk (positive slope).

is an attractor state for the hypothetical pair. Figure 9 shows hypothetical data with a negative slope. This indicates that for the hypothetical pair, rule breaking talk is not an attractor state as would also be the case if the line had no slope.
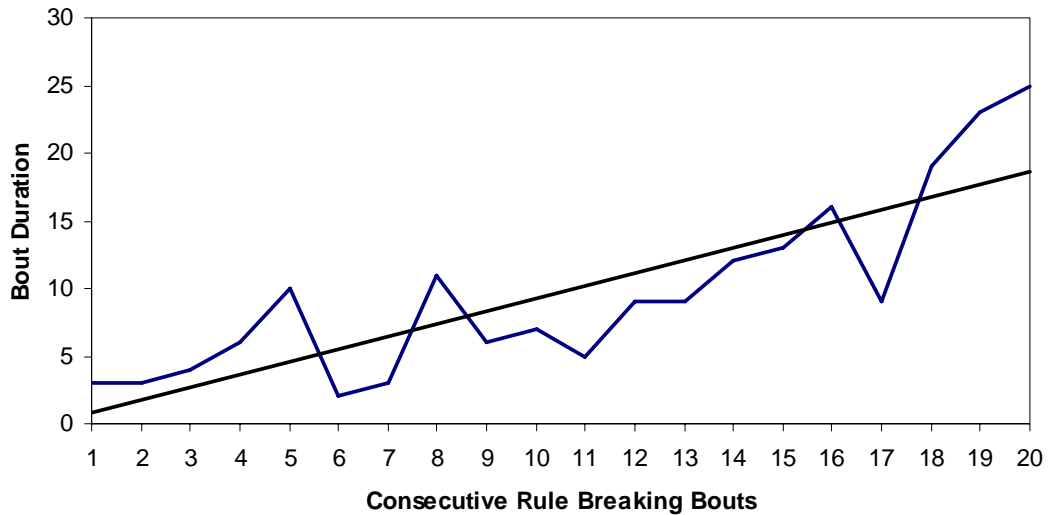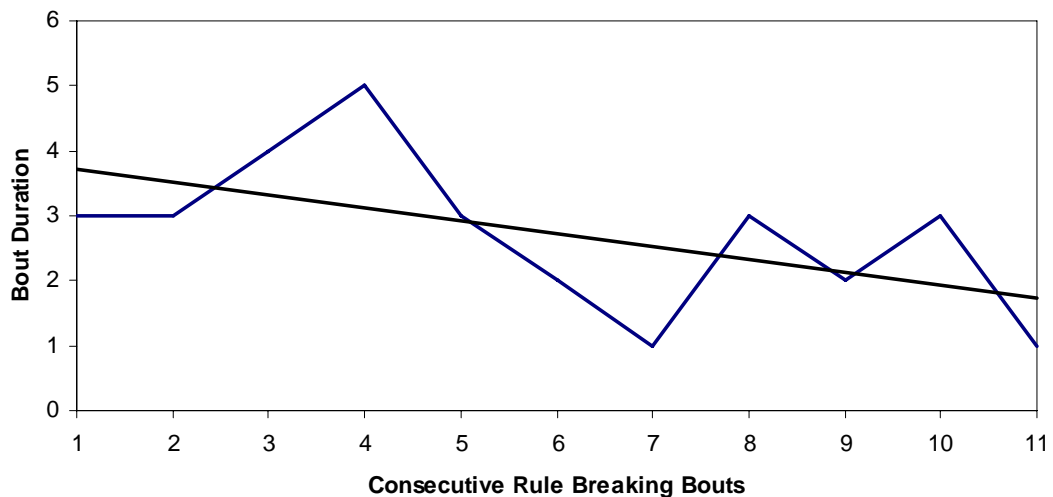

Figure 9. Hypothetical slope data showing an overall decrease in the duration of each consecutive bout of rule breaking talk (negative slope).

Using the attractor analysis method outlined immediately above, the data from each pair in the study were analysed. Table 3 shows that for each pair the attractor slope values range from –0.063 to 0.152 having a mean of 0.036 and a standard deviation of 0.065. Overall it can be seen from these values that there is not a strong attractor state for any of the participant pairs.

Comparison of the slope values with the rule breaking construct yielded Figure 10. There is a slight increase in the level of prior rule breaking behaviour as the slope values increase. The strength of the correlation coefficient $r = .11$ indicates that there is no relationship between the slope measure and prior levels of rule breaking behaviour.

Table 3

Slope values for each pair in the present study.

Pair	Slope Value
1	0.152
2	-0.031
3	0.068
4	0.045
5	0.029
6	0.049
7	-0.063
8	0.030
9	0.058

Figure 10. Slope values from each pair and level of prior rule breaking behaviour.

Discussion

The following discussion section will not be presented in the traditional way. It will be divided into two parts as the significance 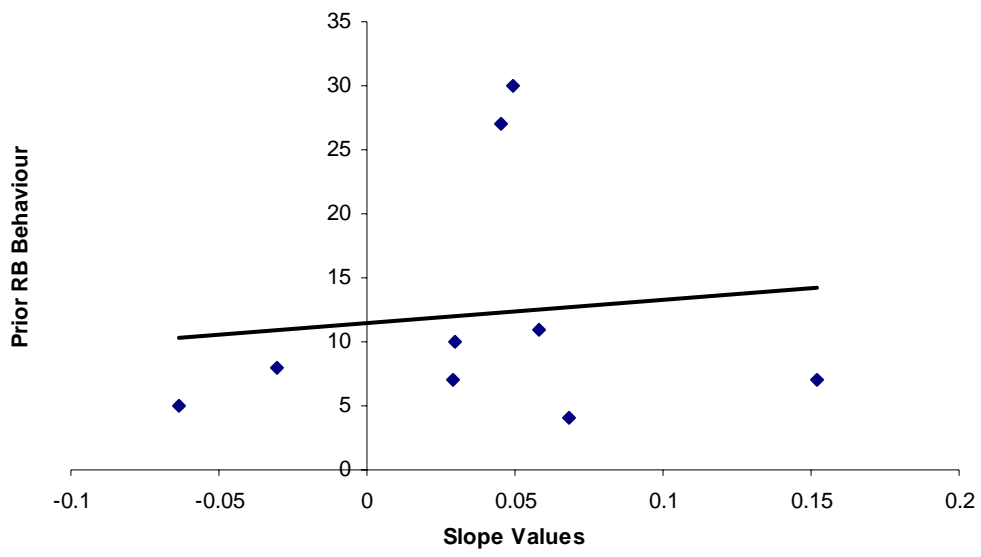of procedural difficulties meant that only limited conclusions can be drawn from the results. Firstly, the data will be discussed and tentative interpretations will be provided where possible. Secondly, discussion will turn to the difficulties that were faced following this methodology, the attempts that were made to deal with them and other ways that these could be overcome more successfully in future research.

Discussion of the Results

Prior Behaviour and Rule Breaking Talk

The main focus of this study was to examine whether there was a relationship between measures of rule breaking talk and prior levels of rule breaking behaviour. Three measures of rule breaking talk that appear in the literature were used; the duration of all rule breaking talk, the deviancy training construct and the slope construct. The results suggest that the duration of rule breaking talk had the strongest correlation with prior level of rule breaking behaviour (r = .38). The deviancy training construct correlated weakly (r = .22) and the slope construct correlated weaker still (r = .11). The finding for the slope construct is similar to previous research findings. Granic and Dishion (2003) report a correlation of r = .07 between the slope construct and prior levels of delinquency. The authors found instead that the slope construct is more useful in predicting future delinquency even when controlling for the most common correlates, such as prior levels of delinquency and antisocial peers. Granic and Dishion did find that the duration of rule breaking talk correlated significantly with prior levels of delinquency (r = .32), a finding in line with this study. Unexpectedly, the duration of rule breaking talk seemed to relate better to delinquent behaviour than the deviancy training construct. The main difference between the two is that the deviancy training construct incorporates the relationship between talk and laughter. This relationship had been thought to be important in earlier research (Patterson, Dishion, & Yoerger, 2000) and resulted in the deviancy training construct being used as well as measures based on duration.

The relationship between deviant talk and laughter may not be critical to the comparison of peer interaction to behaviour. Piehler and Dishion (2007) explain that while previous research has focused on the role of laughter contingent on rule breaking talk, the most common response to rule breaking talk is more rule breaking talk. It could be that this reciprocity of rule breaking talk serves a similar function to laughter by supporting discussion of rule breaking topics. Piehler and Dishion used a measure of the duration of rule breaking talk in their study and found that it correlated with antisocial behaviour with an r = .42, another finding comparable to the findings of this study in which there was a correlation of r = .38. It is not clear from the literature which of the two measures is better, but the results of this study, and the trend described above suggest that the duration of rule breaking talk provides a useful measure as evidenced by this study. Conceptually it also makes sense that the reciprocity of rule breaking talk bouts could function similarly to laughter, that is, by reinforcing rule breaking talk.

In spite of recognising the usefulness of the duration of rule breaking talk Dishion and colleagues do not explain how it could function to influence peers. It may be that the majority of rule breaking talk functions to maintain lines of communication that will allow for resource sharing between members of a group on certain occasions (according to processes described in Guerin, 2004). Rule breaking talk may maintain access to other young people in the peer group who have knowledge and skills necessary to support rule breaking behaviour. The rule breaking talk may function to maintain access to resources in future situations. It has already been discussed how during childhood children displaying more antisocial behaviour tend to be rejected by their peers that display more prosocial behaviour. Rule breaking talk may function to allow some adolescents to initiate contact with peers in similar circumstances and continue to gain access to resources.

The implication of this result is that the degree to which peers discuss rule breaking topics is related to prior levels of delinquent behaviours. This finding supports the findings from previous research in this area. It is limited however, because the size of the sample is small and may not reflect the qualities of the population from which it was drawn.

Verbal behaviours

The total durations of verbal behaviours shown in Figure 1 show a similar trend for most pairs of participants. In this trend the duration of normative talk is high when compared to all other verbal behaviours. In six of the nine pairs the duration of normative laughter is longer than the duration of rule breaking laughter. The exception to this is Pair 9 which had a much longer duration of rule breaking laughter than normative laughter. Pair 9 also had a noticeably shorter total duration of normative talk as compared to the other pairs.

Dishion, Spracklen, Andrews and Patterson (1996) found in their study that the more delinquent pairs tend to not only reinforce rule breaking talk more frequently, but they reinforce normative talk much less frequently. It can be seen that Pair 9 had much higher total duration of laughter for rule breaking talk and a much lower duration of laughter for normative talk than other participants. This result suggests that Pair 9 displays a pattern of talk that Dishion et al. have described as being representative of antisocial dyads. For participants other than Pair 9 this pattern does not occur. All other pairs had a total duration of laughter for normative talk that was either much higher or very similar to the duration of laughter for rule breaking talk. Pair 6 had an interesting set of results. Pair 6 was recruited from the Tough Love support groups and was expected to show a pattern of interaction similar to the antisocial dyads in the previous research. The total duration of normative talk for Pair 6 is slightly lower, but still comparable to the durations of the other pairs (excluding Pair 9). Pair 6 also had a total duration of rule breaking talk that is similar to the level shown by Pair 9. The durations of laughter for each category of talk are equivalent for Pair 6 but unlike Pair 9 where there was a noticeable difference. It could be said from these results that Pair 9 have displayed a style of interaction consistent with an antisocial pair while Pair 6 have displayed a mixture and the remaining pairs displayed a style of interaction consistent with a prosocial dyad. These results suggest some similarities between the findings from the present sample and the findings in previous research.

The mean bout lengths for each type of laughter are very similar for almost all pairs. It also seems that the lengths of mean bouts or rule breaking and normative laughter are the same, at about 2-3 seconds long. The rule breaking talk bout duration is also quite similar across all pairs. Interpreting these findings in light of those discussed above suggests that the pattern of rule breaking talk and laughter may be similar for all pairs. Rule breaking bouts are more likely to be shorter in duration than

normative bouts and talk bouts are usually ended with 2-3 seconds of laughter. This suggests that for Pairs 6 and 9, which both had high total durations of rule breaking talk that this was likely to have been made up of a very large number of short duration bouts interspersed with laughter. Another feature of this style of interaction would be a long total duration of rule breaking laughter. This can be seen in the results for Pair 9.

Frequencies of Verbal Behaviours

The frequencies of rule breaking and normative talk bouts were calculated per minute. The mean rate for normative talk (3.4 bouts per minute) was higher than the mean rate of rule breaking talk (1.8 bpm). This is similar to the findings of Dishion, Spracklen, Andrews and Patterson (1996) who found higher rates of normative talk than rule breaking. A major difference is that the frequencies reported by Dishion et al. (1996) are much higher than those found in this study. Dishion et al. report a mean normative frequency of 13.6 codes per minute and a mean rule breaking frequency of 2.56 codes per minute. While the difference between the rates of rule breaking talk is not particularly large, Dishion et al. report a frequency of normative talk several times larger than what was found in this study. This could be explained in several ways. The methods of defining a bout could differ between studies. Although steps were taken to try and mimic the measures used in previous research it is not always clear how they are defined. It seemed from Dishion et al. that the authors were using a dyadic definition of each category, so it did not matter which of the pair was speaking, rather it was the code of conversation (normative of rule breaking) that was counted. In order to replicate Dishion et al.'s findings as closely as possible, the dyadic definition was used in the current study. It is clear that counting verbalisations separately for each pair would increase the number of bouts and the rate per minute frequency. In order to check the difference this could make some of the results were reanalysed. For the new analysis bouts ended with a shift in speaker as well as topic or a pause of three seconds or greater. After recoding one third of the sample, the new mean was 7.3 bouts per minute for normative talk. This result is more than double the old mean, but still lower than the mean from Dishion et al. Analysing the bout data in a non-dyadic way did not explain the difference between the results from this study and the previous research. The previous researchers make it clear that they were interested in studying interactions at a dyadic level. From this perspective it makes

little sense to treat each member's behaviour as independent from the others. Practically it is even difficult to code behaviour for each individual because there are so many times when both participants' talk overlaps.

A second alternative is that Dishion et al. counted the codes differently. Perhaps rather than counting switches between rule breaking and normative talk, the authors counted switches between specific rule breaking and normative topics. This would have increased the frequency of bouts and could explain the difference. Although for this to be the cause the participants in the current study would have had to use around four to five topics in each bout (based on a mean number of 3.4 bouts per minute). Other potential explanations are that the samples behaved in different ways in each of the studies. Possibly, the participants in the sample in the current study spoke for longer in each bout than the participants in the previous research. The participants in the previous research could have had a higher number of bouts per minute. For this to be the case, it would be reasonable to expect that the amount of talk in the current sample was lower than in the previous research. On average 80% of the coded behaviour in the current sample was talk. This finding leaves little room for increase in the amount of talk the participants could do.

Dishion, Spracklen Andrews and Patterson (1996) took their evaluation of frequency further by dividing their sample on the basis of arrest status. They found that pairs with both boys having been arrested previously actually had higher mean frequencies of rule breaking talk bouts per minute than normative talk. While the present study does not have sufficient numbers of participants to warrant a comparison like this, one pair in the present sample (Pair 9) did have a higher mean frequency of rule breaking talk bouts per minute than normative. Pair 9 did not score highest on measures of previous rule breaking behaviour for the sample. Higher scores suggest a more severe level of rule breaking behaviour. Pair 6 had the highest scores for prior rule breaking behaviour, although this pair was recruited specifically because they were thought to have higher levels of rule breaking behaviour. Out of the pairs recruited from high schools, Pair 4 had the highest level of rule breaking behaviour and Pair 9 was second highest. Pair 4 scored very highly in comparison to the other pairs from high schools. This may reflect a problem with the measures used in the study which will be discussed in the section on the methodology. It cannot be said that the pair with the highest level of rule breaking behaviour also had the highest frequency of rule breaking bouts per minute. Variation does exist in the

frequencies of talk from the sample that is similar to previous research. This finding lends some support to the similarity between the current study and the research findings of previous studies conducted previously.

Rates of reinforcement

The rates of reinforcement were calculated from the number of bouts that were followed by laughter for each pair. For the most part the results were similar across the sample. Two of the pairs provided results that differed from the rate of reinforcement for different categories of talk for the rest of the sample. Pair 1 had a particularly high rate of reinforcement for normative bouts. This can be attributed to other findings. Pair 1 also had the highest total duration of laughter for normative talk, and a relatively short mean duration of normative talk bouts. Observing the tape of Pair 1 and comparing it to the other pairs it is clear that the pair had a unique style of talk. The pair had particularly high rates of short bouts of laughter that were interspersed throughout their conversation. Laughter seemed to act as punctuation marks in the middle and end of each sentence for Pair 1. There is no clear explanation of why this could be the case from the previous research.

Pair 9 had a particularly low rate of reinforcement for normative talk bouts. This supports the findings discussed earlier and seem to reflect that Pair 9 displayed an antisocial style of interaction. In contrast to what Dishion et al. (1996) Pair 9 did not reinforce rule breaking bouts at a higher rate than other pairs of participants. All of the participants seemed to reinforce rule breaking bouts to a similar degree. The average percentage of rule breaking bouts reinforced for the sample was 58.8%.

Proportions

The relationship between rule breaking talk and rule breaking laughter was found to be strong. 72% of the variance of rule breaking talk was accounted for by the amount of rule breaking laughter. This finding is similar to that reported in the previous research by Dishion, Spracklen, Andrews and Patterson (1996). They found that rule breaking laughter accounted for 84% of the variance in rule breaking talk. The amount of variance accounted for was similar in both studies. In their study, Dishion et al. suggested that the amount of rule breaking talk that the pairs of participants engage in is matched to the amount of laughter or reinforcement provided for it, at least to a degree. It is not clear whether rule breaking talk is matched to rule

breaking laughter. The comparison of proportions is based on a correlation. Correlation between two variables does not show a causal relationship or the direction of that relationship. A limitation of this finding is that the sample size in this study is very small, and the addition (or subtraction) of even one data point could potentially change the strength of the relationship. Tentatively, the finding is similar to the findings of previous research and suggests that similar processes may be found in more extensive investigation in New Zealand Aotearoa.

Ratios of Talk to Laughter

For all pairs in the sample, there was a higher ratio of laughter for rule breaking talk than for normative talk. One minute of rule breaking talk yielded an average of 20 seconds of laughter whereas the same duration of normative talk yielded an average of 7 seconds of laughter. As mentioned above, the proportion of rule breaking talk from total talk matched the proportion of rule breaking laughter from total laughter. The argument put forward by Dishion, Spracklen, Andrews and Patterson (1996) was that rule breaking talk is matched to the amount of pay off (laughter) each pair gave out for it. Assuming a similar process existed for the present sample, it seems strange then that there was not more rule breaking talk than normative since all of the pairs paid out high rate of laughter for rule breaking talk. An alternative argument could be that laughter does not reinforce rule breaking talk so much as it acts as a discriminative stimulus. Laughter may signal to participants in an interaction that continued rule breaking talk will be met with reciprocation. This could explain why all dyads had a similar ratio of rule breaking talk to laughter but different proportions of rule breaking talk to total talk.

Coding Categories

The way behaviour was coded in this study may have had quite a large impact on the nature of the results. The rule breaking topic 'inappropriate behaviour' was the most frequently coded (140 codes) and reinforced (69% of codes reinforced) topic in the present study. This code includes behaviours such as making faces or doing the fingers to the camera, singing songs or speaking in a manner that is not understandable to the coder, and messing around with chairs or other things in the room. Behaviours that involved talking to the camera fell under this code provided that the participant was not speaking to the camera as they would to an interviewer.

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The rule breaking code that was the most frequently occurring would have had the largest impact on measures of rule breaking talk. In the present study that code was 'inappropriate behaviour.' The most common behaviour in this code involved making contact with the video camera. The presence of the video camera in the room during the conversation task seems to have elicited a large amount of rule breaking talk measured in the study. While the studies in this area have focused on trying to observe discussions between pairs, it is important to consider how the presence of a video camera could influence behaviour. It does seem that attempting more naturalistic observations of adolescent peer interactions would be either practically or ethically difficult. With very young children it is possible to observe peer interactions in natural settings (see, for instance: Snyder, Horsch, & Childs, 1997; Snyder et al., 2005). Perhaps given the utility of the results of studies that have used video cameras in predicting future problem behaviours, the presence or absence of the video camera in the room is not important. It would be interesting to examine this, and it seems that on the basis of these results there would be less rule breaking behaviour in the session if a video camera was not present. It could be seen that the presence of the video camera is a threat to the validity of the observations or that the camera-related features of the code 'inappropriate behaviour' should be dropped. Alternatively, following from the analysis of rule breaking talk presented above, it could be that talking to the camera in a rule breaking way is meant to affect the person sitting next to the speaker rather than the person coding the tape. The second interpretation makes the case for retaining the code 'inappropriate behaviour' as it functions in the same way as other rule breaking talk does.

There seems to be an anomaly between the low frequency of the 'gross activities' code (33 codes) and the high rate of reinforcement for this code (60% reinforced). The code 'gross activities' is defined as 'engaging in or talking about activities involving bodily gases, fluids or parts' (Poe, Dishion, Griesler, & Andrews, 1990). This includes discussion of behaviours like spitting, farting or picking the nose. It seems strange that the potency of the reinforcement contingency for this behaviour did not result in higher frequencies of the behaviour. A possible explanation could be that at the age of 15 years old, the consequences applied to these behaviours outside the peer group are such that these behaviours are punished. Although for the participants this topic was reinforced by peers perhaps other

contingencies hold greater control of the behaviour. Examining the validity of this argument in relation to current literature is beyond the scope of this project.

The discussion of drugs and alcohol was largely similar in frequency and reinforcement to other rule breaking topics. This code was defined as any talk of drugs in the context of their use. This code provided some difficulty for the coders as some pairs discussed drugs and alcohol in a way that did not seem to be rule breaking, but was defined as such. For instance, several pairs of participants discussed the importance of taking a harm reduction approach to alcohol use by, for example, limiting how much they drank. The following is an excerpt from one pair of participants in this study:

> Boy 1: "If you're gonna get drunk, don't drive. And don't drink too much"
> Boy 2: "Yeah and it's good to have someone sober with you that can look after you"
> Boy 1: "Yeah"

This excerpt shows the boys discussing alcohol use in a manner that seems to be realistic and favours a harm reduction viewpoint. The Topic Code definition states that any discussion of drug use, even talking about facts, if it is in the context of using the drug, is rule breaking behaviour. The talk quoted above would then have to be coded as rule breaking behaviour. This seems to be a limitation of the Topic Code. In the interests of replicating previous research the codes for rule breaking talk were used in this study as they were defined in the Topic Code. It seems that the code describes the topography of rule breaking talk. It may be more useful to include more focus in future codes on the function of rule breaking talk.

Another limitation of the Topic Code was that two of the codes occurred so infrequently that they were of no real use to the study. These codes were 'inciting rule break behaviour' and 'being victimised.' The Topic Code was actually difficult to use because many of the definitions had numerous exceptions that had to be understood before it could be used. One exception has already been identified; talking to the camera is rule breaking behaviour, unless the participant is talking to the camera as they would talk to an interviewer. Any future researchers examining this area should perhaps consider whether it is more appropriate to create their own code that reflects the current values of New Zealand society.

Discussion will now turn to the difficulties faced in conducting this research and how these could be overcome with specific focus on the problem of recruiting participants.

Discussion of the Methodology

Recruiting participants was a major difficulty in this study. Three attempts to recruit participants were made at the selected high schools. The first attempt involved taking a random sample of 40 male students from one of the high schools. Consent forms were sent out by home room teachers. The consent forms asked for consent from the student and one parent or caregiver. The student and parent or caregiver also had to list three friends that would also be asked to participate in the study, as per the methods of the Oregon Youth Study. The return rate from this sampling was very low (10%) so the remainder of the Year 10 boys were sampled at the first school. This second sampling attempt yielded a return rate of only 4.5%. This gave an initial sample of nine participants (6% of the population). Naturally, this study requires pairs of participants so that the conversation task can be done. Only one of the boys chosen as a friend by the initial sample completed the consent process and was able to participate in the study. Consequently, the first two attempts at sampling from a pool of 150 potential participants gave only one pair of participants.

To counter the difficulty of recruiting participants the methodology was changed so that the researcher would give a talk at each school to try and build up more interest in the study. It was also decided to give a small incentive for agreeing to participate, in the form of a movie ticket, to each participant. The use of incentives was central to the methods used in the Oregon Youth Study to increase rates of recruitment and retention, as described by Capaldi and Patterson (1987). For the Oregon Youth Study using cash as an incentive proved to be an effective method for increasing the rate of recruitment and retention. The necessary changes were made to the ethics application for this study and were accepted by the University Ethics committee. The researcher gave talks at both high schools that introduced research in psychology and the reason for doing the specific research with high school students. Consent forms were given out at the end of the talk. Potential participants were asked to pair up under their own initiative to streamline the consent process. The importance of getting the consent forms back to the school quickly was emphasised by explaining

the limited number of places available in the study. Five pairs of participants were recruited at the first school (10.7% of the total population) and three pairs were recruited at the second school (8.6% of the total population). This sample of 8 pairs was far below the sample of 40 pairs required to detect the effect of the size suggested by previous research. However, the sample was much larger than the initial sample of one pair, so the researcher decided to proceed. While incentives were useful in the Oregon Youth Study, increasing retention rates to around 70%, they were less effective with the population targeted in this study. This could be because the Oregon Youth Study researchers had far larger resources to draw upon.

It seems likely that needing pairs of participants for this study increased the difficulty of recruiting participants. Instead of requiring consent from the participant and one of their parents, consent was also needed from one of the participant's friends and one of the friend's parents. In other words, one pair of participants required the consent of four individuals for the study to be ethically sound. The first method was to get consent from one participant and then to try and get consent from the partner. This process was ineffective and time consuming. In the second method, participants were asked to form pairs from the outset, and while this did speed the process consent was still required from four people. In some cases it took several weeks to receive consent forms from both participants in each pair. Once the Year 10 Deans at each school became involved this situation did improve, and all the consent forms were returned within several days.

One of the barriers already discussed was the problem of interesting Year 10 boys in the study and the lack of incentive for them to participate. The study does not teach participants any new skills, nor do they gain any insight into their own behaviour. Given that this research was conducted as a Master's Thesis, the resources and expertise were simply not available to make the study more rewarding to participants. The attempt to overcome this difficulty was to create the second methodology and to offer small incentives for agreeing to participate. Using these strategies led to an improvement in the recruitment rates, but they were still far lower than expected.

It could be that another barrier stopped some of the potential participants from participating. Some research has been done to examine reasons people have for not participating in research and other initiatives such as preventative interventions for adolescent problem behaviours. Spoth, Redmond, Kahn and Shin examined some

factors thought to be related to parents' participation in research in the area of adolescent problem behaviours. One of the best predictors of participation was the perception that the research was worthwhile (Spoth, Redmond, Kahn, & Shin, 1997). On reflection it seems the utility of the study could have been emphasised more in the consent forms sent out to parents. An earlier study by Spoth, Redmond, Hockady and Shin (1996) sampled 459 parents of which 289 refused to participate in an assessment for a preventive family skills training intervention. Phone interviews were conducted to see what the main reasons were for not participating. The authors found that being video-taped was a major barrier to 42% of the total sample (Spoth, Redmond, Hockaday, & Shin, 1996). Video-taping the conversation task in the current research may have been a barrier to parents' consent. Steps were taken to assure potential participants that the recordings were to be kept secure and would not be shown to people outside the project in the information sheets. It was discussed at several points during the study whether it was necessary for the conversation task to be video taped or if audio tape would have been sufficient. Audio taping would have been less disruptive and perhaps more palatable to some of the people giving consent (such as parents). Audio recordings could have been coded with little difficulty other than identifying each member of the pair. As this study was meant to replicate as closely as possible the methods used in previous research it was decided against using audio recordings instead of video recordings of the conversation task. It seems that using audio recordings would change the dynamic of the conversation task as compared to having the video camera present.

Spoth, Redmond, Hockaday and Shin (1996) found several other reasons for participants in their study to not participate in an assessment. One of these reasons could be quite important for understanding the low recruitment rates in the present study. Around 37% of the sample in Spoth et al. (1996) simply did not want their family to be studied. A possible implication of this finding is that some of the families approached to be in the present study may have felt uncomfortable with the idea of having their children's behaviour scrutinized. Barriers such as the two described above may well have played a role in limiting the numbers of participants that were recruited.

The small sample size meant that it was unlikely that any meaningful conclusions could be made from the data as to the relationship between verbal behaviour and rule breaking behaviour. To address this, possible sources of more

participants were considered. One option was to approach more high schools to recruit participants. This idea was discarded for two reasons. First, all of the previous attempts at sampling had taken so much time that the final term of the high school year was almost finished, so recruitment would have to take place the following year. Secondly, it seemed likely that only a few participants with similar characteristics to those already in the sample would be recruited from more schools. Data in this study were analysed using correlations, so it was important to take steps to avoid reducing the variation measured in the sample. Data from a large sample of participants who did very little antisocial talking or behaviour would be unlikely to show the effect suggested in the literature.

Given a small sample of participants who for the most part seemed to be quite prosocial, it was decided that the best use of time would be to try and recruit a sample of participants who were known to be antisocial. This would have allowed some comparison to be made between the two groups. After deciding on this course of action, a school that catered to young people with behaviour problems was approached. After some initial interest from the managers of the school, consent was requested from the board of managers and from there requests were made to the Ministry of Social Development. Several different government agencies were involved at the school, and in the care of the potential participants. These agencies included Child, Youth and Family Services, The Hamilton Youth Offending Team and Group Special Education. As far as could be seen, each of these groups would have needed their own ethics processes to be completed, even with consent from the university ethics committee. It was hoped that gaining consent from one agency may have circumvented the need for the other agencies to follow through with their ethics processes and then would have cut down the time involved. The Ministry of Social Development was approached first. In order to gain consent from the Ministry of Social Development some changes were requested to the ethics application for this study. The changes amounted to taking extra steps that the participants were not identifiable on the tapes or anywhere in any written or presented work. The changes to the method were made, and approved by the university ethics committee. After returning the altered ethics application to the representative from the Ministry of Social Development the research was declined on 'operational grounds.' This process took place over a period of several months. While this was happening, two attempts were made to gather participants from 'Tough Love' groups in the Waikato area.

Tough Love is a support group network for parents who are struggling with their teenage children's behaviour. Although two attempts were made, no participants were recruited from this source.

Youth Horizons in Hamilton and Auckland was also approached to see if participants could be recruited. After an initial run of success, it looked as if a sample of similar size to the high school sample may have been able to be recruited. A sample that, although small, would have made a valuable comparison group. Unfortunately it was soon discovered that Child, Youth and Family Services would need to be consulted as the young people were under CYFs protection. Applications would have been made to the research access coordinator of the Ministry of Social Development for a second time. It was then decided to end any more attempts at recruitment.

The result of this lengthy process was the realisation that examining this topic using the methodology described above was perhaps an impossible task to complete within a Master's level thesis project. It appears that it is difficult to interest prosocial young people and their families in research of this nature, and it was too difficult to access antisocial young people within the time frame because of their vulnerability.

A further limitation to this study was the measure used for collecting information about the participants' prior behaviours. The scales (such as the CBCL and the TRF) from the Achenbach system of empirically based assessment are widely used tools that have been found to have good reliability and validity (Achenbach & Rescorla, 2001). The limitation lies in the way the scales were used in this study. Measures of behaviour were taken from parents and teachers at only one point in time. It was a strength that information was gathered from more than one source, but taking only one measurement meant that there could be no checks for reliability. Capaldi and Patterson (1987) discuss the importance of getting data using multi-modal methods. This means collecting information from a range of sources with a range of measures at several different points in time (Capaldi & Patterson, 1987). The Oregon Youth Study was a well funded longitudinal study which meant that multi-modal data gathering was possible and could be carried out over a number of years. The present study was much more time limited and so measures were only taken once. Carrying out measures once only leaves the possibility that they could have been affected by other variables (such as parents' mood at the time) that were not the focus of the study. Measures were carried out in the interest of replicating as close as

possible the conditions of the Oregon Youth Study. Future researchers in this area may consider using different methods to gather information about participants' behaviour that can be checked for reliability.

Alternative Methods

For a study like the present one to be more successful it would have to take place under a different set of conditions. The first alternative that could prove successful is to approach this within a doctoral thesis. The larger time frame would allow a researcher to develop better relationships with the people and organisations that would allow access to participants. It also seems likely that a doctoral level researcher would have access to more resources with which to recruit participants and their families. A long term project would also provide the necessary time frame to develop research questions that are more pertinent to the original findings. The predictive ability of measures of rule breaking talk could be examined over a period of months or years. This is impossible within the typical time frame of a Master's Thesis. A second option is to conduct this study as a short term project within the context of an ongoing relationship with services and organisations that have access to potential participants. Having established a relationship with organisations such as CYFs could ease the process of attempting to access young people. The results of the research could be particularly useful for agencies working with young people as it may highlight the importance of managing verbal interactions that are focused on rule breaking topics between young people at risk. Another possibility for research is to reduce the number of participants necessary for the study to be a success. As there is little published research in the specific area of rule breaking talk, there have been no studies that have examined these behaviours from a single subject design. Repeated measures of rule breaking talk could be taken. Experimental conditions could be manipulated to determine the effect of different rules on verbal behaviour. A study like this could provide unique findings and add to the knowledge of rule breaking behaviour currently available.

Conclusion

It is not possible to draw conclusions as to whether the way New Zealand adolescents talk to each other is related to how they behave from the present results, given the small sample size. However, for this very small sample a trend was found

with increased duration of rule breaking talk related to higher prior levels of rule breaking behaviour. A larger sample size would have allowed the generality of the findings to be established and would also have allowed a better comparison between groups of pairs. The present data suggest that a larger sample would show a clearer differentiation between the talk of primarily antisocial boys and primarily prosocial boys. Thus the research question itself is still a valuable one as understanding the process involved in antisocial behaviour has implications for improving the quality of our communities. It is argued here that it was legitimate to attempt to study the question in the way described above. However, the unexpected difficulty of getting consent from participants, as well as getting consent to approach possible participants has severely limited the success of this study. It is argued here that without the appropriate infrastructure in place, in terms of connections to and consent from services in the area, future research using this method will face similar difficulties in New Zealand. If the infrastructure to overcome these difficulties were built it would allow future study of peer interaction.

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Adolescent Issues

Please have a look at the list of problems that young people often face. Put a circle around some of the issues that you have faced over the past four weeks. Please choose ONE of the issues you have circled that you think is important and would like to discuss with your friend.

Telephone calls

Doing homework

Using the television

Cleanliness

Which clothes to wear

Making too much noise

Fighting with brothers or sisters

Swearing, bad language

How to spend money

Picking books or movies

Going places without parents

Drugs

Taking care of pets or possessions

Drinking alcohol

Buying records, games or other

Going on dates

Who I should be friends with

Sex

Selecting new clothes

Coming home on time

Getting in trouble at school

Having trouble with school work

Lying

Talking back and arguing with parents

How to spend free time

Smoking

Earning money away from home

Taking things that do not belong

Bad behaviour or attitude

Social activities

Weapons

Gang fights

Jealousy

Birth control

Popularity

Cheating at school work

Teasing

Family Issues

Please have a look through the list of problems that young people often have with their parents. Put a circle around some of the issues that you come across at home in the last four weeks. Please choose ONE of the issues you have circled that you think is important and would like to talk about with your friend.

Telephone calls

Cleaning up bedroom

Doing homework

Using the television

Cleanliness (washing, showers, etc)

Which clothes to wear

How neat clothing looks

Making too much noise

Fighting with brothers or sisters

Swearing, bad language

How money is spent

Picking books or movies

Pocket money

Going places without parents

Playing stereo too loudly

Drugs

Taking care of pets or possessions

Drinking beer or other alcohol

Buying records or games

Going on dates

Who I should be friends with

Sex

Selecting new clothes

Coming home on time

Getting in trouble at school

Getting low scores on tests

Lying

Helping out around the house

Talking back or arguing with parents

Being messy

How to spend free time

Smoking

Earning money away from home

Taking things that don't belong to me

Parents setting consequences

Going places with my family

Bad behaviour or attitude

Social activities

Parents fighting

Problems around divorce

Getting a driver's license

Step parents

Appendix C:
Conversation Task Instructions
This activity is about how friends make plans and solve problems together.

Part 1:

Plan an activity together in as much detail as possible. The activity should be something that you can do together in the next week. Make it something that you enjoy.
Duration: 5 minutes.

Part 2:

Discuss a family issue chosen by the first boy. Please discuss together the best way to handle the situation the next time it comes up. It might be helpful to consider different ways to deal with the situation.
Duration: 5 minutes

Part 3:

Now it is the second boy's turn to introduce the family issue they chose. Again, please discuss together the best way to handle the situation the next time it comes up.
Duration: 5 minutes

Part 4:

The first boy should now introduce the adolescent issue that they chose. The same as before, please discuss the issue together and try to come up with the best way to handle the situation should it come up again.
Duration: 5 minutes

Part 5:

Now the second boy can introduce the adolescent issue that they chose. Please discuss together the best way to handle the situation should it come up again.
Duration: 5 minutes

Last Part:

To finish off the task, please plan a party together. You can discuss things like where to have it, who to invite and what sort of activities/food/music you would like.
Duration: 5 minutes

> If you feel like you have run out of things to say, feel free to relax and talk, but please wait to discuss other issues that you have selected until they are introduced by James. Please stay in your chairs for the whole time and don't move them.

Appendix D: Section of the Topic Code

(The entire code is included in the CD attached to this thesis – See Appendix E).

CATEGORY II: BREAKING THE RULES

This category includes all verbal and nonverbal behavior that is not appropriate to the setting or task. Some of the topics in this category are mutually exclusive with topics in FOLLOWING THE RULES, because they are by definition inappropriate in any setting. Examples are all illegal activities which includes using drugs and alcohol or doing physical harm to someone else. Other topics are not illegal but inappropriate to this particular setting. Examples are obscene gestures or songs and talking about or doing gross activities.

Other topics may be in either category depending upon the context of the talk. For examples, talk about drugs or getting into trouble at school can be in the category FOLLOWING THE RULES if the talk is factual and if the talk indicates that it is a problem that needs to be corrected. The category BREAKING THE RULES is qualified by the rational or attitude that these activities are fun; they are not a problem; or they do not want to change them.

BREAKING THE RULES may be coded for any behavior or talk done in the session; for telling stories about what oneself or someone else has done or will do. The stories told about these activities do not need to be factually accurate or intended seriously. For example, it may include what fictional characters say or do in movies, books, or music. It may also include talk which is intended to be a joke.

TOPICS

13. Gross Activities: Engaging in or talking about activities involving bodily gases, fluids, or parts. Examples include spitting, farting, peeing, giving the raspberry, picking the nose.

"Did you let a reeker? You did, didn't you."

"That's the hole in the floor we peed down."

14. <u>Using Drugs or Alcohol, or Tobacco</u>: Examples include talk about being in

trouble because of drugs or engaging in drug use; all factual talk about drugs if it

is in the context of drug use. Pulling out a pack of cigarettes even though he

doesn't smoke one.

> "My parents don't like me doing it."
> "Why do you keep on doing it, then?"
> "Because I want to."
>
> "How much beer can you get?" "At least a case with the money I make here."
>
> "Let's light up a cigarette."

15. <u>Illegal Activities</u>: All activities except those in drug use and victimizing topics.

Examples include stealing; vandalizing; making a bomb.

> "We can tip cars over."
>
> "Find a good rig. Hot wire it."
>
> "We could steal everything in here…..the cameras, this table."

16. <u>Obscene Language, Gestures, or Songs</u>: Topic includes sexually explicit talk that

is not appropriate to the setting.

> "This is a boring subject. We won't be able to talk about this. So why don't
> we just whip out our wongs."
>
> "Give her a moon for her money."
>
> Giving finger to the camera.
>
> Showing his nipple to the camera.

17. <u>Inciting the Other Person to Break the Rules of the Session</u>: Or to engage in

anything that would stop or interfere with the session.

> "Take a piss on the microphone." (This is also a gross activity.)
>
> "Let's sing. Get the microphone."

"Let's turn off the camera."

"Go ahead. Spit it on the floor. I'll give you $5.00." (This is also a gross activity.)

18. <u>Songs or Activities That are Inappropriate to the Session</u>: That are not in other BREAKING THE RULES topics. Examples include singing; RAP; writing on the blackboard; messing with the chairs; waving to the camera; making faces to the camera; making weird noises; purposely lying or exaggerating about issues. This includes code talk which is clearly not understandable by the coder. It also includes speaking in another language.

"Old McDonald had a farm….." (singing)

"I'm going to go play on the chalkboard."

Talking like Donald Duck.

19. <u>Getting in Trouble at School</u>: Any talk about trouble at school that is within the context of not being concerned that it is problem. This includes skipping classes, cheating on exams or assignments, getting a referral or detention, and fighting.

"I have an excuse signed to miss Friday. It's an old one. My Mom will never know that I'm using it."

"We could go to the lake. Let's skip school on Friday."

"I always cheat."
"I do that, too."

"I have a special tutor because the teachers are afraid of me."

"I like what you did…..your teacher handed back your book report and you (ripping gesture) in front of him."

20. <u>Victimizing Women</u>: Includes any talk or stories about doing physical harm to, degrading, coercing, or humiliating women, not necessarily physically. Referring to women as "Bitches." Includes family members.

"Put a collar and leash on her like the dog that she is."

"I've got a solution. Kill my sister."

"Force feed her."

"I should just say to her, 'Fuck off, Bitch'."

"She bangs herself with her tits."

"It was mean and stuff, but I enjoyed it." (how he talked to a girl)

"We would tie him to the bed."

Note: This should be differentiated from roughhousing and conflict with

sisters (no intent to physically harm the other person)

21. <u>Victimizing Others</u>: Doing physical harm to; humiliating or degrading parents,

teachers, same sex peers, minorities, animals, people in general.

"Find some cats and stick firecrackers up their butts."

"That's why you've got to tie your parents up and take control. Tie them up, handcuff them, tape their face."

"The coach comes to practice drunk everyday."

"I would have dumped both of them - beat the shit out of him."

22. <u>Being Victimized</u>: Includes anything that is more serious than roughhousing;

anything that is physically harmful, humiliating or degrading.

"I understand being slapped in the face for being a smart ass or getting spanked or grounded. But a fist, grabbing your hair and smashing your head into the wall saying 'I'm going to kill you'."

Appendix E: List of Extra Materials Included in the CD Attached to This Thesis

Item	Description
THE TOPIC CODE - DOC File	The entire code used to code verbal behaviour in the conversation task.
Thesis -DOC File	An electronic copy of this thesis.
Psychology and some other stuff -Microsoft PowerPoint Presentation	The Power Point slides used in the presentations to high school students.
Data -Microsoft Excel Worksheet	An Excel Worksheet containing the data from the coded conversation task.
Ethics proposal completed J Pope - Adobe Acrobat Document	A pdf copy of the initial ethics proposal.
Checklist -DOC File	A checklist including instructions read out at the beginning of the conversation task to participants.