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Developmental Antecedents of Proactive and Reactive Rebelliousness: The Role of Parenting Style, Childhood Adversity, and Attachment

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Adolescence is a time of developmental transition that for one in five young people is characterised by feelings of oppositionality, rebellion, and negativism. Despite the prevalent experience of teen turbulence and despite its significance within the phenomenological framework provided by reversal theory (RT), the childhood antecedents of rebelliousness in adolescence and adulthood have not been given extensive empirical attention within RT, although such work has been carried out using other constructs and theories. We examined recalled parenting style, childhood adversity, and attachment style in adulthood as correlates of proactive and reactive rebelliousness in a sample of 80 participants, aged 18 to 50 years. Each participant responded to a questionnaire package containing the revised Adult Attachment Scale, the Parental Bonding Instrument, the Childhood Experience of Care and Abuse Questionnaire, and the Negativism Dominance Scale. We found that paternal abusive parenting, followed by paternal indifferent parenting style, paternal neglect, and paternal antipathy were independently predictive of scores on proactive rebelliousness, the sensation-seeking form. Maternal and paternal indifferent parenting styles each were found to equivalently and independently predict scores on reactive rebelliousness, the interpersonal disaffection form. The results of this study suggest these two forms of rebelliousness may have distinctly different antecedents. A longitudinal study is needed to examine the potentially causal pathways that are suggested by the results of this cross-sectional research. We consider reversal theory explanations of these results and contrast them with complementary theoretical frameworks.

Keywords: rebelliousness, parenting style, childhood adversity

According to the findings from a study by Balswick and Macrides (1975), who asked four hundred college students “how rebellious as teenagers had you felt toward parents and other authorities?,” one in five students replied they had felt either "very" or "extremely" rebellious as teenagers, with only 14% of male respondents and 21% of female respondents replying "not at all." Developmentally adolescence is a time of multiple transitions, replete with competing requirements from a variety of sources (for example, school, home, and peers). These demands can engender feelings of oppositionality, rebellion, disaffection and negativism within a significant proportion of young people. Yet, as is evident from Balswick and Macrides’ study, they may not do so to the same degree amongst everyone. This raises the question as to why some individuals experience such a period of rebelliousness, while others do not. Within reversal theory (RT), rebelliousness (or "negativism") and conformity make up one of four metamotivational state pairs between which individuals switch (or, "reverse"). The frequency of these switches and thereby the amount of time spent in a rebellious state is said to depend upon the effects of situational contingency, upon satiation with the state, and upon frustration experienced within it (Apter, 2001). Adolescent rebellion as a response to multiple requirements is consistent with such a contextualizing and phenomenological framework. Yet despite the centrality of rebelliousness within RT and the prevalence of teen turbulence, the childhood antecedents of rebelliousness in adolescence and adulthood have not been given extensive empirical attention, even though such work has been carried out on related constructs beyond the RT framework, such as offending behavior (Farrington, Coid, & Murray, 2009) and antisocial behavior (Moffit, Caspi, Harrington, & Milne, 2002). Within these allied areas, transgenerational transmission of psychological and social risk-factors and problem behaviors are reported.

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Conceptualising rebelliousness and its antecedents

The psychological causes of rebelliousness can be approached from a variety of psychological perspectives: socio-situationally, as an outcome of social influence pro-

cesses; developmentally, as a product of childhood ontology; as a facet of personality or of individual differences in response disposition; psychodynamically, as an emergent property of group and family systems; biopsychosocially, as a product of the complex interaction of nature and nurture; and phenomenologically, as a psychological construct that is experiential rather than objectively verifiable. These perspectives potentially are complementary and not antithetical to one another, since they view rebelliousness as a phenomenon that occurs within the interpersonal world, with either proximal or distal antecedents. This social and experiential emphasis is captured succinctly within Apter's (1982) definition of being in a rebellious state, as "...wanting or feeling compelled to do something contrary to that required by some external agency" (p.198). This definition places importance upon the actor's experience rather than upon an external observer's evaluation of behavior. Consequently, the structural phenomenological framework of RT provides an appropriate theoretical context within which to explore rebelliousness and its antecedents, given its experiential, subjective nature.

McDermott (1986; 1987) has empirically identified reactive and proactive rebelliousness as two distinct forms using principal components analysis of an item pool containing mastery, sympathy, telic, and paratelic negativism conceptual subscales. Reactive rebelliousness arises in response to a requirement that is experienced as unfair or unreasonable and "...is often a reaction to an interpersonal frustration, affront, indignity, disappointment, or rebuff and is characterized by feeling vengeful, retaliatory, or vindictive" (McDermott, 2001, p. 171). This form of rebelliousness is a response to not being sympathized with, to not being implicitly or explicitly respected, liked or loved. As such it aligns with the RT notion of sympathy negativism. Proactive rebelliousness, on the other hand, is that form of the negativistic state in which an individual wants to oppose a perceived requirement in order to obtain fun and excitement. It involves the proactive pursuit of hedonistic goals and so aligns with the RT notion of paratelic negativism since it is "...about the heightening of pleasurable arousal through often gratuitous and provocative oppositional behavior" (McDermott, 2001, p.171). Both forms of rebelliousness may serve the function of exerting counter-control and attaining a sense of freedom from constraint.

This psychometrically derived, two-component model of rebelliousness has been replicated by Robinson, Weaver, and Zillman (1996) and by Klabbers, Bosma, van den Akker, van Boxtel, Kempen, McDermott, and van Eijk (2009), the latter in an analysis of data from over five thousand respondents. Cronbach's alpha for the two subscales suggest acceptable levels of internal reliability, with .7 for reactive and .65 for proactive rebelliousness (McDermott, 1987). The construct validity of the two subscale measures has been demonstrated in several studies. Griffin and McDermott (1998) found that reactive rebelliousness correlates positively with neurotic hostility and negatively with openness to experience, whilst Klabbers el al (2009) found it to be related to alcohol consumption, and McDermott (1987) found it to be significantly associated with non-excused absence from school and inversely with academic achievement. Regarding proactive rebelliousness, on the other hand, Boddington and McDermott (2013) found among undergraduate students that it is significantly linked with resistance to health education messages about the health risks associated with smoking cannabis, whilst, Lafreniere, Menna, and Cramer (2013) found that it is an influential predictor of illicit drug use, risky sexual behavior, and aggressive behavior. Thus, the position of reactive and proactive rebelliousness in relation to a range of psychological constructs confirms not only the validity of the two operational definitions, but also suggests that these correlates tend to be socially undesirable and likely to be problematic for self and others when such negativism is dominant: that is, in RT terms, when an individual spends a disproportionate amount of time in a rebellious state, irrespective of their preference for it. Such a contention is supported by Albers and Biener (2002) who found that rebellious adolescents are twice as likely to develop depression in adulthood compared to less rebellious peers.

In this study we examine whether reactive and proactive rebelliousness have distal antecedents that may also be similar in kind, thereby implicating the experience of psychological adversity earlier in life. Further, given the retaliatory nature of reactive rebelliousness and the risk-proneness of proactively rebellious individuals, it is likely that such people are often engaged in dysfunctional ways of relating to others in their adult lives and that such behaviors, like habitual rebelliousness, may have their origins in adverse attachment experiences earlier in life. Therefore we also consider whether childhood adversity is a precursor of rebelliousness, with specific reference to problematic parenting, given its implications for the development of dysfunctional adult attachment styles.

Childhood adversity, parenting, and attachment

There is a broad range of evidence that suggests that childhood adversity is a precursor both of interpersonal difficulties in later life and of the risk-prone and retaliatory negativism that underpin proactive and reactive rebelliousness. The Adverse Childhood Experiences (ACE) study by Dube, Felitti, Dong, Giles, and Anda (2003) found that the more adverse experiences a child experiences, the worse were the subsequent physical and psychological outcomes, while Bifulco, Bernazzani, Moran, and Jacobs (2005) found that experiencing maternal antipathy, paternal neglect, or severe sexual abuse were significantly related to an elevated risk of depression in later life. According to Music (2010), many children who have experienced abuse become oppositional

and aggressive and cause problems at school, becoming easily over-aroused and escalating challenging classroom situations. Essential to prosocial interpersonal functioning is an ability to empathize, yet a legacy of childhood abuse appears to create a deficit of empathy. Main and George (1985), who observed children who had and had not been abused, found that none of the abused children showed sympathy or concern for another child in distress and instead displayed aggression or anger in response to a crying child. Hernandez, Arntz, Gavira, Labad, and Gutierrez-Zotes (2012) further suggested that childhood adversity is a precursor of interpersonal difficulties of the risk-prone and retaliatory kind by showing that borderline personality disorder, which is characterized by emotional impulsivity and the inability to make and maintain functional relationships with others, is associated with emotional and sexual abuse as a child. Zanarini (1997) observed a similar association for children who had been abused or neglected. Howell (1998) found other forms of childhood adversity - using markers of family disorganization such as coming from a "broken" home, parental drug or alcohol abuse, and sibling antisocial behavior - to be related to antisocial behavior in the form of gang involvement. Thus, the experience of childhood adversity may be a distal antecedent of proactive and reactive rebelliousness.

One form of childhood adversity that appears to be particularly salient as a predictor of problematic behavior in later life is the experience of an adverse parenting style. Maternal and paternal authoritarian parenting styles (high demand, low warmth) have been found by Uji, Sakamoto, Adachi, and Kitamura (2013) to predict children's mental health problems later in life. In a 14-year longitudinal study of mothers and their children, Barker, Oliver, Viding, Salekin, and Maughan (2011), found that higher levels of harsh parenting led to children being more fearless, with fearlessness at the age of two years being associated with conduct problems and callous-unemotional traits in early adolescence. Consistent with this, Scott, Doolan, Beckett, Harry, and Cartwright (2010) examined inner city families with four-to-seven year old children and found that a harsh, inconsistent parenting style subsequently predicted severe antisocial behavior. Paiva, Bastos, and Ronzani's (2012) study of Brazilian adolescents observed that maternal authoritarian parenting is related to adolescent alcohol use. Chan and Koo's (2011) analysis of the Youth Panel of the British Household Panel Survey found that adolescents with authoritarian or permissive (high warmth, low demand) parents are less risk averse and have lower self-esteem than adolescents with authoritative parents. Uji et al's (2103) research suggests that adopting an authoritative parenting style – high in warmth, expectation, demand and communication – leads to the most positive outcomes and away from a troubled youth experience, with Murray (2012) finding that such a style predicts enhanced academic performance in elementary school children. It follows then, that negativistically-dominant adolescents and young adults may have been subjected to authoritarian rather than authoritative parenting as children.

According to attachment theory (Bowlby, 1988; Ainsworth & Bowlby, 1991), the consequences of childhood adversity and authoritarian parenting are important for a child's later development since they constitute an internal working memory model that acts as a template for forming future relationships. It is probable, then, that the relationship between childhood adversity and proactive and reactive rebelliousness is moderated by attachment difficulties. Insecure resistant children, who show distress when separated from their primary care giver but push their attachment figure away when reunited, have been found to be less able to regulate their emotional needs. In later life insecure attachment predicts greater risk of drug abuse, suicidal ideation, and aggressive and criminal behavior (Lessard & Moretti, 1998; Lessard, 1994; Moretti, DaSilva, & Holland, 2004). Infants who have experienced traumatic, unpredictable, and inconsistent parenting and who cannot get their attachment needs met show disorganized attachment and have been found by Hesse and Main (2000) to display challenging behaviors, being more likely to have difficulties with peers and to be violent and controlling when they reach school age (Lyons-Ruth, Yellin, Melnick, & Atwood, 2003). Insecure avoidant children, who show no outward concern when separated from their primary care giver and no concern when reunited, have been found to be less sympathetic toward others than securely attached children and more likely to present themselves as strong and independent later in life (Music, 2010). Conversely, Waters, Wippman, and Sroufe (1979) have found that securely attached children are more sociable in infancy and tend to have more confidence when they grow up. Given these concomitants of attachment experience and subsequent attachment style, we suggest that differences in attachment may also be associated with the emergence of proactive and reactive rebelliousness in adolescence and adulthood.

The present study

We have presented evidence that demonstrates the interrelationship of childhood adversity and parenting and attachment styles with a variety of outcomes that share some psychological characteristics of proactive and reactive rebelliousness. We have also argued that study of the developmental antecedents of negativism dominance, of rebelliousness, is lacking. This is in part because longitudinal studies examining the developmental trajectory of rebelliousness from infancy through childhood to young adulthood are resource intensive. As an alternative to longitudinal studies, however, cross-sectional self-report studies, despite their methodological limitations, can help identify variables that may subsequently be found to have causal significance. We report here

such an investigation of the distal precursors of rebelliousness, focusing upon childhood adversity, parenting styles, and attachment styles as candidate antecedents. We hypothesize that these three variables will independently predict self-reported proactive and reactive rebelliousness in adulthood.

Method

Participants

We collected data from an opportunity sample of 80 respondents, composed of 45 men (56%) and 35 women (44%). The age range of the participants was 18 to 50 years old, with the majority (55%, n=44) aged 18 to 22, the mean age being 25 years (*SD* 7.45). The sample was moderately homogenous in terms of the self-designated nationality of the participants, with 60% (n=48) of respondents reporting having been being born in Great Britain, and 88% (n=70) describing their nationality as British. However, in terms of self-designated ethnicity, the composition of the sample was more diverse, reflecting the inclusive intake of the metropolitan University in the south-east of England in which the study took place: for example, 19% (n=15) self-designated as ethnically British, 14% (n=11) as Bangladeshi, 11% (n=9) as African, 9% (n=7) as Pakistani, 8% (n=6) as Caribbean, and 6% (n=5) as Indian, with the remainder of the sample self-classifying across an additional eight categories of ethnicity. Educationally, 66% (n=53) of these respondents had at least "A" level qualifications, that is had passed UK national examinations at age eighteen at the end of their secondary school education, with an additional 27% (n=22) reporting having attained a professional, undergraduate degree level or higher qualification. Of these respondents, 10% (n=8) reported having been separated from their mother and 19% (n=15) from their father for more than one year before the age of seventeen.

Materials

A questionnaire booklet of self-report measures consisting of five sections was distributed to each participant. In the first section was the revised Adult Attachment Scale (Collins, 1996), which assesses feelings of comfort with closeness and intimacy, feelings of comfort with depending on others and a belief that others will be available when needed, and worry about being rejected or unloved. Combinations of these three facets enable an individual's attachment style to be classified as either secure, anxious or avoidant. Additional validation work on this measure has been reported by Cooper, Shaver, and Collins (1998). Included in the second section was the Parental Bonding Instrument (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm, & Austin, 1997), a retrospective measure of maternal and paternal indifference, over-control, and abuse, which has been shown to have convergent validity (Lancaster, Rollinson, & Hill, 2007). The third part of the booklet contained selected sections from the Childhood Experience of Care and Abuse questionnaire (CECA-Q3), which measures paternal and maternal antipathy and neglect and was developed by Smith, Lam, Bifulco, and Checkley (2002). Additional evidence of its validity has been provided by Bifulco, Bernazzini, Moran, and Jacobs (2005). The fourth section of the questionnaire booklet contained the Social Reactivity Scale (McDermott & Apter, 1988), which is referred to within the context of reversal theory as the Negativism Dominance Scale (NDS-18), which measures a current disposition for proactive and reactive rebelliousness (the dependent variables in the study). The validity and reliability of this measure has been demonstrated previously, for example by Klabbers, Bosma, van den Akker, van Boxtel, Kempen, McDermott, and van Eijk (2009), by Tacon and Abner (1993) and by Boddington and McDermott (2013). The fifth and last section of the questionnaire booklet solicited demographic information from respondents (including age, sex, ethnicity and highest level of educational attainment).

Procedure

Potential participants were given an invitation letter containing information about the research, which was presented as a study of the psychosocial correlates of non-conformity. If interested and agreeable to taking part, respondents signed a consent form and were reminded that they were free to withdraw from the study at any time without explanation or consequence. Thereafter, respondents were given the questionnaire booklet to complete in the presence of the researcher, this taking on average of thirty minutes. The questionnaires were completed in the same fixed order, with fatigue effects unlikely given the relative brevity of the overall task. The fixed order avoided an increase in error variance that might be associated with the confounding of individuals with a particular task element (Unsworth, Spillers, & Brewer, 2011). Upon completion, respondents were thanked and given the opportunity to ask questions about the research before leaving.

Results

Data from the questionnaire was entered into SPSS 20, with missing values replaced by median scores. Inspection of the raw data did not indicate the presence of extreme scores. Next we investigated the association of three demographic variables (sex, age, and highest educational attainment) with proactive and reactive rebelliousness. The highest level of educational attainment, a proxy indicator of socioeconomic status, was found to be moderately related to proactive ($r = -.23, p = .02$) and reactive rebelliousness ($r = -.19, p = .05$), while the age of respondent was not correlated at $p < .05$ with either form of rebelliousness on one-tail Pearson's tests. Independent t-tests suggested that

Table 1
Pearson product moment correlations between indices of self-reported childhood adversity, recalled parenting style, and current attachment style (N=80)

Independent variables	Proactive rebelliousness	Reactive rebelliousness
Maternal indifferent parenting style	.55***	.57***
Maternal over-controlling parenting style	.26**	.25
Maternal abusive parenting style	.49***	.45***
Maternal antipathy	.40***	.45***
Maternal neglect	.59***	.61***
Paternal indifferent parenting style	.39***	.40***
Paternal over-controlling parenting style	.05	.11
Paternal abusive parenting style	.47***	.45***
Paternal antipathy	.34***	.46***
Paternal neglect	.54***	.58***
Comfortable with closeness & intimacy	-24	-.43***
Comfortable depending on others & believe that others will be available when needed	-.17	-.33***
Worry about being rejected or unloved	.04	.21

Note. $^{**}p < .01$, $^{***}p < .001$, 1-tail test

male respondents reported more reactive rebelliousness than females ($t = 2.09, p = .04, df = 78$), but no statistically significant difference related to gender was found for proactive rebelliousness. Given the possibility that parents may affect differently gendered siblings in different ways, we used independent t-tests to examine whether there were gender differences in respondents' scores on the independent variables. Of the thirteen independent variables investigated in this way, only three emerged with significant t values, ranging from $p = .031$ to $p = .043$: male adults reported more maternal neglect than female adults; male adults reported more paternal abusive parenting style than female adults; and, male adults reported more maternal abusive parenting style than female adults. After a Bonferroni correction for the number of tests, however, none of these differences were significant. Consequently, we decided to combine the data from male and female respondents and to drop the demographic variables from subsequent analyses.

To begin to explore the relationship of childhood adversity, parenting style, and attachment style in adulthood with proactive and reactive rebelliousness, Pearson product moment bivariate correlations were computed and are reported in Table 1. A notable feature of this table of correlations is the magnitude of many of the coefficients, with 15 out of 26 ranging from .40 to .61, probability values all less than .01, and with shared variance ranging from 16% to 36%, suggesting substantive relationships between the independent and dependent variables. Secondly, it is notable that maternal indifferent parenting style, maternal neglect, and paternal neglect are the most statistically significant correlates of both reactive and proactive and rebelliousness, with the six coefficients ranging from $r = .54$ to $r = .61$. Thirdly, it is notable that neither maternal nor paternal over-controlling parenting are strong bivariate correlates of either form of rebelliousness. Lastly, it is notable that scores on the three attachment variables only correlate consistently with those on the reactive rebelliousness subscale. Associations with the proactive form are either non-significant or relatively weak.

To determine which of the bivariate correlates of proactive and reactive rebelliousness independently predict scores on these dependent variables, two multiple regression analyses were performed, the results of which are reported in Table 2. To enhance the ratio of respondents to independent variables (8.9:1 and 9:1 respectively), only independent variables with Pearson's correlations at p<.01 were included in the analyses.

Four variables independently predict scores on proactive rebelliousness: paternal indifference, abusive parenting, antipathy, and neglect. The most statistically significant of these is paternal abusive parenting. It is notable that scores on maternal variables do not covary with proactive rebelliousness scores significantly, albeit that maternal neglect approaches significance. Two variables can be seen to independently predict scores on reactive rebelliousness, specifically maternal and paternal indifferent parenting style, each being of equivalent independent significance. The eight other variables included in this analysis do not attain significance.

Discussion

We found that paternal abusive parenting was most significant statistically and was independently predictive of scores on proactive rebelliousness, the sensation-seeking form of negativism, followed by paternal indifferent parenting style, paternal neglect, and paternal antipathy. Maternal and paternal indifferent parenting style each were found to equivalently and independently predict scores on reactive rebelliousness, that form aligned with interpersonal disaffection.

Table 2
Results of two multiple regression analyses for recalled parenting styles, childhood adversity and current attachment style with proactive and reactive rebelliousness (N=80)

Independent variables	Proactive rebelliousness			Reactive rebelliousness		
	β	t	p	β	t	p
Maternal indifferent parenting style	0.17	1.04	.30	0.37	2.33	.02*
Maternal over-controlling parenting style	0.03	0.22	.82	n/i	n/i	n/i
Maternal abusive parenting style	-0.09	-0.53	.60	-0.27	-1.58	.12
Maternal antipathy	0.12	0.67	.51	0.13	0.85	.40
Maternal neglect	0.33	1.94	.06	0.28	1.7	.09
Paternal indifferent parenting style	-0.42	-2.86	.006**	-0.35	-2.42	.02*
Paternal abusive parenting style	0.51	3.23	.002**	0.22	1.34	.19
Paternal antipathy	-0.41	-2.01	.05*	-0.02	-0.12	.90
Paternal neglect	0.41	2.02	.05*	0.33	1.58	.12
Comfortable with closeness & intimacy	n/i	n/i	n/i	-0.05	-0.33	.75
Comfortable depending on others & believe that others will be available when needed	n/i	n/i	n/i	0.06	0.53	.60
	R=.66 ; Adj R Sq=.34			R=.69; Adj R Sq=.39		

Note. * $p < .05$, ** $p < .01$, n/i = not included in the equation

Notably, in multiple regression neither maternal nor paternal over-controlling parenting style nor maternal abusive parenting style emerged as independent predictors of either proactive or reactive rebelliousness. Multivariate correlational analysis similarly showed that none of the three measures of attachment style in adulthood were independently of other variables predictive of scores on either proactive or reactive rebelliousness, whilst no form of either childhood adversity nor parenting style other than indifference independently predicted reactive rebelliousness scores. So, there is partial support for the hypothesis of the study in that specific forms of parenting and childhood adversity have been found to be predictive of proactive and reactive rebelliousness, whilst it has not been found, however, that self-reported attachment style in adulthood is similarly related. The results of this study suggest that the two forms of rebelliousness have different antecedents, apart from having paternal indifference in common, with proactive rebelliousness being driven by aspects of paternal malpractice, while reactive rebelliousness implicating both maternal and paternal disinterest.

The question arises therefore, whether this pattern of prediction from these independent variables is mirrored by that found for other dependent variables which in broad terms share similarities with proactive and reactive rebelliousness. Firstly, the findings reported here support the view that parenting characteristics are important concomitants of proactive and reactive rebelliousness. They resonate with Shek's (2002) finding that early parenting characteristics predict subsequent parent-adolescent conflict. Interestingly, however, Shek's (2002) analysis of his longitudinal data showed this relationship to be bi-directional, with early parent-adolescent conflict having adverse effects on subsequent parenting quality. Whether early proactive or reactive rebelliousness has similar adverse effects on parenting quality is a question for further research to address. Secondly here, as for the prediction by paternal parenting of proactive rebelliousness, Shek (1999) has found in a sample of Hong Kong Chinese adolescents that a father's parenting has a more significant impact on their psychological well-being than maternal parenting, (with this effect being more pronounced in females rather than males). Similarly, Shek (2007) has found in a much larger sample that paternal psychological control predicts subsequent changes in adolescent's life-satisfaction (though maternal psychological control predicted changes on adolescent's self-esteem). These findings resonate with those of Balswick and Macrides (1975) who concluded from their questionnaire study of undergraduates that self-defined adolescent rebellion is the result of home environments that are patriarchal and either very restrictive or very permissive. Interestingly, they report also that such rebelliousness correlates with perceived parental marital unhappiness, thereby implicating broader affective and relational aspects of family dynamics as antecedents of adolescent rebellion. So, the evidence here that four measures of paternal malpractice independently predict risk-prone and sensation-seeking proactive rebelliousness aligns with other research, suggesting that how fathers deliver their role is central to determining the emergence of paratelic negativism. This finding to some extent is at variance with studies that demonstrate the importance of maternal mis-parenting for predicting other more clearly, undesirable outcomes. However, the argument here is that for the specific outcome of risk-prone proactive rebellion paternal parental abuse, indifference, antipathy and neglect are particularly salient as distal antecedents.

A possible explanation for the finding in this study that reactive rebelliousness is solely predicted by parental indifference, whether that be either maternal or paternal, involves the proposition that such indifference will lead a child to internalise a model of the self as unlikeable or unlovable, and so will potentiate the likelihood in adulthood that interpersonal requirements that involve frustration, disappointment or rejection will precipitate the experience of sympathy negativism. Support for this line of argument is provided in the form of a study by Dodge and Coie (1987) who examined social-information processing factors in reactive and proactive aggression in elementary school children. In brief, they found that both types of aggression related to social rejection, as with reactive rebellion. Further, they found that only reactively aggressive children displayed uncharitable, hostile attributional biases when asked to interpret and explain the intentions of individuals depicted in ambiguous interpersonal situations. Thus, it is evident that reactively rebellious children, like reactively aggressive children, may be cognitively primed to misinterpret the actions of others as involving malign intent, and it is probable that such priming takes its impetus from parental indifference.

That attachment style in adulthood did not emerge as a predictor of either form of rebelliousness, however, runs counter to what was hypothesised and indeed is suggested by other studies. For example, Bifulco, Kwon, Jacobs, Moran, Bunn, and Beer (2006) found that insecure attachment styles predict depression and anxiety at follow-up, while fearful and angry-dismissive styles were found to mediate in part the association between childhood adversity and either of these mental health outcomes. One possible explanation of this result is that the self-report attachment style questionnaire used here is not a sufficiently sensitive measure, as compared with a face-to-face interview assessment. However, the validation work of Cooper et al (1998) on the parenting measure used here does not suggest this is an entirely plausible explanation. However, it is for further studies to explore further this possible association, given the strong theoretical links with childhood adversity and parenting styles as concomitants of proactive and reactive rebelliousness. Certainly, mediators are worthy of exploration in this context (Banaschewski, 2011), as demonstrated for example by Taubner and Curth (2103) who found that individual differences in mentalization mediates the relationship between early traumatic experiences and the development of aggressive behavior.

Our study found significant correlational relationships for parenting styles and childhood adversity with proactive and reactive rebelliousness. These two dependent variables respectively accounted for 34% and 39% of the variance in aspects of parenting style and childhood adversity. Additional predictor variables as yet to be identified by further studies are likely to account for remaining variance. Given that parenting styles and childhood adversity are experientially important distal antecedents, it could be concluded that individual differences in proactive and reactive rebelliousness are fixed and immutable. However, the cognitive, affective, and social consequences of such experience are open to influence and reconstruction, as suggested variously by, for example, Kennerley's (2009) cognitive behavioral guide for overcoming childhood trauma, by a review of clinical interventions with children who have suffered abuse in childhood (Allnock & Hynes, 2012) and also by change in scores on these two forms of rebelliousness across the lifespan (Tacon & Abner, 1993). Also, it should be noted that as well as these distal antecedents, the expression and acting out of proactive and reactive rebelliousness have many proximal determinants, as the state based approach provided by reversal theory reminds us. In addition to this framework, work within social psychology on dissent and defiance (Jetten & Hornsey, 2011) emphasises the highly contextually dependent nature of negativism. For example, Gamson, Fireman, and Rytina (1982) have shown us how giving individuals the opportunity to come together to collectively define a situation as unjust is a crucial dimension of social situations that contributes to a group shifting toward taking rebellious action. A notable cultural exemplar in recent times of a social group being given the opportunity to collectively define a situation as unjust and rebel has been in the UK the police tactic of "kettling" protesters, a tactic, given Gamson et al's (1982) evidence, that is likely (albeit unintentionally) to produce and escalate oppositional behavior. Interestingly, however, Brown (1986) has argued that for a group to shift toward rebellion, it is important for there to be one or two individuals within the group with a high readiness to rebel and act as group catalysts. So, arguably both socially proximal and temporally distal antecedents are important when explaining the occurrence of proactive and reactive rebelliousness. Adding to those suggestions made by Apter (2013) for further research with reversal theory constructs, clearly, a longitudinal study from early childhood is needed to examine the potentially causal pathways that are suggested by the results of this cross-sectional, correlational study, which charts the experience of adverse parenting in the early years to the emergence of proactive and reactive rebelliousness in adolescence and young adulthood.

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