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# Personality and misconduct correlates of body modification and other cultural deviance markers

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## Abstract

The personality and misconduct correlates of body modification (e.g., tattoos, piercings) and other markers of cultural deviance (Goth or provocative appearance) were examined in a sample of 279 undergraduate students. Participants completed a comprehensive battery of personality questionnaires and provided detailed self-reports of any unusual appearance markers. In addition, participants provided anonymous self-reports of five categories of misconduct. Three personality variables (openness to experience, subclinical psychopathy, and low self-esteem) independently predicted the likelihood of having deviance markers. After controlling for personality, however, the positive association between deviance markers and overall misconduct was eliminated. This finding undermines the allegation that acquiring deviance markers directly increases the likelihood of misconduct. One exception was a significant positive association between deviance markers and drug abuse that remained after controlling for personality. Our personality analysis provides a three-facet organizational framework for understanding the psychological significance of deviance markers.

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*Keywords:* Psychopathy; Big 5; Self-esteem; Misconduct; Body modification

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## 1. Introduction

Body modification in the form of tattoos and piercings is becoming increasingly common (e.g., [Armstrong & McConnell, 1994](#); [Frederick & Bradley, 2000](#)). To date, the

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phenomenon has drawn more attention from the public press (e.g., Brean, 2002; Redfearn, 2002; Romell, 2003) than from scientific researchers. Among the latter, the primary concern has been with the ensuing health risks (e.g., Armstrong & Murphy, 1997; Armstrong, Ekmark, & Brooks, 1995; Mayers, Judelson, Moriarty, & Rundell, 2002). Only a handful of studies have addressed the role that personality plays in this phenomenon (Carroll & Anderson, 2002; Forbes, 2001; Frederick & Bradley, 2000). Although acceptance is increasing in Western society, body modification still has overtones of cultural deviance (Armstrong, 1994; Atkinson, 2003; Copes & Forsyth, 1993; Irwin, 2000).

Body modification lies at one end of a fuzzy spectrum of cultural deviance markers (CDMs).<sup>1</sup> This radical end of the spectrum involves invasive skin-alterations that are relatively enduring (Martin, 1997). Besides piercings and tattoos, other examples include branding, flesh tunnels and pattern-cutting (Myers, 1992). Less radical but more publicly provocative markers include extreme hairstyles such as shaved head, spiked hair, and Mohawk cuts (Hebdige, 1979). Although least radical with respect to permanency, Goth makeup and clothing tend to be worn for their sinister significance (Williamson, 2001).

We know surprisingly little about who chooses to acquire markers such as tattoos and piercings. Published commentaries tend to portray the practice in blanket negative terms (e.g., Favazza, 1996) or blanket positive terms (e.g., Atkinson, 2003; Stirn, 2003). The few available studies of personality correlates are open to criticism on a methodological basis. Better established is the fact that those who choose body modification also tend to engage in various forms of misconduct including drug abuse, early sexual promiscuity, and violence (e.g., Brooks, Woods, Knight, & Shrier, 2003; Burger & Finkel, 2002; Farrow, Schwartz, & Vanderleeuw, 1991; Forbes, 2001; Roberts, Auinger, & Ryan, 2002, 2004). Some commentators have gone so far as to warn that body modification could actually encourage antisocial behavior (e.g., Brean, 2002; Favazza, 1996; Redfearn, 2002). Permanent markers certainly make it difficult to withdraw from a maladaptive identity (Litt, 1994).

It is critical that the personality and misconduct links with CDMs be studied together. Only with a joint study of personality predictors and peer group variables can we evaluate the possibility that acquiring such markers encourages antisocial behavior. That rationale guided the study that we present below.

## 2. Predictors of body modification

Cultural trends may explain the overall increase in popularity of body modification, but they cannot explain the dramatic individual differences in reaction to and adoption of them. Compared to mainstream cosmetics (Cash, 1988), the choice to undergo radical body modifications such as tattoos and piercings seems to have an identity significance more closely linked to scarification (Bonierbale-Branchereau & Valero, 1986). Because body modification is seen as unattractive by the mainstream population, some individuals may choose to indulge simply to challenge accepted conceptions of attractiveness (Martin, 1997). Indeed, Myers's (1992) survey revealed that "shock value" was an important motivation for acquiring body modifications.

Of the possible developmental origins of marking an unconventional identity, two in particular seemed most important to investigate. First is the influence of subcultures

<sup>1</sup> We use the term "deviance" not in an evaluative sense but to refer to departure from conventional norms.

operating within the larger culture: Peer groups transmit practices such as body modification to their members. Second, even within subcultures, individual differences in unconventionality are likely to emerge because of differences in basic personality traits.

### 2.1. Peer group membership

Individuals often alter their appearance to satisfy a need to belong (Cash & Pruzinsky, 1990). Alterations may sometimes be strategic attempts to curry favor with an admired group (Martin, 1997; Pinaire-Reed, 1979). Other identification processes such as mimicry may be less conscious (Chartrand & Bargh, 1999). Both phenomena may be derived from the well-known law of similarity and attraction (Byrne, 1969). Once the requisite appearance is adopted, then membership and commitment toward the group are on display (Johnson & Downing, 1979). Any subsequent derogation of the group by others can actually increase group identification and, consequently, increase public display (Jetten, Branscombe, Schmitt, & Spears, 2001).

Consistent with these notions, group affiliation has been reported as the most common reason for piercing in teenagers (Farrow et al., 1991; Stirn, 2003). Of course, not every social group encourages body modification. As Sanders (1988, p. 395) put it, body modifications are ‘marks of disaffiliation’: Such groups seek to differentiate themselves from society at large and from other groups that are more conventional in their appearance (see also Hebdige, 1979). Among groups likely to encourage body modification are those who identify themselves as adventurous thrill-seekers (e.g., biker gangs): Such groups expressly promote dangerous and even unhealthy lifestyles (Roberts, Bogg, Walton, Chernyshenko, & Stark, 2004).

In sum, the literature convinced us that peer group membership was an important variable to include in our research. We anticipated that reported membership in disaffiliated or adventurous groups would be linked to rates of body modification.

### 2.2. Personality traits

It stands to reason that personality traits should have an impact on the choice to undergo body modification. After all, they bear on bedroom decoration (Gosling, Ko, Mannarelli, & Morris, 2002) and cosmetic choice (Cash, 1988) as well as clothing choice (Cosbey, 2001). We will focus on the Big Five personality factors (Costa & McCrae, 1992). Also of special interest are the so-called “Dark Triad” of aversive personalities (Paulhus & Williams, 2002). Possible links with adjustment will also be considered. For each of these domains, we now examine the literature in some detail.

#### 2.2.1. The Big Five personality factors

Given the claims about their fundamental nature (e.g., Costa & McCrae, 1992; John & Srivastava, 1999), an evaluation of personality correlates should start with the Big Five dimensions (extraversion, agreeableness, conscientiousness, neuroticism, and openness). Surprisingly, only one study has directly examined the relation between the Big Five dimensions and body modification (Forbes, 2001). The author stated that no associations were found but failed to report any details such as significance tests, means or standard deviations. The power of this study was handicapped by: (1) use of an un-validated measure of the Big Five and (2) the choice to dichotomize participants into groups with or

without body modification. The dichotomization of a continuous variable necessarily reduces the power to demonstrate a significant association (e.g., Rosenthal & Rosnow, 1991).

Despite the paucity of direct research, we were able to develop predictions about four of the Big Five dimensions. First, a large literature indicates that *openness to experience* is associated with interest and skill in creative endeavors (McCrae & Costa, 1997). This association applies specifically to creativity in appearance. For example, openness is associated with the quantity and variety of artistic items in respondents' bedrooms (Gosling et al., 2002) as well as their web pages (Vazire & Gosling, 2004).

We also know that body modification is associated with creativity (Sanders, 1988, 1989): This notion finds linguistic expression in the terms like 'body adornment', 'body art' or 'body decoration' commonly used by individuals with tattoos and piercings (e.g., Greif, Hewitt, & Armstrong, 1999; Myers, 1992; Soyland, 1997). Artistic self-expression is often voiced openly as the reason behind obtaining body modification (Armstrong & Murphy, 1997; Jetten et al., 2001; Myers, 1992). In one recent study, individuals with body modification tended to see themselves as especially creative, artistic, and individualistic (Drews, Allison, & Probst, 2000). In sum, there is good reason to believe that openness to experience should be associated with both a greater number and diversity of body modifications.

For several reasons, we also anticipated that *extraversion* would be associated with body modification. First, one of the key facets of extraversion is sensation seeking (Costa & McCrae, 1992). In the only published study, Roberti, Storch, and Bravata (2004) reported positive associations with body modification. Our prediction about extraversion is further supported by links between body modification and another key facet of extraversion, namely, impulsivity (Drews et al., 2000). Many reported their decision to acquire body modification was made on the "spur of the moment" (Drews et al., 2000; Mosher, Oliver, & Dolgan, 1967; Myers, 1992; Sanders, 1988).

In addition, we predict a link between *neuroticism* and body modification. A recent set of studies in young community samples suggested that those with body modifications score significantly higher on depression, hostility, and anxiety (Carroll & Anderson, 2002; Ross & Heath, 2003). Given that neuroticism is characterized in part by all three of these outcomes as facets (Costa & McCrae, 1992), we predict a positive association with body modification.

Finally, we posit a link between low *conscientiousness* and body modification. Like psychopaths, those low in conscientiousness are irresponsible and lacking in impulse control (Paulhus & Williams, 2002). Given that body modifications are often acquired on the spur of the moment (Drews et al., 2000), such tendencies should make low conscientious individuals particularly susceptible. In the most relevant study, Forbes (2001) found that those with body modification described themselves as reckless. Finally, recent work at the facet level has suggested some overlap of low conscientiousness with the openness facet of unconventionality (Roberts et al., 2004), thereby adding another motivation for body modification.

### 2.2.2. Self-esteem

Many observers have hypothesized a link between body modification and low self-esteem (e.g., Farrow et al., 1991; Myers, 1992). The notion that those with low self-esteem would tend to pierce and tattoo their bodies is consistent with the phenomenon of self-mutilation in teenage girls. It is well-known, for example, that those who self-mutilate have extremely negative self-views (Klonsky, Oltmanns, & Turkheimer, 2003).

With regard to tattooing and piercing, the self-destructive symbolism has similar psychoanalytic overtones (e.g., Hawton, Rodham, Evans, & Weatherall, 2002). Body modification may reflect the individual's damaged self as well as anger toward the world (Grumet, 1983). These theoretical links are supported by various studies showing greater maladjustment in those with body modification. For example, suicide victims were twice as likely to have tattoos as were a matched sample of accidental-death victims observed in the same clinic (Dhossche, Snell, & Larder, 2000). Indeed, the aforementioned findings indicating higher scores on various indices of maladjustment (Carroll & Anderson, 2002; Ross & Heath, 2003) may too suggest a role for low self-esteem in predicting body modification.

Surprising to us, the two empirical studies designed to directly evaluate the association between low self-esteem and body modification found small to null correlations (Carroll & Anderson, 2002; Frederick & Bradley, 2000). Unfortunately, both studies suffer from selection bias: Frederick and Bradley's sample comprised individuals recruited at tattoo and piercing shops, and Carroll and Anderson's sample comprised high-risk adolescent girls. In both cases, the marker-adjustment associations are likely underestimates because they suffer from a restriction of range on both key variables. Therefore, we continue to side with the theoretical reasoning in predicting that low self-esteem should be a significant predictor of body modification.

### 2.2.3. *The Dark Triad*

We also considered a set of three overlapping yet distinct traits that are best characterized as antisocial personalities in the normal range: They have been labeled the "Dark Triad" and include narcissism, Machiavellianism, and subclinical psychopathy (Paulhus & Williams, 2002). Narcissists are characterized by grandiosity, feelings of superiority over others and entitlement (e.g., Emmons, 1984). Machiavellians are characterized by a sense of cynicism and the manipulation of others (e.g., Christie & Geis, 1970).

Of the three, the trait most likely to be associated with body modification is subclinical psychopathy. Similar to Hare's (2003) forensic version, but less extreme, subclinical psychopathy is a personality construct combining impulsive thrill-seeking with callous affect (Williams & Paulhus, 2004).<sup>2</sup> Despite their aversive traits, such individuals have managed (so far) to avoid contact with the clinical or forensic authorities. In college samples they manage to perform at the level of the average student. Nonetheless, subclinical psychopathy is invariably the strongest predictor of a variety of antisocial behaviors—even relative to the other members of the Dark Triad, (e.g., Nathanson, Paulhus, & Williams, 2005).

As with extraverts, a higher rate of body modification in subclinical psychopaths is expected based on their impulsive thrill-seeking.<sup>3</sup> Psychopaths are also characterized by callous indifference to the consequences of their actions. Hence both components of psychopathy should increase the likelihood of acquiring body modifications.

In clinical research, several studies have indicated a direct link between body modification and personality disorders, including psychopathy (for a review, see Raspa & Cusack, 1990). To date, only Frederick and Bradley (2000) have evaluated psychopathy in

<sup>2</sup> Some argue that psychopathy can be explained within the Big Five system (Miller, Lynam, Widiger, & Leukefeld, 2001) whereas others disagree (Livesley, 2001).

<sup>3</sup> We did not include a direct measure of impulsivity because it is a facet in both the Big Five and Dark Triad systems.

non-clinical samples and failed to find a link with body modification: As noted earlier, however, the self-selection bias in their sample undermines the credibility of that finding.

### 3. Other cultural deviance markers

Far less attention has been given to other CDMs such as radical hairstyles, clothing, and cosmetics, and sexually provocative display. Although the possible manifestations are numerous, all are less extreme than the invasive and enduring dermal alteration incurred in body modification. Nonetheless, they can be indicators of unconventionality not unlike body modification (Hebdige, 1979). Although easier to put on and remove, these other markers still indicate a choice to deviate from the establishment mainstream. To this extent, we assume that similar personality correlates should obtain.

One group of markers falls under the general rubric of provocativeness. Inappropriate sexual display is one example: Established personality predictors are extraversion (Wilson, 1997), openness to experience (Miller et al., 2004), and various personality disorders (Hare, 2003). Other behaviors that individuals report performing in order to provoke shock include radical hairstyles (spiked hair, shaved head) and display of profanity on clothes (Myers, 1992; Willis, 1990). Along with provocativeness, these predictors have also been shown to predict body modification (Carroll, Riffenburgh, Roberts, & Myhre, 2002).

Possibly of a different nature is the so-called “Goth” appearance. Central to contemporary Goth subculture is a focus on morbid concerns and a preference for predominantly black clothing and makeup (Williamson, 2001). The link between the two is more than a myth: Several studies have demonstrated that the color black is psychologically associated with death and mayhem (Frank & Gilovich, 1988; Meier, Robinson, & Clore, 2004). Psychoanalytic reasoning would link morbid infatuations with deep psychological disturbances. In normal samples such as successful students, the closest parallels are low self-esteem and depression. On the other hand, the Goth subculture has strong creative and anti-establishment overtones suggesting a link with openness to experience (Williamson, 2001).

#### 3.1. *Markers and misconduct*

Numerous studies have demonstrated a reliable association between body modification and a wide range of misconduct.<sup>4</sup> For example, Farrow et al. (1991) found that tattoos were associated with various indices of misconduct such as number of arrests and drug use. Similar findings were obtained among samples of adolescents, both incarcerated (Braithwaite, Robillard, Woodring, Stephens, & Arriola, 2001) and non-incarcerated (Houghton, Durkin, Parry, Turbett, & Odgers, 1996), college students (Armstrong & McConnell, 1994; Burger & Finkel, 2002; Forbes, 2001; Greif et al., 1999), and adult community samples (Drews et al., 2000).

Perhaps the most extensive research on the link between body modification and misconduct is that by Timothy Roberts and colleagues (Carroll et al., 2002; Roberts et al., 2004; Roberts & Ryan, 2002; Roberts et al., 2002). His group has consistently found that adolescents with body modification were more likely than those without to engage in risk-taking behavior such as violence and drug use. As a result, Roberts and colleagues concluded that

<sup>4</sup> We chose this term (“misconduct”) because it covers the broadest range from socially inappropriate to outright criminal behavior.



body modifications could be construed as “markers of mayhem”. That is, the presence of body modification is an indirect cue that the ‘modified’ individual is living an antisocial lifestyle (see also Brooks et al., 2003).

Research on links between misconduct and other CDMs has an even longer history. For example, antisocial behavior has been linked to deviant hairstyle (Burr, 1984), clothing style (Banks & Dabbs, 1996), and sexual provocativeness. Unlike the solely correlational research on body modification, experimental studies have demonstrated how manipulating clothing can alter aggressive behavior (Frank & Gilovich, 1988; Johnson & Downing, 1979).

### *3.2. The present research*

Our review indicates a reliable association between CDMs and actual misconduct. Some observers fear that such markers may even play a causal role in encouraging misconduct. We suspect that this link is spurious, with those two variables having a common source, that is, personality. As noted above, however, the literature lacks sound research examining the antecedents of body modification along with personality measures. Accordingly, we collected data on personality, misconduct, and CDMs in a large sample of college undergraduates.

Specifically, we aimed to address three questions: First, what personality traits and peer group affiliation predict acquisition of CDMs? Second, what is the range of misconduct that can be linked to CDMs? Third, do CDMs predict misconduct independent of personality and peer group membership?

Our review of the personality literature suggested that four of the Big Five factors (extraversion, openness, conscientiousness, and neuroticism), as well low self-esteem, and psychopathy are likely to predict possession of CDMs. Membership in adventurous and disaffiliated peer groups should also be significant predictors. In addition, CDMs should be associated with misconduct. However, we suspect that this latter link is spurious with those two variables having a common source, that is, personality.

## **4. Method**

### *4.1. Participants*

Participants were 279 undergraduates at a large northwestern university. Seventy percent were women. All participants received course credit for their participation.

### *4.2. Procedure*

Data were collected in two stages. At Stage 1, participants completed a questionnaire package in a large group setting: It included the measures of personality, body modification, and peer group association. Participants also provided biographical information that included date of birth.

At Stage 2, conducted several months later, participants were given an anonymous take-home package, which included the misconduct inventory. They were instructed not to put any identifying information on the questionnaire or on the large envelope in which the questionnaire was to be placed for return. The questionnaire did request date of birth,

which was used to link participants' responses to those provided in Stage 1. Of the original 279 participants for whom we had data in Stage 1, 83 packages were obtained at Stage 2.<sup>5</sup>

### 4.3. Materials

#### 4.3.1. Narcissism

Narcissism was assessed by the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The NPI is a well-validated 40-item questionnaire (e.g., Emmons, 1984). On each item, respondents are forced to choose between two options, one of which indicates narcissism (e.g., "I like to be the center of attention.").

#### 4.3.2. Machiavellianism

Machiavellianism was assessed by the Mach-IV scale (Christie & Geis, 1970). The Mach-IV is a 20-item measure of Machiavellianism in a 5-point Likert scale format (1 = 'strongly disagree'; 5 = 'strongly agree'). Items include such statements as "It is hard to get ahead without cutting corners here or there."

#### 4.3.3. Big Five

The Big Five Inventory (BFI) (John & Srivastava, 1999) was used to measure the Big Five traits. The BFI is a 44-item measure with a 5-point Likert scale ranging from 1 = "disagree strongly" to 5 = "agree strongly." Participants indicate their degree of agreement with brief phrases, all of which are prefaced with "I see myself as someone who is..."

#### 4.3.4. Self-esteem

Participants completed Block's 14-item Ego Resiliency scale (Block & Kremen, 1996) and Rosenberg's (1965) 10-item self-esteem scale. Both scales require participants to rate their degree of agreement with the items on 5-point Likert scales ranging from 1 = 'inaccurate' to 5 = 'accurate.' Given the high intercorrelation between the two scales in our sample ( $r = .53$ ), they were standardized and summed to form a single index of self-esteem.

#### 4.3.5. Subclinical psychopathy

Participants completed the Self-Report Psychopathy Scale (SRP-III; Paulhus, Himpill, & Hare, in press). This measure requires participants to indicate their agreement with 40 statements on rating scales ranging from 1 = 'strongly disagree' to 5 = 'strongly agree.' Sample items include "I get a kick out of conning someone" and "It's fun to see how far you can push a person before they catch on." SRP scores have shown strong psychometric properties (Williams, Paulhus, & Hare, in press) including convergence with other established self-report psychopathy measures. Of the established self-report psychopathy scales, the SRP possesses the closest historical and conceptual link with the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), considered the gold standard of forensic psychopathy assessment.

<sup>5</sup> To distinguish between participants in those cases where multiple participants had identical dates of birth, we used other demographic information provided, such as sex, ethnicity, number of years resident in Canada, etc.



Table 1  
Deviance markers scoring system (abridged)

Category	Scoring system
Body modification	Number of piercings per body location: eyebrow; nose; ear; lip; tongue; chin; nipple; navel; genital Total number of tattoos
Goth appearance	For each: 0 = no, 1 = yes Hair dyed jet black (i.e., an unnatural black) Dark/black clothing Dark/black makeup
Provocative appearance	For each example listed: 0 = no, 1 = yes Unusual or offensive clothing: e.g., chains/metal; ripped/'punk'/'skater' clothing; profanity/offensive phrases on clothes Radical hair: e.g., shaved head; dyed unusual color (e.g., blue, green); spiked Sexually suggestive: e.g., revealing clothes; going topless

#### 4.3.6. Cultural deviance markers

Participants were given an open-ended questionnaire entitled “Distinctive Appearance Features.” They were asked to report if they had any of the features listed under ten heading and to give details. For each category, several primes were provided. For example, under piercings, suggestions included “eyebrow, nose, ear, belly, lip, tongue, etc”. Unusual clothing included ‘dark/black clothing’ and ‘dark/black makeup,’ and radical hair included “spiked hair, shaved head, Mohawk, etc.”

Our three category scoring system is presented in Table 1. Given that markers can have different implications for male and female participants, particular attention was paid to participant gender when coding these data. For example, the statement “I show off my arms” likely implies a flaunting of muscles for men whereas the same inference does not seem as likely in women. Also, given the tradition of earrings, women had to have more than one per ear to be counted.

#### 4.3.7. High school peer groups

Participants were instructed to write a paragraph with the instructions “Tell us about who you hung out with in high school.” To code these paragraphs, we asked our group of six undergraduate research assistants (RAs) to describe the different peer groups in their high schools. The RAs provided us with 14 peer groups: ‘Jocks’/athletes, ‘skaters’ (i.e., skateboard enthusiasts), ‘Goths,’ ‘IBs’ (students pursuing the International Baccalaureate), wealthy/‘preppy’, religious, ‘nerds,’ ‘dopers’ (i.e., drug users), ‘ethnics’ (groups whose commonality was shared ethnicity), artistic, school club members, bullies/trouble-makers, ‘gearheads’ (car enthusiasts), and ‘partyers’ (students that regularly frequented nightclubs or dance parties).

Participants’ reports were content analyzed for degree of affiliation with each peer group on a 5-point Likert scale ranging from 0 = ‘not at all associated’ to 4 = ‘very strongly associated.’ An ‘Other’ category was included to capture any additional groups mentioned by participants that were not in the original coding system. Categories were not mutually exclusive: A participant could be associated to varying degrees with different peer groups.

#### 4.3.8. Self-report misconduct

The Comprehensive Misconduct Inventory (Paulhus & Williams, 2001) was administered anonymously to encourage honest responding. Participants were asked to indicate the number of times in which they have engaged in the various forms of misconduct listed either over the last five years or in the last month. The five subscales were: *Crime* (e.g., carried a concealed weapon, shoplifting), *driving misconduct* (e.g., street racing, driving while intoxicated), *drug abuse* (e.g., excessive marijuana use, any use of cocaine), *bullying* (e.g., hurting someone's feelings, physical bullying), and *anti-authority misconduct* (e.g., verbally abusing adults, failing to declare items at customs).

The composite indices were fairly reliable with alphas ranging from .56 to .83. These five indices were summed to form a single overall index termed *Total Misconduct* ( $\alpha = .77$ ).

## 5. Results

### 5.1. Cultural deviance markers

Overall, 36% of female and 26% of the male students reported having at least one tattoo or piercing. These rates of body modification are comparable to those obtained recently in American college samples (e.g., Forbes, 2001; Greif et al., 1999). Rates of the other marker groups were 19% for provocative appearance and 6% for Goth appearance.

Based on the scoring system outlined in Table 1, a separate score was calculated for each of the three categories of CDMs. Preliminary analyses revealed that the composites were positively intercorrelated (mean  $r = +.35$ ) and showed similar associations with the various personality and behavior measures. For this reason, we standardized scores on each composite and combined them into a single index of CDMs. The alpha reliability of the overall index of CDMs was .59.

### 5.2. Peer group dimensions

The peer group membership data were factor analyzed using principal factors with varimax rotation. Two interpretable factors emerged to explain 26.3% of the variance: *Adventurous Peer Groups* (e.g., partyers, dopers), and *Intellectual Peer Groups* (e.g., school club members, nerds). Factor scores were computed to represent the two factors: Their reliabilities were .70 and .52, respectively (see Tabachnick & Fidell, 2001, p. 645). No specific factor emerged for disaffiliated groups.

### 5.3. Predictors of CDMs

The intercorrelations and alpha reliabilities of the predictor variables are displayed in Table 2. The questionnaire reliabilities are all at typical levels ranging between .72 and .89.

Correlations between the predictors and our index of CDMs are presented in Table 3. Disattenuated correlations are also provided because the relatively low reliability for markers handicaps any correlations with that variable. Among the Dark Triad, the strongest predictor of CDMs was subclinical psychopathy,  $r = .18$ ,  $p < .05$ , one-tailed. The correlation with Machiavellianism was also significant with a two-tailed test but, after controlling for psychopathy, its significance was eliminated. Conversely, psychopathy did remain significant after controlling for Machiavellianism ( $r = .13$ ,  $p < .05$ ).

Table 2  
Intercorrelations among predictors

	1	2	3	4	5	6	7	8	9	10	11
1. Narcissism	(.82)	.27	.40	.45	-.09	.08	-.21	.27	.24	.10	-.01
2. Machiavellianism		(.72)	.46	-.08	-.40	-.25	.06	-.08	-.28	.03	-.10
3. Psychopathy			(.82)	.18	-.42	-.40	-.11	.09	-.10	.15	-.24
4. Extraversion				(.85)	.15	.10	-.29	.21	.45	.16	-.03
5. Agreeableness					(.75)	.28	-.24	.13	.28	.05	.07
6. Conscientiousness						(.79)	-.16	.13	.35	.05	.12
7. Neuroticism							(.83)	-.13	-.50	-.20	.08
8. Openness to experience								(.75)	.26	.08	.23
9. Self-esteem									(.89)	.22	.00
10. Adventurous Peer Groups										(.70)	.02
11. Intellectual Peer Groups											(.52)

Note.  $N = 279$ . Values greater than  $|\text{.12}|$  are significant at  $p < .05$ , two-tailed. In parentheses are the alpha reliabilities.

Table 3  
Correlations of predictors with cultural deviance markers

	Deviance markers (CDMs)	
	Raw correlations	Disattenuated correlations
Narcissism	.08	.10
Machiavellianism	.15	.18
Subclinical psychopathy	.18*	.24*
Extraversion	.05	.07
Agreeableness	-.10	-.13
Conscientiousness	.02	.02
Neuroticism	-.01	-.01
Openness to experience	.13*	.16*
Self-esteem	-.11*	-.15*
Adventurous Peer Groups membership	.05	.07
Intellectual Peer Groups membership	.00	.00

Note.  $N = 279$ . Disattenuation was only conducted on the criterion variable (deviance markers). An asterisk (\*) indicates a significant predicted correlation,  $p < .05$ , one-tailed.

Correlations between CDMs and the Big Five were mixed. As predicted, openness showed a significant positive correlation,  $r = .13$ ,  $p < .05$ , one-tailed. Contrary to our predictions, neither extraversion, neuroticism nor conscientiousness showed significant correlations.

As predicted, self-esteem was a significant negative predictor of CDMs,  $r = -.11$ ,  $p < .05$ , one-tailed. Neither of the peer groups factors significantly predicted CDMs (Adventurous Peer Groups:  $r = .05$ ; Intellectual Peer Groups:  $r = .00$ , both  $p = \text{ns}$ ). The latter suggests that individuals belonging to these peer groups are no more or less likely to have CDMs than those not belonging to these groups.

To control for overlap among the significant predictors, we regressed CDMs on psychopathy, self-esteem, and openness. Each predictor remained significant with similar sized effects

Table 4

Correlations of personality predictors, cultural deviance markers, and high school peer groups with misconduct

	Misconduct factors					
	Drug abuse	Driving	Anti-authority	Bullying	Crime	Total Misconduct
Narcissism	.24	.29	.19	.08	.18	.26
Machiavellianism	.06	.15	.11	.31	.16	.21
Subclinical psychopathy	.42	.48	.34	.40	.49	.59
Extraversion	.25	.20	.19	-.06	.15	.20
Agreeableness	-.01	-.15	-.19	-.29	-.09	-.19
Conscientiousness	.05	-.13	.01	-.22	-.13	-.12
Neuroticism	-.12	-.13	-.07	-.00	-.18	-.15
Openness to experience	.19	.07	.06	-.03	.11	.11
Self-esteem	.08	.14	.02	-.19	-.01	.01
Adventurous Peer Groups membership	.22	.14	.07	-.03	.10	.14
Intellectual Peer Groups membership	.08	-.24	-.08	.11	-.09	-.07
Cultural deviance markers (CDMs)	.32	.20	.12	.10	.15	.23

Note.  $N = 83$ . Values greater than  $|\text{.22}|$  are significant at  $p < .05$ , two-tailed.

(psychopathy:  $\beta = .15$ , self-esteem:  $\beta = -.14$ ; openness:  $\beta = .15$ , all  $ps < .05$ , one-tailed). Together these three personality predictors explained 6% of the variance in rates of CDMs. After disattenuation of the criterion, this value rises to 11% of the variance in marker rates.

#### 5.4. Markers and misconduct

Table 4 provides the correlations between all the predictors and misconduct. Note first that we replicated the well-established positive association between CDM rate and overall level of misconduct,  $r = .23$ ,  $p < .05$  (one-tailed). This positive association holds in varying degrees across all five factors of misconduct: Correlations range from .10 to .32.

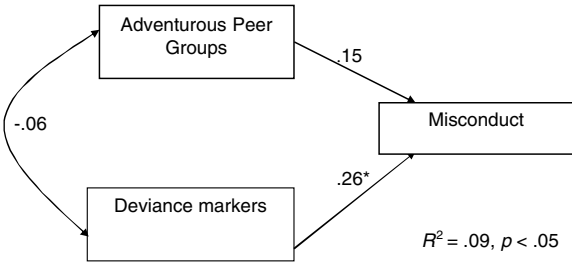
Table 4 also indicates that we replicated the reliable association between psychopathy and misconduct. In fact, psychopathy was by far the strongest predictor of misconduct,  $r = .59$ ,  $p < .05$  (one-tailed).<sup>6</sup> Although a few other personality variables were significantly associated with misconduct and its composites, their significance was lost after psychopathy was controlled for. Finally, the correlation of misconduct with membership in Adventurous Peer Groups was positive ( $r = .14$ ), but with only 83 participants in this analysis, was only marginally significant,  $p < .10$  (one-tailed).

#### 5.5. Comparing the sociological and personality models

Various arguments in the introduction suggest a possible three-stage temporal model. We will apply the term *Sociological Model* to the direct prediction of misconduct from peer group membership and CDMs. That label was chosen to capture various social psycholog-

<sup>6</sup> Note that we had removed any overlapping items from the subclinical psychopathy measures to avoid contamination with the misconduct measure.

Sociological Model:



Personality Model:

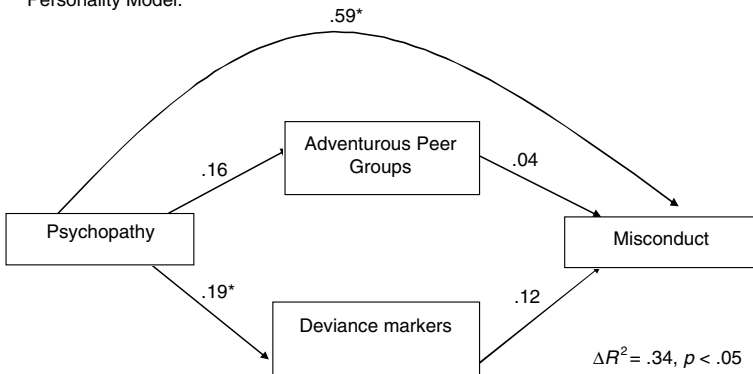


Fig. 1. Two models explaining overall misconduct.  $N = 83$ . \*  $p < .05$ , one-tailed.

ical arguments outlined in our introduction including the idea that affiliation with certain cultural subgroups and the acquisition of CDMs both encourage misconduct. We applied the term *Personality Model* to describe the same model with personality variables inserted as a prior step. We predict that the Personality Model will be better supported than the Sociological Model. Specifically, we do not anticipate that the sociological predictors will contribute to misconduct above and beyond the effects of personality: That is, we suspect that the Sociological Model is spurious.

### 5.5.1. Predicting total misconduct

To create testable models with total misconduct as the criterion, we simplified the results reported in Table 4. Of the two types identified, only Adventurous Peer Groups was included in constructing the Sociological Model (Fig. 1, top half) because only that group factor was predictive of total misconduct. Of the three significant personality predictors of CDMs, only psychopathy<sup>7</sup> was included in the Personality Model (Fig. 1, bottom half) because it was the only one of the three that predicted total misconduct.

<sup>7</sup> To determine whether the Big Five could replace psychopathy in the Personality Model, we computed Big Five psychopathy prototype scores based on the expert-generated profile found in Lynam (Lynam, 2002, p. 332; see also Miller et al., 2001). We then compared the correlations of CDMs and misconduct with prototype scores against those with SRP scores. In contrast to our results with SRP scores, the pattern of results with prototype scores was inconsistent and, in some cases, counter to those seen with SRP scores. In particular, prototype scores were uncorrelated with drug abuse,  $r = -.02$ , and, more troubling, with CDMs,  $r = .05$ . These results made us feel more confident in choosing psychopathy as measured by the SRP as the primary variable in the Personality Model.

To evaluate these models, we conducted a two-step regression.<sup>8</sup> First, total misconduct was regressed on Adventurous Peer Groups and CDMs. At the second step, subclinical psychopathy was added as a predictor.

The results of the regressions are presented in Fig. 1. As seen in the top half of the figure, we found initial support for the Sociological Model. When predicting misconduct, CDMs showed a significant positive beta,  $p < .05$ ; Adventurous Peer Groups was only marginally significant,  $p < .08$  (both one-tailed). When psychopathy was included as a predictor, however, the Sociological Model was shown to be spurious. As indicated in the bottom half of Fig. 1, psychopathy remains a strong predictor of misconduct,  $\beta = .59$ ,  $p < .05$  (one-tailed) but Adventurous Peer Groups and CDMs were no longer significant. Nor did either variable reach significance in tests for mediation (Sobel, 1982) of the link between psychopathy and misconduct (Adventurous Peer Groups:  $z = .28$ ; CDMs:  $z = 1.16$ , both  $p = ns$ ).

Both the Sociological and Personality Models were found to explain a significant portion of the variance in misconduct (Sociological Model:  $R^2 = .09$ ;  $F_{2,79} = 3.79$ ; Personality Model:  $R^2 = .43$ ,  $F_{3,78} = 19.36$ , both  $p < .05$ ). We also found a significant increment in  $R^2$  ( $\Delta R^2$ ) from the Sociological Model to the Personality Model,  $F_{3,78} = 15.41$ ,  $p < .05$ . This increase suggests that, in terms of explanatory power, the Personality Model is an improvement over the Sociological Model.

### 5.5.2. Drug abuse as the criterion

We investigated the two models further by examining the two-step regression on each of the five misconduct subscales (i.e., crime, anti-authority, etc.). Four of them showed the same spuriousness pattern as observed with Total Misconduct.

A notable exception arose with drug abuse as the criterion. As seen in the top half of Fig. 2, the Sociological Model emerged as viable: Both predictors of drug abuse were positive, strong, and significant. With this criterion (see the bottom half of Fig. 2) the inclusion of psychopathy did not completely eliminate the effects of Adventurous Peer Groups and cultural deviance (Adventurous Peer Groups:  $\beta = .17$ ,  $p < .07$ ; CDMs:  $\beta = .28$ ,  $p < .05$ , both one-tailed). The two predictors appear to have stronger effects in the Personality Model of drug abuse (Fig. 2, bottom half) than in the corresponding model of misconduct (Fig. 1, bottom half). Moreover, CDMs emerged as a significant mediator of the link between psychopathy and drug abuse,  $z = 1.65$ ,  $p < .05$ .

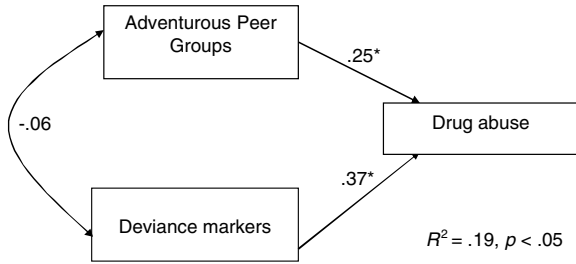
Tests of the  $R^2$  values for the Sociological and Personality Models revealed a pattern similar to that found when predicting overall misconduct. Both models explained significant amounts of variance in drug abuse (Sociological Model:  $R^2 = .19$ ,  $F_{2,79} = 9.25$ ; Personality Model:  $R^2 = .36$ ,  $F_{3,78} = 14.34$ , both  $p < .05$ ). In addition, the increment in  $R^2$  was significant,  $F_{3,78} = 6.75$ ,  $p < .05$ , suggesting that the Personality Model provides significantly more explanatory power than the Sociological Model in predicting drug abuse.

Further analyses were conducted to ensure that the influence of CDMs on drug abuse was fully independent of personality. To address this issue, we used the three significant

<sup>8</sup> We did not use structural equation modeling because model fit was not the primary issue here. As indicated previously, we had  $N = 83$  participants with complete data sets. To ensure that this subsample did not differ from the remainder, we compared the samples with respect to intercorrelations among the variables in the Sociological and Personality models. None differed significantly across the subsamples. Nor did the mean scores on these variables differ significantly across the subsamples. In short, the 83 participant subsample did not differ systematically from the remainder of the sample.



Sociological Model:



Personality Model:

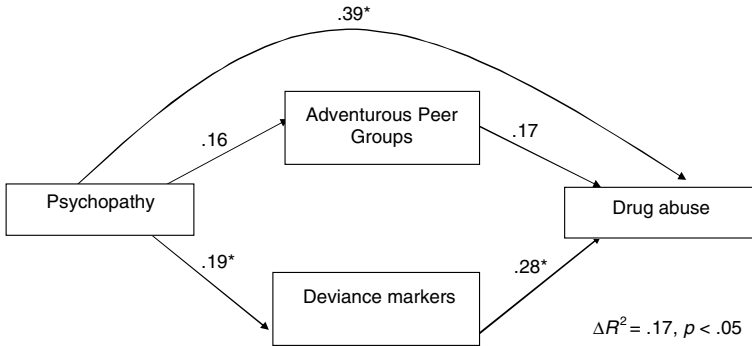


Fig. 2. Two models explaining drug abuse.  $N = 83$ . \*  $p < .05$ , one-tailed.

personality predictors of CDMs (psychopathy, self-esteem, openness) to compute multiple correlations with CDMs (.24), and with drug abuse (.46). We then used these values to partial personality out of the link between CDMs and drug abuse: CDMs remained a significant predictor of drug abuse,  $r = .24, p < .05$ .

## 6. Discussion

A subset of voluntary changes in physical appearance—especially piercings and tattoos—have come to be known as markers of cultural deviance<sup>9</sup> (Armstrong, 1994; Atkinson, 2003; Copes & Forsyth, 1993; Irwin, 2000). Our study sheds light on the phenomenon by taking a personality perspective. Briefly, our findings suggest that: (1) three personality traits—openness to experience, subclinical psychopathy, and low self-esteem—play independent roles in predicting possession of CDMs, and (2) the association between body modification and misconduct is largely spurious.<sup>10</sup> A number of complexities qualify these general conclusions.

To begin with, our data were not able to distinguish between the three categories of CDMs, that is, body modification, Goth appearance, and provocative appearance. The

<sup>9</sup> Note again that the term “deviance” is not used in an evaluative sense, but to refer to departure from conventional norms.

<sup>10</sup> Further analyses confirmed that the link between CDMs and misconduct remained when openness and self-esteem were used as predictors. That is, only psychopathy renders the CDMs-misconduct link spurious.

three were positively intercorrelated and showed similar patterns of associations with personality variables. Therefore, we combined the three CDMs to simplify the analysis and presentation.

## 7. Predictors of deviance markers

### 7.1. Peer group membership

Our analyses of high-school group affiliations were disappointing. A few subgroups (e.g., Goths, artistic types) showed higher than average CDM rates but the group membership numbers were too small to demonstrate statistical significance. Our factor analyses yielded distinct clusters of Adventurous and Intellectual peer groups but they showed no association with marker rates. Stronger associations have been obtained in previous research (e.g., Atkinson, 2003; Roberts et al., 2002). Those studies, however, investigated current group membership; instead, we asked college students to recall their high school peer groups. Had we asked about current group membership, the associations might have been stronger.

### 7.2. Personality traits

Several of the hypothesized associations between personality and markers were substantiated: Openness to experience, subclinical psychopathy and low self-esteem were all significant predictors of CDMs. Although the individual associations were small, these three personality variables combined to explain 11% of the (non-error) variance. The fact that the predictive power of these three diverse traits was independent suggests that acquisition of deviance markers has (at least) three distinct psychological meanings.

In each case, the link between CDMs and the personality trait may have two functions. First, markers may be indirect indicators of personality. Along with such diverse phenomena as bedroom decorations, music preferences, and personal website content (Gosling et al., 2002; Rentfrow & Gosling, 2003; Vazire & Gosling, 2004), students' markers appear to reflect their personality traits. Second, CDMs may represent a strategic self-presentation of identity (e.g., Armstrong, 1994).<sup>11</sup> Exactly which of three images was intended may not always be clear to observers.

Note that our discussion of CDMs in terms of three 'groups' is not meant to imply that they are mutually exclusive. Our choice of terminology is intended to stress that these predictors operate independently of each other. More than one of these factors may be at play in any given individual and may combine to increase the likelihood of obtaining CDMs.

#### 7.2.1. Openness to experience

A hallmark of openness to experience is a high level of interest in and ability at creative endeavors (e.g., Feist, 1998; McCrae & Costa, 1997). Its association with CDMs suggests that, for one group of individuals, the markers reflect a broader lifestyle of creative expression. To the degree that physical appearance can be altered with clothes, hairstyle, and skin markings, open individuals have rich outlet for their crea-

<sup>11</sup> That such self-presentations are successful is indicated by the fact that perceptions of marked individuals do not differ across marked or non-marked judges (Degelman & Price, 2002).

tivity (Armstrong & Murphy, 1997). They view body modification as ‘body art’ thereby emphasizing the esthetic and symbolic aspects in that very choice of words (Millner & Eichold, 2001; Myers, 1992).

From a self-presentational perspective, those high in openness may sport deviance markers as an unmistakable public marker of their Bohemian style (DeYoung, Peterson, & Higgins, 2002; McCrae & Costa, 1997). Given the initial novelty and unconventionality of CDMs, those high in openness may have been among the first to try them out.

### 7.2.2. *Low self-esteem*

Independent of other personality variables, low self-esteem was associated with a higher frequency of CDMs.<sup>12</sup> On the surface, the association seems paradoxical for several reasons: First, markers should further stigmatize the individuals who acquire them (Degelman & Price, 2002; Forbes, 2001; Myers, 1992; Shepperd & Kwavnick, 1999), and lead to further feelings of discrimination (Jetten et al., 2001). Given that those low in self-esteem are especially sensitive to criticism (Rosenberg & Owens, 2001), it is hard to fathom why they would invite more grief. Without resorting to psychoanalytic theory (e.g., Grumet, 1983; Hamburger, 1966), there are some possible social psychological explanations.

First is the proposition that low self-esteem individuals often prefer consistent feedback over self-enhancing feedback (e.g., Swann, 1990). In this case, the bearing of CDMs is an invitation for others to confirm the negative self-image of the individual low in self-esteem: A self-fulfilling prophecy is set into motion. Far from radical, this argument simply acknowledges the venerable assumption that self-consistency is a fundamental human motivation (Lecky & Taylor, 1945). A more complex variant holds that CDMs (similar to derogatory self-labels such as “punk” or “freak”) are part of the strategy of ironic self-abasement (Burr, 1984; Hebdige, 1979).

Alternative explanations point to the rewards ensuing from group identification. Indeed, an attempt to forge an identity is often cited as a reason for acquiring markers (Edgerton & Dingman, 1963; Millner & Eichold, 2001; Myers, 1992; Sanders, 1988, 1989). Those with low self-esteem may willingly accept the social stigma in return for bonding and friendship with similar others (Jetten et al., 2001).

### 7.2.3. *Subclinical psychopathy*

The third independent predictor of CDMs was subclinical psychopathy. Recall that high scorers on this variable combine impulsive thrill-seeking with callousness (Paulhus & Williams, 2002). For this culturally-deviant group, the self-presentational function is to advance a ‘tough guy’ or ‘bad girl’ image (Armstrong, 1994), that is, an unabashed declaration of social deviance (Sanders, 1988, 1989). From the perspective of subclinical psychopaths, markers also serve as a warning: “Don’t mess with me”. Consistent with such values, this subset of marked individuals may identify with explicitly antisocial subcultures such as criminals and gang members (Raspa & Cusack, 1990; Sanders, 1988).

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<sup>12</sup> Some have argued that true low self-esteem is rare in college students. However, comprehensive reviews suggest that low self-esteem is a meaningful notion even within high SES, highly educated samples (Adler & Stewart, 2004).

#### 7.2.4. Unsuccessful Big Five predictors

We hypothesized that extraverts, neurotics, and those low in conscientiousness, would also be likely to display CDMs. However, none of these predictions were borne out by the data.

One explanation may lie in our choice of instrument to measure the Big Five traits, namely, John and Srivastava's (1999) BFI. This rather brief instrument does not provide facet-level measurement. Future researchers may wish to administer a lengthier inventory such as the NEO-PI-R (Costa & McCrae, 1992), to capture the facets of each Big Five dimension.

#### 7.3. Misconduct correlates of deviance markers

Our finding of a positive association between markers and antisocial behavior replicates an oft-found result—one that is disconcerting to many observers. We have added to the literature by extending the generality of this association across five categories of misconduct. Deviance markers are associated, not only with drug use and criminal offenses, but also with driving offenses, bullying, and anti-authority misconduct.

Another contribution is our investigation of possible causal links between CDMs and misconduct. We concede that correlation research such as ours can never be definitive. Yet it is unlikely that experiments with random assignment of CDMs will ever be conducted. In any case, correlational data can help rule out certain causal models. Our analyses have made a strong case against allegations of a causal association between CDMs and misconduct: Our results indicate that, in general, this association is spurious.

##### 7.3.1. Drug abuse

The exception to the pattern of spuriousness was drug abuse: Independent of personality, CDMs still predicted a higher likelihood of drug abuse. Something about the acquisition, possession, or display of CDMs contributes unique variance to the prediction of drug abuse (Brooks et al., 2003; Carroll et al., 2002; Dhossche et al., 2000). In noting this association, previous commentators have varied in their explanations. One popular notion is that risk-taking is the common link between CDMs and drug use (e.g., Drews et al., 2000). Unfortunately, we did not include a direct measure of risk-taking. However, extraversion, which incorporates risk-taking, did not predict CDMs. And the marker/drug abuse association remained after controlling for subclinical psychopathy, which also includes a component of risk-taking (Williams & Paulhus, 2004). Deviance markers were also independent of conscientiousness, a surprising result if impulsivity were the key element behind acquisition of CDMs. Nonetheless, the complex role of impulsivity in risky behavior is only beginning to be understood (Cooper, Agocha, & Sheldon, 2000).

Although more speculative, other explanations offer avenues for future research. First, the 'fog' of drugs may contribute to the acquisition of CDMs (e.g., Armstrong & McConnell, 1994; Armstrong & Murphy, 1997). Another possibility is that drug or alcohol abuse begins with an analgesic goal (e.g., dulling the pain of getting a piercing) but ultimately leads to addiction. Yet another possibility is that the painful and physically invasive procedure involved in body modification (e.g., getting a tattoo or piercing) is a gateway to a lifestyle of corporal self-abuse (e.g., injecting heroin) (Grumet, 1983). This plethora of possibilities is impossible to tease apart with our data.

### 7.3.2. Peer group and misconduct

Although peer group membership was not associated with overall misconduct,<sup>13</sup> the link did hold for drug abuse. Former members of Adventurous Groups now sport CDMs and abuse drugs. Not surprisingly, the Adventurous Group cluster included subcultures traditionally associated with drug abuse, such as the “dopers” and “partyers” (Haynie, 2002; Hebdige, 1979; Sussman & Ames, 2001). This sustained influence of early peer groups on later drug abuse highlights the potent effects of early exposure to drugs.

### 7.4. Plausible sequential models

The joint examination of the predictors and sequelae of CDMs helps clarify the interplay among these variables. In particular, our comparison of the Sociological and Personality Models shed light on the possible causal dynamics of psychopathy, CDMs, and peer groups as they affect misconduct. This model is outlined in Figs. 1 and 2.

In this sequential model, subclinical psychopathy was the temporal starting point. We believe this placement is justified by the evidence for a strong genetic component of personality (e.g., Jang, Livesley, Angleitner, Riemann, & Vernon, 2002), including psychopathy (e.g., Blonigen, Carlson, Krueger, & Patrick, 2003). However, although psychopathic behavior may be relatively enduring (e.g., Harris, Rice, & Lalumière, 2001; Loeber & Farrington, 1997), there is no doubt that personality and social roles interact in a complex fashion over the life-span (e.g., Roberts, Caspi, & Moffitt, 2001).

A reasonable speculation is that, in adolescence, psychopathy encourages affiliation with high school peer groups such as the ‘dopers’ and ‘partyers’, while also motivating the acquisition of CDMs. The events at this stage are likely happening simultaneously. However, our data suggest that these phenomena are occurring independently of each other—hence the two divergent paths from psychopathy. Moreover, the tendency to engage in drug abuse may be partly explained by the repercussions of acquiring CDMs and, perhaps, membership in adventurous peer groups.

### 7.5. Subclinical psychopathy

The construct of subclinical psychopathy appears to be a useful common thread in understanding associations among peer groups, CDMs, and proclivity for misconduct. We found that subclinical psychopaths were likely to associate with the Adventurous Peer Groups and obtain CDMs. However, neither of these phenomena explains the majority of psychopaths’ misconduct. Instead, our data suggest that factors predating peer group membership or the acquisition of CDMs are of comparatively greater importance than these later phenomena.

The strong association between subclinical psychopathy and misconduct replicates several previous findings (e.g., Nathanson et al., 2005; Williams & Paulhus, 2004) and reaffirms its correspondence with forensic psychopathy (Hare, 2003). We also helped flesh out the link between psychopathy and drug abuse by demonstrating an indirect link via

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<sup>13</sup> Note that the low reliability of the Intellectual Peer Groups factor handicaps its correlations with other variables. However, disattenuating its correlations with cultural deviance markers or overall misbehavior did not increase the values to significant levels.

CDMs. It appears that the consequences of psychopathy play out in a number of causal paths.

The subclinical version of psychopathy is becoming an important explanatory variable in non-clinical, non-forensic samples (LeBreton, Binning, & Adorno, 2005). Risky and antisocial behavior among otherwise successful individuals appears to ensue from an unhealthy combination of impulsive thrill-seeking and callous affect. Note that our analysis of misconduct in terms of subclinical psychopathy overlaps substantially with work conducted under the label of other constructs such as the externalizing personality (Krueger, 2002), antisocial character, and delinquency proneness.

## 8. Conclusion

Our personality approach to understanding cultural deviance marking has confirmed its heterogeneous nature. Such markers symbolize the term “deviance” in three of its multiple meanings, namely, non-conformity, anti-sociality, and alienation. Our data confirm that these meanings correspond to three different motivations for obtaining markers, in turn corresponding to three different types of personalities—those open to experience, those with subclinical psychopathy, and those low in self-esteem. We anticipate that this taxonomy of markers can help organize further research on the phenomenon.

We hope that such data encourage the public to replace stereotypic reactions to deviance markers with a healthy curiosity to learn more about their significance in the lives of the marked individuals. Researchers too should refrain from blanket positive or negative perspectives on markers. The health care community, in particular, must react in a more nuanced fashion: Intervention may be called for if markers indicate damaged self-esteem. Cautious monitoring is required if the markers indicate subclinical psychopathy. Outright encouragement is appropriate if markers indicate creative expression. Otherwise, because the appropriate reactions are so different, a “rush to judgment” could have serious consequences to the individual.

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