

# The Stabilization of Self-Esteem Among Incarcerated Adolescents: Accommodative and Immunizing Processes

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**Abstract:** *The negative effect of a custodial sentence on juvenile self-esteem is discussed. It is argued that individual coping resources offer an explanation for the inconclusive findings of earlier studies in this field. Findings of a cross-sectional study of 299 prisoners (14 to 24 years) are presented. The results show that the stability of self-esteem during incarceration depends on both accommodative and immunizing coping reactions. Prisoners who do not possess at least one of these coping resources show particularly low self-esteem at the start of their term of imprisonment. This creates the misleading impression that for the average individual, self-esteem increases during a period of custody. The study also shows that in the latter period of a prison term, accommodative coping resources also tend to support an increase in immunizing reactions. Implications for longitudinal studies and for practical interventions in the juvenile custody system are discussed.*

Ever since Goffman's (1961, 1963) early work on the damage done to personal identity by the "total institution" of prison, a great deal of discussion has been devoted to the claim that a custodial sentence has a negative effect on the development of the inmate's self. For instance, the *labeling approach* (H. S. Becker, 1963/1973; Lemert, 1967; for an introduction, see Lanier & Henry, 1998, p. 167 ff) argues that the changes in the person's identity during incarceration not only provide insights into the extent to which a person has adapted to the prison world but should also be treated as a key determinant of the likelihood that the prisoner will not reoffend after release (for a critical discussion, see Schneider, 1990). In particular, prisoners' self-esteem is expected to deteriorate due to processes of stigmatization and of pain and strain associated with imprisonment (Greve, 2001; Liebling, 1999).

This damaging influence exerted on the development of personal identity by an onerous, restrictive environment can be expected to be particularly strong for juveniles and adolescents (Johnson, 1978) because establishing a stable, integra-

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tive identity certainly is a central task of juvenile development (Harter, 1990; Petersen, 1988; Petersen & Leffert, 1995; Piquart & Silbereisen, 2000; Silbereisen & Noack, 1988; Waterman, 1993). In fact, the very existence of a specialized system of juvenile justice is explicitly based on this developmental perspective. Throughout a century of discussion, the necessity to treat adolescents and adults differently and in particular the intention to avoid stigmatizing effects of punishment on juveniles (Haines & Drakeford, 1998; Lanier & Henry, 1998) was a widely shared premise of juvenile justice policy (E. Becker & Rickel, 1998; Feld, 1998; Krisberg & Austin, 1993). For instance, the criminal law for young offenders in Germany quite explicitly stipulates that the imprisonment of juveniles should be an intervention to serve a developmental purpose (Greve, 2001).

However, the negative effect of punishment and stigmatization on the juvenile self-esteem is not simply straightforward. To begin with, there is some evidence that stigmatized individuals generally do not show a lowered self-esteem (Leary & Baumeister, 2000). In particular with respect to incarceration, despite some empirical studies supporting the claim of the impairment of the self by imprisonment (e.g., M. Rosenberg, Schooler, & Schoenbach, 1989; Wormith, 1984), the studies available for this particular kind of threat present a very variegated picture. Whereas a number of studies have found that self-esteem declined during the period of punishment (R.L.S. Brown, 1970/1971; Hepburn & Stratton, 1977; McKinney, Miller, Beier, & Bohannon, 1978; Norris, 1977), other authors have been either unable to identify any effect or have actually found converse ones (Atchley & McCabe, 1968; Cairns & Cairns, 1994; Zamble & Porporino, 1988; also see Evans, Copus, Sullenberger, & Hodgkinson, 1996; Harter, 1990). Wheeler (1961) argued that a nonlinear developmental process could provide one explanation—decline during the early phase of imprisonment, followed by a gradual increase during adaptation to the prison subculture, and finally, a decline again during the last third of the sentence in anticipation of others' (or society's) expectations. However, most studies testing Wheeler's findings have not confirmed them (Atchley & McCabe, 1968; Bukstel & Kilmann, 1980). Moreover, almost all the data available on changes in self-esteem refer to adult prisoners. There is very little information available on juveniles and adolescents in prison.

#### **COPING AND SELF-REGULATION: KEY ISSUES IN JUVENILE DEVELOPMENT**

The inconclusive findings on the impairment of self-esteem by imprisonment suggest that this effect is moderated by individual differences in coping with the burden of a custodial sentence. Actually, the development of the self during adolescence and coping with threatening circumstances or events are fundamentally interdependent processes for several reasons. First, the situations or events we need to cope with are often a threat, in the broad sense of the word, to the self. Criminological considerations of the consequences of a custodial sentence con-

verge with the current thinking on the psychology of self in the assumption that “the pathogenic impact of some significant life changes stems, in part, from their capacity to initiate disturbances in the self-concept” (J. D. Brown, 1993, p. 118). The claim that the individual’s self-esteem is actively stabilized and improved against threatening experiences by several palliative and coping processes is one of the few undisputed results of social psychology (e.g., Blaine & Crocker, 1993; Leary & Baumeister, 2000; Schütz, 1998, 2000). Second, the key coping objectives—maintaining the capacity to act, maintaining a sense of personal identity, and achieving social integration—essentially depend on the stability of the self and one’s self-esteem. Whether coping processes ultimately prove developmentally “successful” (Greve, in press) will substantially be evaluated with reference to the stability of the person’s self and self-esteem. Third, processes of the self are some of the key foci in the explanation of individual resilience in the face of unfavorable conditions, threats, and challenges (Brandtstädter & Greve, 1994; Compas, 1998; Freitas & Downey, 1998; Hauser & Bowlds, 1990; Lösel & Bliesener, 1994). However, the two issues of self and coping have rarely been discussed together with respect to juveniles and adolescents (Jackson & Bosma, 1990) and particularly rarely from a developmental viewpoint.

It seems worth mentioning at this point that the delinquent adolescents sentenced to prison have at any rate failed to cope successfully with their particular challenges and developmental tasks. Even if juvenile delinquency is not viewed as a symptom of underlying psychopathology but rather as a form of coping (Brezina, 2000; Olbrich, 1990; Silbereisen & Noack, 1988), these coping reactions of the adolescent inmates have obviously transgressed the limits of socially acceptable deviance so frequently or so far that these reactions have to be evaluated as maladaptive *per definitionem*.

### **COPING WITH UNALTERABLE ADVERSITIES: THE MODEL OF DEVELOPMENTAL REGULATION**

Any burdensome events, experienced deficiencies, threats to one’s identity, and developmental losses can be understood as problem situations that are characterized as discrepancy between the individual’s *is* and *ought* perspectives on his or her personal development. According to the model of developmental regulation proposed by Brandtstädter (1999; Brandtstädter & Greve, 1994; Brandtstädter & Renner, 1990; Brandtstädter, Wentura, & Greve, 1993), one can basically differentiate between three types of reaction to these discrepancies. In the first instance, the person may engage in active efforts to resolve the current problem or alleviate a burden (assimilative coping) (Brandtstädter & Renner, 1990). For example, a person who failed an important exam may engage himself or herself in a more intensive practicing, or a person who feels to be overweight may commit himself or herself to a strict diet. However, not all *is/ought* discrepancies can be reduced by active problem solving. This is especially true of our present context of impris-

onment. Prison as an institution is restrictive by its very nature, restraining autonomous actions and social contact while systematically ruling out the possibility of exerting any influence on the environmental conditions that are experienced with aversion.

The fewer options to change the threatening or straining circumstance the individual has or perceives, the more important become adaptive forms of reactions to protect subjective well-being and self-esteem (Brandstädter, 1999; Brandstädter & Greve, 1994; also see Heckhausen, 1999). As a consequence, the two remaining modes of coping with threats are of special interest as possible reactions to the burden imposed by imprisonment. If assimilative strategies are (perceived as) unavailable or indeed as systematically ruled out, the person needs to adapt to surrounding conditions to stabilize his or her sense of well-being. The telling characteristic of reactive adaptation to a context experienced as immutable is that the *ought* values that are under threat (because they deviate from the *is* position) change in such a way as to reduce or even completely resolve the discrepancy (accommodative coping) (Brandstädter & Renner, 1990). Adjustments of one's personal system of values and preferences, palliative reinterpretations of onerous problem situations, changes of perspective, and deliberate (downward) comparison are all typical examples of accommodative processes that help to dissolve the *is/ought* discrepancy, reducing its detrimental influence on a person's self (Brandstädter, 1999; Brandstädter et al., 1993). Accordingly, Harter (1993) argued that juveniles may stabilize their self-esteem by adjusting their aspirations to their individual achievements. For instance, a person who became divorced from his or her partner may tend to evaluate his or her former partnership as less convenient and the divorce as a chance for possibly more exciting encounters. An adolescent sentenced to prison may appreciate the chance of achieving the final examination of his school education (instead of worrying over the loss of options to meet his girlfriend). In particular, any positive form of reframing of (initially) threatening experiences or life situations is accommodative in the sense of this model.

However, it is a prerequisite of both assimilative efforts and accommodative processes that the discrepancy causing the problem be perceived and accepted in the first place. Only perceived demands or threats can be and have to be coped with. Consequently, there is a third way of reacting to burdens and threats to personality, by means of a defensive reaction or immunization (Brandstädter & Greve, 1994) against these threats. In this reactive mode, the problem is neither resolved by assimilation nor dissolved by accommodation; rather, it is ignored (Brandstädter, 1999). Rejection of one's own perceptions, denial, situational reinterpretation, excuses, or self-serving attributions are all examples of cognitive processes that ignore the problem at hand and thus remove the burdens or threat to the prisoner's self. Such techniques of neutralization were the subject of early discussions on the stigmatizing effect of delinquency and imprisonment (Sykes & Matza, 1957). For instance, the juvenile may attribute his sentence to the injustice

of the judge or to his bad luck (of being caught), thus maintaining his belief that there is no need for changing his intentions or for adapting his moral beliefs toward social norms.

These three modi of regulation of threats and challenges (assimilation, accommodation, and immunization) are abstract categories of reactions. As the examples mentioned indicate, each mode comprises a great and heterogeneous variety of reactions. From a conceptual point of view, it is important to point to the dynamic interrelations of these three adaptational processes. For instance, the assimilative and the accommodative mode are "inherently antagonistic: Accommodative tendencies are inhibited as long as the assimilative mode dominates and vice versa" (Brandtstädter, 2000, p. 13). In particular, the functions of the accommodation and immunizing reaction modes not only synchronously compensate each other (Brandtstädter & Greve, 1994) but may also diachronously co-operate with each other (Brandtstädter, 1999). For instance, only perceived problems can be solved or dissolved by adaptive processes. Therefore, accommodative reactions to unalterable threats are only possible (and necessary) as long as no immunizing reaction prevents the perception of that threat. For the process of cognitive adjustment, however, it may be helpful or even necessary for some of the threatening aspects of a current burden to be initially ignored. They can only be perceived and accordingly overcome when the adjustment of the individual's norm and value systems is further advanced. Therefore, the functions of immunizing reactions may conversely be controlled by adjustmental processes. For example, from an accommodative perspective, it may prove functional to employ defensive reinterpretations if the context is no longer at odds with them. In this way, techniques of neutralization (Sykes & Matza, 1957) might even take on accommodative functions depending on the subjective situation, for example, in the case of a prisoner who disputes whether a punishment was justifiable if this is not (or is no longer) sanctioned by the social environment.

## ADOLESCENTS IN PRISON: EMPIRICAL STUDY

### METHOD

#### *Subjects*

The data of the present study are obtained within a cross-sectional survey conducted in five youth custody institutions in Northern Germany in the spring and summer of 1998. The participants were 299 male German prisoners between the ages of 14 and 24,<sup>1</sup> who on the survey's reference day (April 1, 1998) were serving a custodial sentence for the first time. First-time prisoners were selected because the experiences of imprisonment should be especially painful for first-time prisoners (Liebling, 1999).

Everyone who fulfilled these criteria was asked to take part; the level of response was relatively high, at 68.8%. The mean age of the participants was 20.9 years (median = 21 years,  $SD = 2.1$ ). Thus, the inhabitants of the “youth prisons” in Germany are to a large degree older adolescents or even young adults. Those questioned had received sentences averaging 2.8 years detention (by their own account), of which 25% were for more than 3 years and 7.1% for 5 years. However, this distribution may partly be the result of the cross-sectional recruitment; the probability of a prisoner being in custody on the day of a random survey is greater for those serving longer rather than shorter sentences (Enzmann & Greve, 2001). Of the participants, 83.3% said that they had previously been sentenced to other sanctions under the Criminal Law for Young Offenders (so-called instructive or disciplinary measures), and 73.9% had already been on probation.

As expected, the social risk factors that are reported throughout the literature (e.g., Enzmann & Greve, 2001; Kerner, Dolde, & Mey, 1996), in particular with regard to the offender’s family background, recur in the present survey. For example, the parents of more than half of those questioned are separated or divorced (51.7%), and in 17.1% of the cases, at least one of the parents is deceased or not known. Correspondingly, just under half (49.2%) grew up with their parents (22.4% with their mother) and 8.4% in care. In addition, 34% of the juveniles who grew up with their parents reported that they had spent at least one stay of residence in a care home. Of the 106 who had been in care homes, 30.2% had been in three or more different homes, and no fewer than 20% of these had lived in care for 7 years or longer. In one third of the cases (35.1%), the juveniles reported that there had been alcohol problems in the parental home; in 5.8%, even drug problems were admitted. More than one fifth (21.7%) reported that one of the parents had a previous conviction.

### *Measures*

The standardized oral interviews were conducted in the prisons between April and August 1998 by trained interviewers: the average duration was just under 2 hours. Participation was voluntary and anonymous; the interviewees received a payment for taking part (20 DM, approximately \$10). A record was made of numerous and varied aspects of the prisoner’s social situation, his or her criminal activities, personal well-being and social integration, as well as personality aspects (e.g., personal goals, self-concept, and social and individual coping resources) (for details of the questionnaire, see Hosser & Greve, 1999). The present investigation concentrates on the following aspects.

*Self-esteem.* In this investigation, self-esteem is assessed with the Self-Esteem Scale (SES) (M. Rosenberg, 1965; German version, Ferring & Filipp, 1996). This 10-item scale (sample items: “I take a positive attitude toward myself” and “I feel I do not have much to be proud of”) is probably the most widely used instrument for the assessment of self-esteem (for an overview, see Ferring & Filipp, 1996),

and it is particularly used in studies with juveniles and adolescents as well as with prisoners (see e.g., F. R. Rosenberg & Rosenberg, 1978; M. Rosenberg et al., 1989). With respect to the present study, the internal consistency is sufficient (Cronbach's alpha = .81). The validity of the scale for the present sample is also demonstrated by a correlation with depressivity (Center for Epidemiological Studies Depression Scale) (CES-D) (German version: Hautzinger, 1988) ( $r = -.52$ ,  $p < .01$ ), general well-being (single item:  $r = .26$ ,  $p < .01$ ), and self-efficacy (Jerusalem & Schwarzer, 1986) ( $r = .40$ ,  $p < .01$ ).

*Accommodation.* Individual inclination to react accommodatively to onerous experiences or circumstances is assessed by the Flexibility of Goal Adjustment questionnaire (FGA) (Brandtstädter & Renner, 1990). The scale comprises 15 items (sample items: "After a serious drawback, I soon turn to new tasks" and "I find it easy to see something positive even in a serious mishap") and was also found to be sufficiently homogeneous for the present sample (Cronbach's alpha = .74). The validity of the FGA scale can be concluded from several earlier studies with heterogeneous samples; for instance, accommodative flexibility predicts positive well-being, better coping with diseases, higher level of perceived control, and a low level of depressivity (e.g., Brandtstädter, 1992, 1999; Brandtstädter et al., 1993). Accordingly, for the present study a high degree of accommodation is accompanied by a low level of depressivity ( $r = -.26$ ,  $p < .01$ ), improved well-being ( $r = .13$ ,  $p < .05$ ), and a higher level of self-efficacy ( $r = .44$ ,  $p < .01$ ).

*Immunization.* As a prominent aspect of immunization, in particular with respect to the experience of incarceration, neutralizing evaluation of own delinquency (NED) was recorded on a scale comprising 15 items (sample items: "I live by my own rules, and according to those rules I did nothing wrong" and "I was unlucky with the judge: other people get off with less for doing what I did, or they are let off altogether") (Ortmann, 1987). The internal consistency of this scale with respect to the present sample (Cronbach's alpha = .72) was found to be similar to Ortmann's results (alpha = .74). Further empirical corroboration of the validity of this scale is not available at present. Beyond a high face validity, however, bivariate correlations with the covariates mentioned previously indicate a sufficient convergent validity. For instance, greater readiness to neutralize is accompanied by a slightly better sense of well-being ( $r = .12$ ,  $p < .05$ ) and a high level of self-efficacy ( $r = .25$ ,  $p < .01$ ). However, no correlation with depressivity was found ( $r = -.01$ , *ns*).

*Duration of imprisonment.* The actual amount of the sentence served at the time of the interviews (absolute duration of imprisonment) (ADI) varies in the present sample between 9 days and 59.6 months ( $M = 13.46$  months; median = 11.47 months;  $SD = 9.55$ ). However, the duration of imprisonment in a cross-sectional survey is confounded with the severity of the punishment ( $r = .57$ ;  $p < .01$ ); the more severe the punishment, the greater the probability that the prisoner

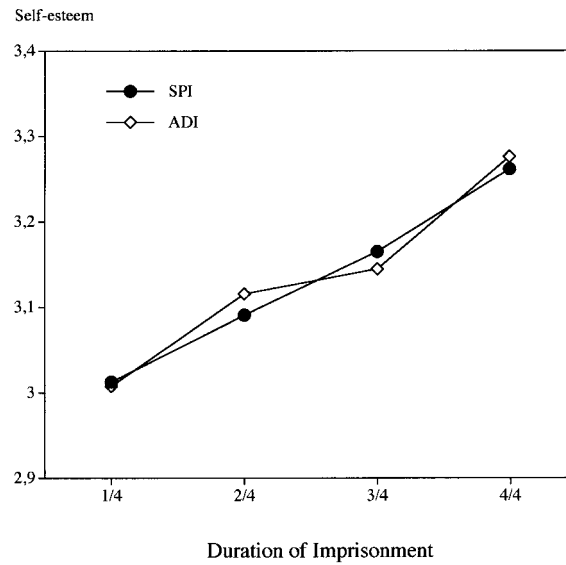
will be in custody at the occasion of the cross-sectional survey (Enzmann & Greve, 2001). Accordingly, the absolute duration of imprisonment correlates positively with age ( $r = .17$ ;  $p < .01$ ). In addition, the amount of the sentence already served at the time of the survey does not take into consideration how near the prisoner is to his release (minimum = 1 day; maximum = 62 months;  $M = 7.6$  months; median = 4.7 months;  $SD = 8.69$ ), which ought to have a fundamental influence on the prisoners' well-being. Thus, the relative subjective duration of imprisonment (subjective proportion of imprisonment) (SPI) was taken as a combined indicator, calculated from the proportion of the sentence already served in relation to the subjectively expected total duration of imprisonment. Consequently, SPI indicates the relative period of imprisonment respondents have thus far survived in relation to their subjective expectation of their entire sentence (0% to 100%). Here, the absolute duration of imprisonment is hence standardized across all sentences; as a consequence, this measure does not correlate with age either ( $r = .02$ , *ns*).

## RESULTS

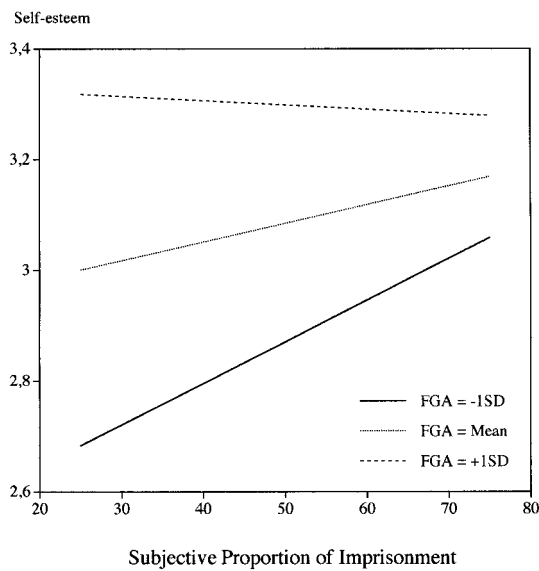
Even on a univariate basis it is noticeable that in this group, whose members are socially disadvantaged and living under very adverse conditions on the survey date, self-esteem is by and large relatively positive: 66.8% of those questioned achieved a score of 3 or more ( $M = 3.14$ ;  $SD = .51$ ; median = 3.2) on a scale of 1 to 4 (4 indicating maximum self-esteem). A more surprising point in light of the previous discussion, however, is that self-esteem appears to increase with the duration of imprisonment, both on an individual level (ADI  $r = .17$ ,  $p < .01$ ; SPI  $r = .20$ ,  $p < .01$ ) and also at group level—quartiles; ADI  $F(291) = 3.59$ ,  $p < .05$ ; SPI  $F(283) = 3.17$ ,  $p < .01$ . (See Figure 1.) At the same time, self-esteem is not dependent either on the punishment ( $r = .09$ , *ns*) or age ( $r = .06$ , *ns*).

As expected, a bivariate positive correlation between accommodation (FGA) and self-esteem (SES) ( $r = .28$ ,  $p < .01$ ) was obtained. This supports the findings of earlier studies (Brandtstädter et al., 1993) that showed accommodative reactions having a protective effect on self-esteem. However, what is most consistent with the predictions of the model of developmental regulation is that the prediction of SES by the SPI is moderated by accommodation,  $t(\text{FGA} * \text{SPI}) = -3.53$ ,  $p < .01$ . Figure 2 depicts the regression of self-esteem on the SPI for three values ( $M$ ,  $M$  plus one  $SD$ , and  $M$  minus one  $SD$ ) of FGA. The more accommodative resources a persons has, the less the change of self-esteem during imprisonment. An analysis of variance— $4 \times 4$ : FGA: quartiles of the sample, SPI: 1st, 2nd, 3rd, and 4th quarter of the sentence;  $F(268) = 2.46$ ,  $p < .01$ —confirms this result on a group mean level.

As mentioned earlier, the model of developmental regulation also predicts that if accommodative adaptations are not available, immunizing reactions may nevertheless be possible and that immunizing reactions can act as a functional substi-



**Figure 1** Self-Esteem as a Function of Absolute Duration of Imprisonment(ADI) and Subjective Proportion of Imprisonment (SPI)



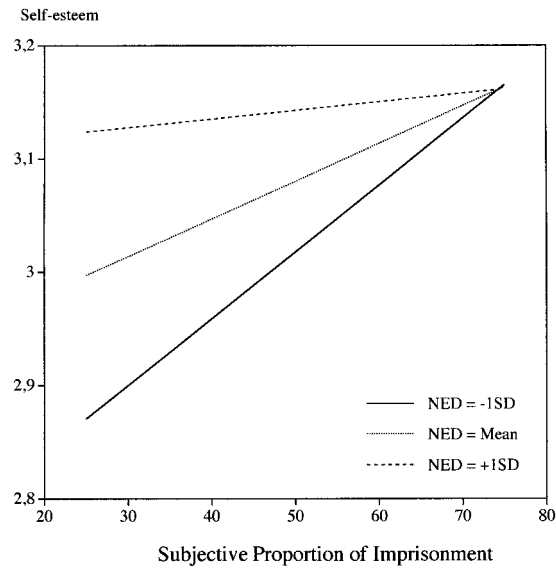
**Figure 2** Regression of Self-Esteem on Subjective Proportion of Imprisonment for Different Values of the Moderator Flexible Goal Adjustment (FGA:  $M$ ,  $M$  plus one  $SD$ , and  $M$  minus one  $SD$ )

tute for accommodative adjustment. As expected, NED does not depend on the SPI (SPI  $r = .01$ , *ns*).

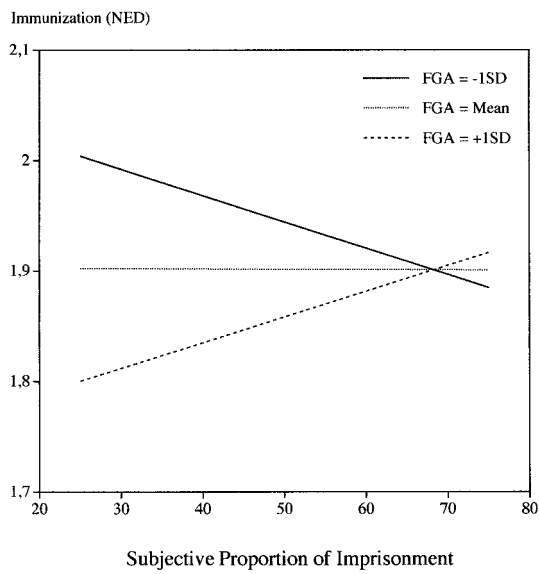
There is also no bivariate correlation between NED and self-esteem ( $r = .04$ , *ns*). However, as expected, the relation between SPI and self-esteem is moderated by immunization,  $t(\text{SPI}*\text{NED}) = -2.09$ ,  $p < .05$ . Figure 3 depicts the regression of self-esteem on the SPI for three values ( $M$ ,  $M$  plus one  $SD$ , and  $M$  minus one  $SD$ ) of NED. This means that persons with a relatively high immunizing tendency also have stable and more positive self-esteem and second, that persons with a relatively low immunizing tendency at the start of their imprisonment demonstrate relatively low self-esteem.

Taken together, these results show that the persons whose self-esteem is found to be lowest at the beginning of their imprisonment are those who have no recourse to either immunizing or accommodative coping reactions. However, the assumptions of the model of developmental regulation point also to the possibility of accommodative and immunizing reactions having a supplementary relationship. In fact, the present data reveal that the prediction of immunizational tendency by reference to subjective proportion of imprisonment is moderated by accommodation,  $t(\text{SPI}*FGA) = -2.14$ ,  $p < .05$ . Figure 4 depicts the regression of NED on the SPI for three values ( $M$ ,  $M$  plus one  $SD$ , and  $M$  minus one  $SD$ ) of FGA. This means that persons with low FGA can be expected to resort particularly strongly to immunizing reinterpretations as a means of stabilizing their sense of well-being at the start of their imprisonment. This supports the assumption of compensatory functions in the two coping modes. Interestingly, however, people with high FGA increasingly appear to resort to immunization at the end of the period of imprisonment; specifically, when on one hand the functionality of an accommodating attitude to imprisonment diminishes, but on the other hand, the date of release gets nearer and with it, the social pressure to justify one's actions in the previous social environment outside prison increases.

Finally, we still need to test the extent to which the specific patterns of findings so far detailed can be substantiated by a multivariate model. For this purpose, a path analysis was calculated with the aid of a structural equation model.<sup>2</sup> The model is shown in Figure 5; depicted in this figure are the main effects (symbolized by arrows directed toward the dependent variable) as well as the interaction effects (symbolized by arrows directed toward main effect arrows). The SPI is assumed to have direct effects on immunization and self-esteem. Accommodation is assumed to have a direct effect on self-esteem and in particular, moderates the effects of SPI on immunization and self-esteem. With respect to immunization, the model only assumes a moderator effect on the effect of SPI on self-esteem. The moderating effects were estimated by including the product terms (i.e., interaction terms) of the moderators with the independent variable SPI. Results show that the model fits well to the data, as indicated by various fit indices,  $\chi^2(9) = 11.41$ ,  $p = .249$ ; Comparative Fit Index = .956; root mean square error of approximation = .031, CI(90) = 0.0, .077). Except for the direct effect of SPI on immunization, all regression parameters are statistically significant.



**Figure 3** Regression of Self-Esteem on Subjective Proportion of Imprisonment for Different Values of the Moderator Immunization (Neutralizing Evaluation of Own Delinquency) (NED: *M*, *M* plus one *SD*, and *M* minus one *SD*)



**Figure 4** Regression of Neutralizing Evaluation of Own Delinquency (NED) on Subjective Proportion of Imprisonment (SPI) for Different Values of the Moderator Flexible Goal Adjustment (FGA: *M*, *M* plus one *SD*, and *M* minus one *SD*)

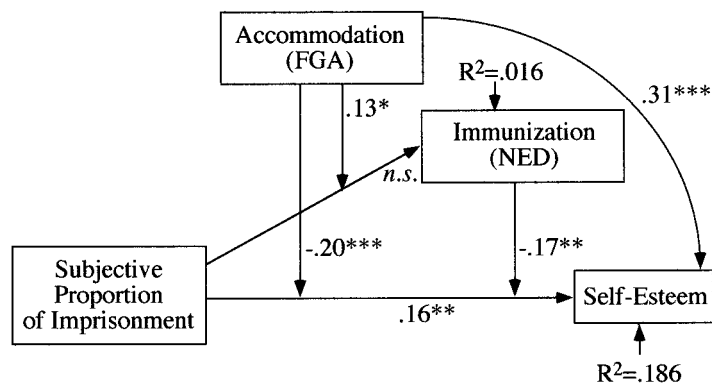


Figure 5 Stabilization of Self-Esteem During Imprisonment: Moderating Effects by Accommodation (FGA) and Immunization (Neutralizing Evaluation of Own Delinquency) (NED); (\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ )

## DISCUSSION

The findings presented in this article support the theoretical predictions of the model of developmental regulation proposed by Brandtstädter (1999). The self-esteem of the adolescents in question is stabilized at a relatively high level by accommodative adjustment or immunizing reactions; only juveniles with very low FGA experience a collapse of self-esteem at the start of imprisonment. This breakdown at the beginning of imprisonment occurs particularly if it cannot be cushioned by immunization of one's own delinquency, that is, the neutralization of the reason for the current predicament of the inmates. A direct effect of SPI on immunization was included in the model according to the argument by Sykes and Matza (1957) that immunization is a reaction to the burden of imprisonment. However, the results show no main effect of SPI on immunization except the interaction between SPI and accommodation. Accordingly, for flexible juveniles it is evidently functional to accept the deviancy of their actions and the resulting punishment at the start of their imprisonment. However, it becomes increasingly more adaptive to immunize against the (justifiability of the) punishment the nearer the subject comes to the point of release. The present data cannot help decide the issue of whether the social function (in particular toward the prison staff members and therapists) or the psychological functionality (e.g., the acceptance of one's own guilt may support the acceptance of the current restrictions) is more significant here. Certainly, however, as this group approaches the end of imprisonment, an increasingly critical evaluation of the justification of the punishment obviously serves an adaptive function for the stability of self-esteem. On the other hand, a decrease in the immunizing tendency need not necessarily entail any negative effect on self-esteem. In fact, this might even signal the achievement of the actual intention of youth detention in bringing offenders to recognize the wrongness of

their delinquency. The fact that immunization has numerous and varied interpretations and functions could explain why, on a bivariate basis, no significant correlation between NED and SES was shown. At the same time, the highly significant path from FGA to SES beyond the effects discussed in this study indicates that we can expect further aspects of accommodative coping to be active in securing the stability of self-esteem among adolescent prisoners.

## GENERAL DISCUSSION

The findings of this study offer interesting insights in several respects. First, these results indicate that the model of developmental regulation (Brandstädter, 1999; Brandstädter & Greve, 1994) is also valid when applied to (the highly selective subgroup of) young people who are forced to live for a longer period of time in an extreme restrictive social environment that is essentially both threatening and burdensome. This is important because the developmental tasks of late adolescence—differentiating and stabilizing an autonomous concept of self and self-esteem and finding the balance between social autonomy and social integration—mark a phase of development that is in any case difficult and onerous and that places severe demands on individual resources to cope with it (Compas, 1995; Crockett & Crouter, 1995; Hauser & Bowlds, 1990; also see Greve, 2001). At the same time, the findings show that processes of self-regulation appear to play a key part for understanding the processes that are crucial to coping not only with current burdens and threats but also with critical life contexts and phases in adolescence. Moreover, the general finding is supported that the overwhelming majority of adolescents clearly succeed in stabilizing self-esteem (Harter, 1993), even those who are forced to live under especially adverse social conditions in a restrictive and hostile environment.

Second, the findings are more particularly informative with regard to the effects that the developmental intervention of a custodial sentence has on adolescent development. This is also of great practical value given the general increase in juvenile delinquency in Western societies (Coleman & Nedry, 1999; Pfeiffer, 1998) precisely because we will have to reckon with a growing number of juveniles and adolescents being sentenced to more severe sanctions, including incarceration (E. Becker & Rickel, 1998; Feld, 1998). For instance, the number of inmates in German youth prisons rose between 1994 and 1999 by 54% (according to the Federal Statistical Office of Germany). The question of whether this substantially damages juveniles' development will hence become enveloped in the current heated debate. The issue of the effect of imprisonment on self-development plays a key part in this. The present study shows, however, that unilateral observations of the effect of imprisonment on self-esteem are not only too simplistic but are in fact misleading. Closer observation shows that the apparent (bivariate) increase in self-esteem during imprisonment is an expression of the complex interaction between various coping processes that secure the stabilization of self-

esteem for the majority of the juveniles concerned. Only those who have neither accommodative nor immunizing resources demonstrate particularly low self-esteem at the start of imprisonment. On closer observation, therefore, the increase in self-esteem looks more like stabilizing, which can be achieved even by persons who do not have particularly strong coping resources (as far as have been observed here). In addition, several studies indicate that we can assume that males in the age group observed here (14 to 24 years) in any case normally have a positive and stable self-esteem, on an upward trend (Adamson & Lyxell, 1996; Alsaker & Olweus, 1992; Block & Robins, 1993). This reinforces the plea that generalized speculation about effects that damage or stigmatize identity should be dismissed as empirically incorrect and theoretically too simplistic.

However, some restrictions of the interpretations of our results should be mentioned at this point. First, from a methodological point of view, one has to bear in mind that the present findings rest on cross-sectional data. Thus, the interpretation of the interindividual differences reported as indicating intraindividual changes (during imprisonment) is not warranted by the data. However, this objection presupposes that within an interval of few years, different birth cohorts of delinquent juveniles and/or the environmental conditions within the youth prisons investigated here changed considerably. Yet because the main duration of imprisonment in youth prisons (in Germany) is about 1 year (Kerner et al., 1996), this objection, although not completely rejectable, seems to be less plausible. Moreover, such cohort effects could have produced only main effects. However, the most important result of the present investigation is the interactional relations, that is, the buffering effects of accommodation and immunization on the change of self-esteem among the incarcerated juveniles. In addition, a longitudinal design with a short interval of measurement has to cope with possible effects of the repeated measurement itself (e.g., habituation effects). Thus, an influence of the cross-sectional design of the present study on the main effect is less plausible, and even more important, a detrimental effect on the interactional effects seems highly improbable.

This argument, however, leads to another aspect. The present discussion does not take into account possible age-related changes of the use of adaptational processes such as accommodation and immunization. At least three answers to this problem are relevant here. First, the age at the start of their respective term of imprisonment varies between participants to a high degree (between 15 and 21 years of age). Thus, an age-related sensitive phase with respect to the development of self-esteem or coping can hardly explain the general trend across these age groups. Moreover, several studies indicate that at least the development of self-esteem throughout late adolescence is rather linear (e.g., Harter, 1999; McCarthy & Hoge, 1982). Second, the developmental dynamics of coping during youth and adolescence is an underinvestigated issue (as mentioned in the introduction). Actually, the first-order correlation between age and FGA is about zero ( $r = .05$ ; *ns*), but this is obviously not a sufficient empirical answer to this very complex problem. Finally, beyond possible empirical differences between differ-

ent age groups (i.e., third-order interactional effects), one would have to identify the developmental processes that are the bases for any statistical effect of the proxy variable of age. However, these developmental processes highly depend on accommodative and assimilative dynamics in response to the developmental tasks to be solved at each period of one's development (Brandtstädter, 1998).

Another possible restriction of the present study refers to a more psychological aspect of the results presented. Some longitudinal studies indicate that the adolescents' self-esteem usually increases in the very period of development we are looking at (McCarthy & Hoge, 1982; O'Malley & Bachmann, 1983). As a consequence, there still may be a damaging effect on the selves of juveniles in prison, resulting in a disturbance of the normal development. However, this cannot be decided without comparing the self-esteem development of adolescent inmates with the development of a parallel group of delinquent and socially disadvantaged adolescents not sentenced to prison. The difficulty is, of course, that this parallel group is simply not available because the punishment of incarceration is not distributed at random but rather sentenced particularly to those delinquent juveniles that have exhibited criminal behavior repeatedly or severely. Hence, any group of delinquent juveniles not sentenced to prison is not really a parallel group. Even with this restriction in mind, the present results clearly demonstrate that the juveniles' self-esteem is not seriously damaged or destroyed by their imprisonment.

This arguments leads to a difficult question that is of high importance for the practical relevance of the present study. With the present data, the influences of the development of self-esteem in imprisoned adolescents on their future development are not investigated. Actually, even if incarceration were to bring about a general damping in self-esteem, that need not necessarily be negative for the person's social behavior or good legal conduct after release. Earlier research initially regarded low self-esteem as an important risk factor for violence (F. R. Rosenberg & Rosenberg, 1978). Kaplan's (1980) theoretical approach claims that persons whose self-esteem is threatened in conventional social groups and contexts and is hence low seek out deviant peers, which in turn increases the likelihood of their own delinquency. More recent empirical studies, however, doubt this perspective (Hughes, Cavell, & Grossman, 1997; Jang & Thornberry, 1998; Wells & Rankin, 1983). In a study by Wormith (1984), for example, high self-esteem actually turns out to be a positive predictor of the probability of recidivism. Baumeister, Smart, and Boden (1996) convincingly argued that the proper interpretation ought to address not the actual degree of self-esteem but the degree of threat to that self-esteem. In many ways, people with high self-esteem are in greater danger of receiving threatening feedback from others and are hence more prone to violence (Baumeister, 1999; Heatherton & Ambady, 1993; Jang & Thornberry, 1998). In particular, the work of Kernis and colleagues (Kernis, 1993; Kernis, Cornell, Sun, Berry, & Harlow, 1993; Kernis, Granneman, & Barclay, 1989) suggests that stability of self-esteem could well be the crucial predictor of aggressive and hostile reactions rather than its actual level. In recent work, Kaplan (Kaplan & Peck, 1992) pointed out that the connection between self-esteem and delinquency could

itself be moderated by coping reactions. To answer this question and in particular, to be able to arrive at differentiated evaluations of the functionality of accommodative and immunizing coping reactions on delinquent behavior, a follow-up study for several years is necessary.

In any case, as far as practical work with juveniles in custody is concerned, the present findings already indicate that the functionality of coping reactions and coping resources with respect to delinquent and criminal juveniles may need to be addressed more subtly. Stabilizing self-esteem in the face of adverse and onerous circumstances can only be functional and promote development if these circumstances would otherwise damage or unfavorably influence personal development. Yet the imposition of sanctions on delinquent juveniles is intended precisely as a corrective intervention into deviant development. The question may still remain as to the circumstances under which a socially restrictive measure such as imprisonment can actually have this effect. However, the fact that the majority of juveniles concerned are able to alleviate the attendant burdens may—at least for some of those concerned—also indicate that possible outcomes such as the prisoner recognizing the wrongness of his or her actions fail to be achieved as a result of effective coping reactions. The fact that more than half of all adolescents and young adults given custodial sentences in Germany are subsequently sentenced to at least one further term of imprisonment (Greve, 2001) would no longer be explained as the effect of prison but as inappropriate or ineffective treatment in prison. Should dealing more appropriately with the coping reactions of imprisoned juveniles prove to be the key to improving this unfortunate state of affairs, this would in practice be an exceptionally important step toward more appropriate developmental correction in delinquent juveniles and adolescents. Only in this way, too, do new prospects of developing alternative development interventions present themselves, prospects that have a good chance of success and that avoid the unpleasant attendant phenomena of imprisonment (“the lost years of youth”), when these are not functional for the future development of these adolescents.

## NOTES

1. This rather large (10-year) span is determined by the *Jugendgerichtsgesetz* (JGG) (German juvenile courts law) (see Albrecht, 1997), which is a specialized criminal law for juveniles between 14 and 18 years of age as well as between 18 and 21 years under certain (frequent) conditions. Offenders sentenced according to the JGG remain and/or have to be incarcerated in youth prisons up to 24 years of age. Thus in Germany, inmates of these specialized youth prisons comprise this age range. It may sound somewhat misleading to call a young man of 24 years of age an *adolescent*. However, with respect to their developmental status, many if not most of these incarcerated young men are more appropriately called juveniles than adolescents. Actually, this developmental diagnosis (offender or offense exhibits a juvenile character) is the legal precondition for their sentence according to the JGG.

2. The model was estimated by using EQS (version 5.7) (Bentler & Wu, 1998).

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