

Jaana Haapasalo

Psychopathy as a Descriptive
Construct of Personality
among Offenders

UNIVERSITY OF JYVÄSKYLÄ

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ABSTRACT

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Diss.

The study was based on the classical description of psychopathy by Hervey Cleckley. The principal goals of the work were (1) to examine various assessment methods used in psychopathy and their interrelationships, (2) to group offenders on the basis of assessment methods, and (3) to clarify the nature of criminal behavior among the Cleckley psychopaths and other offenders.

92 male offenders, aged 21 - 53 yrs and convicted of property, narcotics and traffic offenses, participated in the study. They completed psychopathy-related questionnaires (Eysenck Personality Questionnaire, MMPI Pd and Ma, CPI So, Zuckerman's Sensation Seeking Scale) and were assessed with the Psychopathy Checklist on the basis of file and interview data. Eysenck's and Zuckerman's questionnaires were first standardized in a sample of 967 respondents, aged 17 - 71 yrs.

The results revealed two Checklist factors. Factor 1 included the core personality characteristics of the Cleckley psychopath. Factor 2 related to chronically unstable and antisocial lifestyle. The factor scores were correlated with the personality questionnaire scores, resulting in differential correlative patterns. The psychopaths were differentiated from the others by using global interview impressions, the Checklist total scores and a clustering of the Checklist items. Criminal behavior was examined by analyzing types of offense in the Checklist groups and by comparing the clusters with respect to four criminality variables. It is argued that Cleckley psychopaths can be discerned among the Finnish offenders and that psychopathy assessments should be based on similarities in the Checklist items between subjects rather than other methods.

Keywords: psychopathy, offenders, criminal behavior, personality assessment, personality questionnaires, sensation seeking

PREFACE

My interest in the problem of psychopathy grew originally while working for a time at the Institution for Alcoholics in 1980. I recall particularly a client whose difficulties seemed to lie less in alcohol abuse than in his pathological lying and convincing but deceitful behavior. He was superficially facile and glib in his manners and verbal expression but showed a conspicuous lack of genuine emotions and affective reactions. He seemed to be devoid of anxiety, nervousness or similar affects and behaved with unembarrassed calm when confronted with his lies. He was a facsimile of a human being but something seemed to be lacking. Overall, his behavior was extremely puzzling, and I could not think of any viable explanation for it.

After a while, I happened to read "The Mask of Sanity" by the American psychiatrist Hervey Cleckley and suddenly found a fascinating description of what I had observed in the client's personality. The book with its numerous illustrative case histories and a clinical profile of the Cleckley psychopath was absorbing. It tried to make sense of a behavioral pattern that appeared *prima facie* to be senseless. In Cleckley's (1982) words:

We are dealing here not with a complete man at all but with something that can mimic the human personality perfectly...So perfect is this reproduction of a whole and normal man that no one who examines the psychopath in a clinical setting can point out in scientific or objective terms why, or how, he is not real.
(p. 228)

It was not until 1985 that the present study seriously got started with the support of Professor Lea Pulkkinen. Her own extensive experience in the field of aggressive and antisocial behavior helped to integrate my work into the postgraduate research program of the Department of Psychology at the University of Jyväskylä. Professor Pulkkinen provided sustained and discerning guidance for my research effort. I express my warmest gratitude to her.

The research material was collected in 1986-87 by mail and in prisons. The successful completion of the data gathering operation can be ascribed to all who participated in the study. My research assistants, Lea Pesonen, Mirja Ekunwe and Vuokko Niemi, deserve credit for their indispensable help. Lea Pesonen was even inspired enough to write her master's thesis on the personality of offenders. I am also indebted to Jukka Kesonen, Ari Mäkiäho, Asko Tolvanen and Jari Kalavainen who assisted in carrying out data analyses. Dr. Erkki Pahkinen from the Department of

Statistics at the University of Jyväskylä gave his expertise for designing sampling procedures. Translations of the personality questionnaires were determined with the assistance of Michael Freeman and Auli Batts. Mr. Freeman also attended to the revision of the language of this thesis and the publications related to it. I am grateful to the previewers of the work, Professor Friedrich Lösel from the University of Erlangen-Nürnberg and Dr. Matti Tuovinen from the Mental Hospital for Prisoners in Turku for their comments on the manuscript. I also wish to thank the Publication Committee of the University of Jyväskylä and the editor of the series "Jyväskylä Studies in Education, Psychology and Social Research", Dr. Paula Lyytinen, who made the publication of this study possible.

Dr. Sybil Eysenck from the University of London contributed greatly to my work by proposing the cross-cultural standardization of the personality questionnaires used here. Her advice was valuable in the progressive steps of the data analyses. Discussions with Professor Robert D. Hare from the University of British Columbia, who has done research into psychopathy for over 25 years, were also of great importance in the course of the study.

The Emil Aaltonen Foundation, the Cultural Foundation of Finland and the University of Jyväskylä supported the research financially. In 1990, the University of Jyväskylä gave me a research grant that made it possible to complete my research full-time. Without this assistance, it would have been hard to carry on the study.

I warmly thank all those people who supported and helped me during the research process.

Turku, January 1992

Jaana Haapasalo

LIST OF ORIGINAL PUBLICATIONS

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2. Eysenck, S. B. G., & Haapasalo, J. (1989). Cross-cultural comparisons of personality: Finland and England. *Personality and Individual Differences*, 10, 121-125.
3. Haapasalo, J. (1990). Sensation seeking and Eysenck's personality dimensions in an offender sample. *Personality and Individual Differences*, 11, 81-84.
4. Haapasalo, J. (1990). The Eysenck Personality Questionnaire and Zuckerman's Sensation Seeking Scale (Form V) in Finland: Age differences. *Personality and Individual Differences*, 11, 503-508.
5. Haapasalo, J. (1991). *Cleckleyn psykopaatin muotokuva haastatteluvastausten valossa* (The portrait of the Cleckley psychopath in light of the interview responses) (Report No. 314). Jyväskylä: University of Jyväskylä, Department of Psychology.
6. Haapasalo, J., & Pulkkinen, L. (1991). *The Psychopathy Checklist and nonviolent offender groups*. Manuscript accepted for publication in *Criminal Behaviour and Mental Health*.

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1 INTRODUCTION

A personality description of the psychopath, evocatively presented by Hervey Cleckley for the first time in 1941, has evolved into a classic definition of psychopathy. Cleckley (1941, 1982) compared psychopathy with "semantic aphasia": the psychopath does not realize the meaning of emotional experience, although there is no outer damage in sight. He/she is able verbally to express emotions and moral values, but these expressions do not have emotional content. They are more like verbal reflexes than anything else. Superficial charm, good intelligence, absence of neurotic and psychotic symptoms, unreliability, lying, affective poverty and an aimless life-style characterize the Cleckley psychopath. As recommended previously (see Haapasalo, 1985), instead of merely referring to a psychopath, it is preferable to speak of *the Cleckley psychopath* in order to tie the term to the specific definition given by Cleckley. Evidently, the Cleckley psychopath suffers from a severe personality disorder, particularly emotional defects, despite of his/her mask of sanity and a seemingly good ability to cope socially.

Owing to its pejorative and stigmatizing connotations and its resistance to clear-cut definitions, psychopathy has been regarded as a controversial concept. Definitions have not always corresponded to Cleckley's description. At times psychopathy has been erroneously equated with sociopathy, antisocial personality, dangerousness or criminal personality. Partly for these reasons psychopathy was removed from the official diagnostic classifications of mental disorders. Exclusion does not signify, however, that psychopathy does not exist. Neither does it mean that psychopathy is necessarily to be replaced by some other diagnostic term. In psychological research, psychopathy has been open to discussion for several decades. Cleckley's description has been widely employed for the purposes of research, although its importance as a

diagnosis has been weakened. Recently, psychophysiology of psychopathy, assessment methods and cognitive processes, among other things, have been investigated. The objective has been to explain the inexplicable in the Cleckley psychopath. As Cleckley (1982) noted, it is difficult to describe a disorder like psychopathy. Obviously, it is even more difficult to explain it.

A careful definition of psychopathy is essential. For this reason, it is useful to make comparisons between various clinical-behavioral descriptions, typologies and classifications having emerged during the history of the concept. Two previous reports (Haapasalo, 1985, 1986) dealt to some extent with the historical developments of psychopathy. A more comprehensive historical review is presented here.

The second major task of the study was to analyze methods of assessing psychopathy. The results of this effort were spread across Reports 1 - 6. Psychopathy has been measured, more or less objectively, by means of personality questionnaires, personality tests, rating scales and the Psychopathy Checklist (see Hare, 1986). Some of the most well-known personality questionnaire scales aiming to measure psychopathy or psychopathy-related traits are the Eysenck Personality Questionnaire, the Socialization scale in the California Psychological Inventory, the Psychopathic Deviate and Hypomania scales in the Minnesota Multiphasic Personality Inventory and Zuckerman's Sensation Seeking Scale. These questionnaires were chosen for this study due to their popularity and traditions of use in the measurement of psychopathy and allied traits.

The present study encompassed methodological developments around Eysenck's and Zuckerman's questionnaires. These were translated and adapted to Finnish cultural conditions before use in the psychopathy research. The detailed results pertaining to standardization were included in Reports 1 - 4. In addition to the scales based on self-rating, the Psychopathy Checklist (PCL) developed by Hare (1980b, 1985b) was translated and used in the psychopathy assessments. Contrary to the personality questionnaires, the PCL rests on Cleckley's description and requires clinical observations, interviews and access to files. Specifically, the study aimed at investigating relationships between these different assessment methods and tried to clarify how the PCL functions in a Finnish offender sample. These findings were presented in Report 6. In addition to the PCL assessments, psychopathy was also assessed globally on the basis of the interview and file observations. The interview material, gathered for the PCL assessments, was analyzed separately and qualitatively. Since it would have been awkward to translate all the interview responses into English, they were published solely in Finnish in Report 5 and summarized in the present report.

In connection with psychopathy assessments, the relationships between sensation seeking and the PCL were examined. Quay (1965) was among the first investigators to refer to stimulation seeking among psy-

chopaths. Since then, Hare and Jutai (1986) have examined a sensation seeking trait as exhibited in the Cleckley psychopaths. Sensation seeking is also involved in item 3 (Need for stimulation/proneness to boredom) of the PCL. Most importantly, Zuckerman (1979) stated that sensation seeking is associated with psychopathy but did not specify psychopathy as Cleckley's psychopathy. What is needed is verification or confutation of these assumptions on new samples consisting of Cleckley psychopaths. The sensation seeking perspective provides a new frame of interpretation when investigating psychopathy. Report 3 was concerned with sensation seeking among the offenders in general. Relationships between Cleckley's psychopathy and sensation seeking were examined in Reports 5 (interview responses) and 6 (Sensation Seeking Scale scores).

The present study also devoted attention to the crimes committed by the Cleckley psychopaths and other offenders. It should be remembered that not all psychopaths are criminals, and not all criminals are psychopaths (Eysenck & Eysenck, 1978; Widom & Newman, 1985). However, psychopathy has been investigated mostly in offender samples. The most probable reason for this is a deficient methodology for studying psychopaths outside institutions (Hare & Cox, 1978a). According to previous findings, the Cleckley psychopaths receive more convictions for violent crimes and their criminal behavior is of a more serious nature as compared with other offenders (Hare & McPherson, 1984b; Hart, Kropp, & Hare, 1988; Williamson, Hare, & Wong, 1987).

However, nonviolent criminality was to the fore in the present investigation. The attempt was made to clarify which types of nonviolent offense were committed by the psychopaths. There are logical grounds for assuming that personality characteristics, for example a tendency to deceit, manipulation and lying in the Cleckley psychopaths, create a predisposition towards certain crimes. The issue as to which types of crime the Cleckley psychopaths prefer thus called for consideration. The results concerning types of offense are presented in the present summarizing report. Pertinent to this issue is whether it is possible to discern different offender groups among offenders on the basis of the PCL and how these might differ from each other in criminal behavior and responses to personality questionnaires. One of the objectives in this study was to arrive at a proposition for grouping offenders. The offender groups were presented in Report 6.

This summarizing report on Cleckley's psychopathy begins with a condensed history of the concept of psychopathy together with some of the empirical observations and theoretical notions surrounding the concept. It then proceeds to the analysis of methods of assessing psychopathy, and, finally, the report charts criminal behavior among the Cleckley psychopaths. The overall goal was to verify the existence of Cleckley's psychopathy among Finnish offenders convicted mainly for property (especially frauds), traffic and narcotics offenses and to describe

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the Cleckley psychopath. Explanations as to what creates the personality of the Cleckley psychopath are not ventured seriously but left with pleasure to other researchers.

2 PSYCHOPATHY RECONSIDERED

2.1 Concept of psychopathy: developmental courses

Werlinder (1978) scrutinized the history of psychopathy in various lingual and cultural areas. For example, descriptions of the concept in Germany differ from those in the United States or England. Also clearly distinguishable is the French tradition (see Pichot, 1978). In this section, the early history of psychopathy is addressed primarily on the basis of Werlinder's work. Developmental trends in the concept were previously discussed in a compendious review (Haapasalo, 1985). A supplementary examination of the development of the concept is now attempted, as a knowledge of its history assumes much importance in defining the concept of psychopathy.

In 1786, an American physician, Benjamin Rush, wrote on the disease in terms of the "moral faculty" or moral derangement that he described as shown in lying, deceptiveness, drinking, cruelty and general depravity. He gave several examples of these cases, among them an indisputably multitalented, accomplished and celebrated character named Servin, who at the same time was cruel and false and spent his time lying, deceiving, drinking and practising every conceivable vice (Werlinder, 1978). In the last century, a French physician, Philippe Pinel, introduced the term "manie sans delire" in describing patients who were capricious, liable to violent outbursts, stubborn and quarrelsome but, nonetheless successful in their aspirations under favorable conditions. Still another early writer, James Cowles Prichard, an Englishman, referred to a similar type of disorder. He labeled it "moral insanity" and paid attention to the fact that there were neither signs of intellectual dysfunction present nor "insane illusions or hallucinations".

Moral insanity and manie sans delire were clearly more incoherent syndromes than the modern concept of psychopathy. Common to the early descriptions and the modern concept, however, is an emphasis on affective and moral aberrations. The inflicted obviously were, and are, free of any intellectual or other cognitive defects.

The historical descriptions of psychopathy-like behavior presented by Werlinder (1978) fuse, in part, with the modern concept of Cleckley's psychopathy. They have equivalent features, though expressed in a different terminology. Unreliability, aggressiveness, impulsiveness and a planless antisocial life-style belonged to moral insanity but can also be linked with modern psychopathy. Differences also exist between the early writings and more modern views. Many of the early descriptions implied neurotic symptoms or neurological signs manifest at the behavioral level. Neurotic antisociality or criminality have since been differentiated from psychopathy (Hare & Cox, 1978a), as well as antisocial behavior resulting from neurological causes.

Discussion on moral insanity was gradually geared towards a classification of psychopathy-like disorders. Contributions by the German psychiatrists Koch (1893) and Kraepelin (1909 - 15) merit consideration here. Koch discerned a group of disorders labeled "psychopathische Minderwertigkeiten" (psychopathic inferiorities) that comprised congenital or acquired organic symptoms in various degrees. As regards the mildest form of disorder (psychopathic disposition), the symptoms were hardly noticeable. At a more serious level (psychopathic taint), they were manifest in high responsiveness, irritability, impulsiveness, and in vain, boastful and attention-seeking behavior. At the degenerative level (psychopathic degeneration), the symptoms emerged as a marked impulsivity and unreliability. Different from these various degrees of psychopathic inferiorities is moral insanity, which can be said to exist where a permanent psychopathic inferiority has drifted into a mental disease (see Werlinder, 1978). Thus, Koch did not perceive psychopathic inferiorities as diseases but placed these abnormal states in an intermediary area between mental health and illness.

Kraepelin typified psychopathic personalities and distinguished them from other clinical groups. The group of unstable psychopaths included outcasts incapable of sustained employment (e.g. beggars, vagabonds and prostitutes). Superficially talented, adjusted and witty psychopaths with a tendency to confabulate belonged to the group of morbid liars and swindlers (see Werlinder, 1978). This group is greatly reminiscent of Cleckley's psychopathy. In addition, Kraepelin established the categories of quarrelsome, excitable, impulsive and eccentric psychopaths (Werlinder, 1978). The description of the impulsive psychopath greatly resembles that of the Cleckley psychopath. The impulsive psychopath easily gets bored with his/her everyday life and may vanish into thin air for weeks and even months. He/she earns his/her living by working

sporadically or committing crimes. The impulsive psychopath may have dipsomaniac tendencies, and many tend to gamble and incur debts. Characteristic of the impulsive type is the attempt to carry out impulses immediately.

The German concept of psychopathy evolved along with a typology developed by Schneider (1923). Of his 10 types the unstable, self-assertive, callous and abulic psychopaths are in agreement with the English-French concept of moral insanity. The unstable psychopath continuously seeks new stimulation. In this particular, the description is suggestive of pathological stimulation or sensation seeking in psychopathy. The self-assertive psychopath lacks genuine emotional responses and depth. The need to be admired is evident. Often he/she proves to be a liar and a swindler. According to Schneider, emotional flatness characterizes the callous psychopath capable of committing brutal crimes. The abulic psychopath may perpetrate thefts and other offenses imprudently on account of his/her susceptibility to antisocial influences. The abulic type is easy to lure into crime, and unreliability, shallowness and lack of permanent motives are evident.

Schneider (1923) incorporated violence and aggressiveness into his typology. The callous type and the explosive psychopath, for example, may commit violent crimes. The descriptions of Schneider's callous psychopath and the Cleckley psychopath converge (Crowhurst & Coles, 1989). Certain other features, in turn, diverge considerably. Schneider included neuroticism and anxiety in the personality profile of the hyperthymic, insecure, depressive and asthenic psychopaths, whereas absence of nervousness or other neurotic manifestations is a prerequisite for Cleckley's psychopathy. The issue of whether neurotic traits and anxiety can be found in psychopathy has been one of the major disputes around the concept (Haapasalo, 1985). Some definitions encompass neurotic symptoms, but Cleckley's description claims psychopathy and neuroticism to be incompatible. Likewise, violence and aggressiveness either have been explicitly part and parcel of psychopathy or not, according to definition. Cleckley (1982) does not treat aggressiveness as an explicit criterion of psychopathy. Compared to Cleckley's description, the typology constructed by Schneider is extremely polymorphous.

In the 1930s and 1940s prior to the publication of Cleckley's (1941) work, psychopathy-like behavior was examined and classified by Johnson (1922/23), Kahn (1931), Alexander (1930), Karpman (1924, 1941), Partridge (1930/31) and Henderson (1939), among others. The psychopathic personality generally was associated with criminal behavior and social maladjustment. The psychodynamic school (e.g. Alexander, 1930; Karpman, 1924, 1941) had an impact on notions about the etiology of psychopathy. Alexander (1930) divided psychopathological phenomena into four groups: neurosis, neurotic character, psychosis and true criminality. The neurotic character group corresponded, at least to some extent, to

modern psychopathy. In neurotic character antisocial tendencies are not suppressed, as in neurosis, but fulfilled in a transformed way. An elucidative case history presented by Alexander was a man with no medical training who nonetheless managed to deceive those around him and pose as a surgeon. The man also stole things and, later, confessed his crimes, which Alexander interpreted as a tendency to self-punishment.

The inadequate, predominantly passive, psychopath in the classification by Henderson (1939) bears some resemblance to Cleckley's conception of psychopathy. To this group Henderson assigned, for example, petty criminals, liars and swindlers, many of whom showed superficial facility, calmness, carelessness and charm. When in trouble, they rely on glib excuses. Henderson pointed out that emotional lability, hypochondria, sensitivity, shyness and excitability in this group may be typical of those individuals who are disposed to neurosis or psychosis. The possibility of becoming openly neurotic or psychotic distinguishes the inadequate psychopath from the Cleckley psychopath.

Empirical research on psychopathy started in the 1920s (see McCord & McCord, 1964). Affective disorders and social maladjustment were taken up in clinical-descriptive definitions of psychopathy. Psychopathy was identified with a wide range of diverse disorders. Defining the boundaries between neurotic symptoms and psychopathy was difficult in some descriptions. Also, the etiology of psychopathy was the subject of debate; sometimes constitutional and hereditary influences were brought out (e.g. Henderson, 1939), and at other times social and environmental factors got priority (e.g. Johnson, 1922/23). Besides psychopathy, the concept of sociopathy was employed. Individuals with a chronic and antisocially motivated maladjustment were categorized as essential sociopaths by Partridge (1930/31). He stated that this term, which he coined, best conveyed the essential element common to the group: social maladjustment. Later, the same term was applied in the diagnostic classification (American Psychiatric Association, 1952).

2.2 Cleckley's description

Some facets of Cleckley's psychopathy have already been presented above in relation to the earlier descriptions of psychopathy. The list of Cleckley's criteria is itemized below. Cleckley enlivened his description by case histories and also deliberated about the concept of psychopathy theoretically without, however, proposing a theory of psychopathy. He refused to take an exact stand on the etiology of psychopathy but voted for the possibility of some sort of an inborn or organic defect. Influences interwoven with family relationships and the environment were not

excluded, either. Interpersonal factors distorting a child's milieu and relationships between parents and offspring might exist, even though many parents of psychopaths seem to be well-adjusted (Cleckley, 1982).

Cleckley's criteria were described in more detail in Report 5 and also briefly in a previous review (Haapasalo, 1985). Cleckley listed 16 characteristics distinctive to the psychopath as follows:

1. Superficial charm and good "intelligence".
2. Absence of delusions and other signs of irrational thinking.
3. Absence of "nervousness" or psychoneurotic manifestations.
4. Unreliability.
5. Untruthfulness and insincerity.
6. Lack of remorse and shame.
7. Inadequately motivated antisocial behavior.
8. Poor judgment and failure to learn by experience.
9. Pathologic egocentricity and incapacity for love.
10. General poverty in major affective reactions.
11. Specific loss of insight.
12. Unresponsiveness in general interpersonal relations.
13. Fantastic and uninviting behavior with drink and sometimes without.
14. Suicide rarely carried out.
15. Sex life impersonal, trivial, and poorly integrated.
16. Failure to follow any life plan.

Cleckley portrayed the psychopath as a skillfully constructed reflex machine capable of imitating the human personality and simulating emotions. There seems to be nothing in the psychopath's life that profoundly matters. He/she fails to cherish any values, emotionally meaningful experiences or goals and seems not to distinguish his/her phony reactions, for example false remorse or false love, from the genuine ones of other people (see Cleckley, 1982). Cleckley (1982) attempted to delineate the psychopath's inability to react emotionally, despite that he/she preserves an ostensibly normal facade of personality functions, in the following lines:

My concept of the psychopath's functioning postulates a selective defect or elimination that prevents important components of normal experience from being integrated into the whole human reaction, particularly an elimination or attenuation of those strong affective components which ordinarily arise in major personal and social issues. (p. 230)

The hypotheses and surmises brought forth by Cleckley sound philosophical, subjective and impermeable to rigorous scientific tests, which Cleckley willingly admits himself. As the result of being refined by a clinician on the basis of clinical observations, the terminology is highly

descriptive and perhaps abstruse for a less knowledgeable reader. The task of describing the psychopath's defect, deficit, disorder, dissociation, or whatever it should be called, in the emotional capacity is demanding, particularly when there are no cogent theoretical models at hand.

2.3 Diagnostic classification and psychopathy

The Diagnostic and Statistical Manual for Mental Disorders (DSM) no longer contains the diagnosis of the psychopathic/sociopathic personality (see American Psychiatric Association, 1968, 1980, 1987). In the current classification system, the DSM-III-R, the diagnosis with the closest affiliation to psychopathy is the Antisocial Personality Disorder. The International Statistical Classification of Diseases (ICD) does not recognize psychopathy either, but psychopathy-like characteristics are included in the diagnosis of the "personality disorder with predominantly sociopathic or asocial manifestations" (see e.g. Faulk, 1988). Instead, in the Mental Health Act 1983 in England the psychopathic disorder, referring to any personality disorder that results in irresponsible or abnormally aggressive behavior, is mentioned as a juridical concept (Faulk, 1988; Hollin, 1989). Various affective disorders, intermittent psychotic states, self-mutilation, sadism, pedophilia and the explosive personality are thereby put into the category of the psychopathic disorder. It is obvious that in this way the diagnosis becomes overinclusive and draws away from the classic definition of psychopathy.

The DSM diagnosis of the sociopathic personality disorder first substituted for the psychopathic personality (American Psychiatric Association, 1952). The diagnosis of the antisocial personality was then accepted in the DSM-II (American Psychiatric Association, 1968). These diagnostic criteria were based on Cleckley's description. However, the criteria were not precise enough (Wulach, 1983), and, consequently, the DSM-III changed over to the diagnosis of the Antisocial Personality Disorder (APD) and specified the criteria for childhood and adolescent behavior and for the quality of emotional relationships (American Psychiatric Association, 1980). The revised diagnostic classification, the DSM-III-R, also utilizes this diagnosis but some of the specific criteria have been modified and a new criterion for adulthood (lack of remorse) has been added together with some aggression-related criteria pertaining to the Conduct Disorder with onset before age 15 (American Psychiatric Association, 1987). Although the criterion explicating lack of remorse has altered the emphasis somewhat towards personality characteristics, the APD clearly stresses maladjusted behavioral patterns. Cleckley's psychopathy, by contrast, can be conceived as a bundle of personality characteristics

(Hare, 1983, 1986; Wulach, 1983, 1988). Comparing the APD and Cleckley's psychopathy is complicated as a diagnosis of APD can be made by virtue of many different combinations of criteria. If one wished to compare accurately the incidence of Cleckley's psychopathy with that of the APD, comparisons should be made separately with each combination of diagnostic criteria (Haapasalo, 1985).

The description of psychopathy clearly diverges from the APD in some respects. Superficial charm, good "intelligence", absence of neurotic symptoms and rarity of suicide are mentioned solely in the description of psychopathy. Antisocial behavior, difficulties in interpersonal relationships, aimless lifestyle, unreliability, untruthfulness, insincerity, abuse of alcohol, impersonal sex life and absence of intellectual dysfunction and psychotic symptoms arise both in Cleckley's description and in the APD, though in slightly different forms (Haapasalo, 1985). The substantial difference lies in the fact that the APD is designated on the basis of specified behavioral criteria but Cleckley's psychopathy can be treated as a configuration of personality characteristics with a wide array of possible behavioral outlets. Of course, the APD is first of all a personality disorder and, axiomatically, coupled with personality characteristics, which are, however, not as explicitly stated as in Cleckley's description.

Other diagnostic categories also contain psychopathy-like personality characteristics and patterns of behavior. Blackburn (1987) found traits typical of psychopaths also in the categories of Histrionic, Narcissistic, Paranoid and Borderline Personality Disorder. An individual may fall into more than one category simultaneously. Furthermore, many personality characteristics may be common to several personality disorders. Such psychopathy-related traits as egocentricity, impulsivity, hostility and indifference to other people can equally be part of many diagnoses.

In this context, confluences between the narcissistic disorders and psychopathy cannot be brushed aside. The narcissistic personality organization of the psychopath is one of the basic views in psychoanalytically-oriented quarters. The inventive work of Kohut (1971, 1977) and Kernberg (1975, 1984) on narcissistic personality disorders gave rise to the study of antisociality in the domain of personality disorders.

In Kernberg's theory, the antisocial personality can be traced to the broader group of narcissistic personalities. The narcissistic personality may be borderline but not necessarily. Kernberg defined the narcissistic personality as a disorder of self-esteem associated with disturbances in object relations. Social coping and behavior may be within a normal range, but emotional life is impoverished. A lack of empathy may be present. Beyond the smooth appearance a parasitic and unscrupulous attitude toward other people can be found. Honours and admiration received from others seem to be vitally important for the narcissistic personality. However, this does not augur genuine interpersonal dependence, for the narcissistic personality fails to depend on other people

because of his/her deep mistrust.

The pathology of narcissism reflects the pathology of internalized object relationships. Distortions of the structural derivatives of the object relationships, of superego and ego, are present. The degree of superego pathology is of prognostic importance. An inability to experience guilt and depression, along with a lack of value systems and moral judgement, impair the prognosis. In the case of the Antisocial Personality Disorder, the prognosis is poor. Kernberg holds that antisocial behavior by itself is not crucial but that behavior is to be analyzed in conjunction with character pathology and superego. The theoretical constructs laid out by Kernberg have no correspondence with Cleckley's description. Indeed, they may be too theoretical ever to become subject to a strict empirical testing. At a descriptive level, however, the narcissistic personality and the Cleckley psychopath share traits.

According to Bursten (1973), the narcissistic personality and many of the antisocial personalities are manipulative personalities. He criticised the diagnosis of antisocial personality for intermingling a psychiatric point of view with an aspect of social deviation, criminality. In his opinion, in order to apply the manipulative personality also to a noncriminal population it would be better to search for psychological descriptors. There are persons who are manipulative but who nevertheless manage to avoid serious conflicts with society. Some of them adjust to society and find a position that enables manipulation (e.g. politics, business). The central concept for Bursten is deception, whereby the manipulative personality can restore his/her self-esteem after having been narcissistically wounded. Thus, manipulation is not situation-bound but results from psychodynamic processes. Behavioral patterns of deception and manipulation approach behavior found in the Cleckley psychopaths.

In Finland, Keltikangas-Järvinen (1977, 1985) utilized the concept of psychopathy to describe the most serious form of narcissistic disorders in which affective poverty, callousness and complete indifference towards other people prevail. She claimed that the main difference between the milder forms of narcissistic disorders and psychopathy is that the latter is distinguished by continuous antisocial, destructive and violent behavior. In this sense, psychopathy defined as a serious form of narcissistic disorders differs clearly from the classic psychopathy described by Cleckley. Cleckley's psychopathy does not necessarily imply continuous antisocial or violent behavior. Typically, the Cleckley psychopath alternates between socially acceptable and antisocial behavior. Violent offenses are not inevitable.

Keltikangas-Järvinen (1977) divided her psychopathic subjects into four subgroups:

1. Rigid psychopaths who are emotionally cold.
2. Psychopaths exhibiting paranoid and aggressive characteristics.

3. Destructive psychopaths who view destruction as an objective in itself and discharge their inner tension by acting out.
4. Aggressively behaving subjects who have learned their aggressive behavior through imitation.

Psychopaths belonging to the fourth group have been brought up in aggression-breeding environments, where aggressive behavior is common. For this reason, they fail to conceive of their aggressive behavior as something abnormal. The subjects in this group generally display at least some concern over their victims and see their punishment as justified (Keltikangas-Järvinen, 1977). The first group, lacking in emotional expression, appears to be closest to the Cleckley psychopaths, if comparisons are to be made. The fourth group with an ability to feel empathy and accept punishment fails to fit in with Cleckley's description.

The classification outlined by Keltikangas-Järvinen (1977) concerns violent offenders. Accordingly, pathological self-esteem, twisted and poorly developed interpersonal relationships, a continuous and exaggerated need for attention, a willingness to maintain a violent self-concept and absence of guilt and depression are characteristic of the psychopathic violent offender. Keltikangas-Järvinen approached psychopathy from the framework of narcissistic character pathology. On this account, her concept of psychopathy naturally differs from that of Cleckley. It could be asked whether violent psychopathy as described by Keltikangas-Järvinen and psychopathy described by Cleckley are in fact two different constructs.

Psychoanalytical and ego-psychological theory does not seem to be directly pertinent to Cleckley's psychopathy. However, some of the psychological descriptions based on such theoretical notions coincide with the clinical descriptions in regard to impulsivity, egocentricity, emotional coldness, a tendency to manipulate and exploitation of other people in the Cleckley psychopaths. The Cleckley psychopath fails to show anxiety or other neurotic symptoms. In contrast, the narcissistic personality, or the borderline personality, may suffer from intense anxiety and oversensitivity, aggressive acting-out, hate, rage, envy and suicidal behavior (Kernberg, 1975, 1984; Ronningstam, 1988). Overall, the relationship between Cleckley's psychopathy and the narcissistic disorders is not fully understood.

2.4 Conceptual confusion around psychopathy

In the previous overview of developmental trends around the concept of psychopathy, some of the earlier conceptions of psychopathy were sketched (see Haapasalo, 1985). In the 1950s and 1960s, for example,

McCord and McCord (1956, 1964), Craft (1966) and Eysenck (1964) put forth their notions of psychopathy and the origins of criminal behavior. Later, Eysenck (1977, 1987; Eysenck & Eysenck, 1978) refined and deepened his theory of criminality. The Eysenckian personality theory and its relations to criminality were recapitulated in Report 1. A closer perusal of this theory is thus not included here. It should be mentioned, however, that Eysenck's theory includes the dichotomization of psychopathy into a primary (cold and callous) and a secondary (neurotic) type, which is reminiscent of the earlier conceptualizations of idiopathic and symptomatic (Karpman, 1941), or true and pseudo-, psychopathy (Arieti, 1963). The secondary, symptomatic or pseudopsychopath can experience neurotic anxiety and fear, whereas the primary, idiopathic or true psychopath is characterized by a lack of emotional reactions. The latter type is the classic Cleckley psychopath. As Hare and Cox (1978a) stated, secondary or neurotic psychopathy is a misleading concept, since neurotic reactions contraindicate psychopathy.

Despite the aforementioned criticism, the division of psychopathy into two types is still employed in research. In fact, there have been continuous efforts to subgroup psychopathy (e.g. Blackburn, 1975, 1979, 1987; Blackburn & Maybury, 1985; Howard, 1986). Howard (1986), for example, appears to parallel the concepts of Cleckley's psychopathy, sociopathy, the Antisocial Personality Disorder (APD) and chronic antisocial behavior without recognizing the incongruence of the APD and Cleckley's criteria. In the first place, Howard (1986) regards psychopathy as a North-American concept based on Cleckley's and Hare's (1970, 1986) descriptions. Secondly, he sees it as an European concept referring to a personality type, constituted by certain personality traits and deviating from a normal personality. Essential in the North-American concept is chronic socially-deviant behavior (Howard, 1986). This definition is not commensurate with the descriptions by Cleckley or Hare, in which personality characteristics rather than antisocial behavior are emphasized. The psychopathy construct by Howard became even more obscure with the suggestion by Barbour-McMullen, Coid and Howard (1988) that Gough's (1969) Socialization scale is a good measure of the North-American concept of psychopathy.

Conceptual confusion increases still further when Howard (1986) includes both the primary and secondary types of psychopathy in the North-American concept. According to him, the secondary type is characterized by social withdrawal, low intelligence, electrophysiological anomalies and the inability to cope under conditions of perceived threat in the environment. The secondary psychopath is hypersensitive to social cues of punishment or reward. These characteristics are mostly incompatible with Cleckley's or Hare's descriptions, which Howard after all related to the North-American concept. The primary type posited by Howard overlaps with Cleckley's psychopathy. A distinctive feature of this type is

the lack of social withdrawal or anxiety along with noncoping resulting from an upbringing that poorly sensitized the individual to the social reward and punishment cues in the environment. Hence, the primary psychopath is relatively insensitive to the sources of punishment and reward and may show a high susceptibility to boredom. He/she may be easily bored and try to increase the amount of stimulation input from the environment (Howard, 1986). This, in turn, could lead to sensation seeking behavior.

Howard's model of psychopathy is, in part, based on the studies by Blackburn (1975). Blackburn divided psychopathy into a primary and a secondary type by means of the Impulsivity and Sociability factors derived from the Minnesota Multiphasic Personality Inventory (MMPI). Both types are impulsive but the secondary psychopath is socially withdrawing, while the primary psychopath is outgoing and sociable.

Blackburn (1987; Blackburn & Maybury, 1985) also extracted two factors, Psychopathy/Antisocial Aggression (PY) and Social Withdrawal (SW), from a multitrait ten-scale inventory, the Special Hospitals Assessment of Personality and Socialization (SHAPS). According to him, the PY factor with the 40-item Belligerence (B) -scale based on it covers both the European and the North-American concept. The scale measures the hostile, impulsive and aggressive tendencies associated with psychopathy. The 27-item Withdrawal (W) -scale drawn from the SW factor deals with socially inhibited behavior, submissiveness and proneness to dysphoric mood. Blackburn (1987) argued that these scales hold many advantages as a unitary measure of psychopathy over, for example, the Psychopathic Deviate scale of the MMPI. By combinations of scores on B and W it is possible to create a four-class typology that comprises the groups of Primary Psychopaths (high B-low W), Secondary Psychopaths (high B-high W), Controlled (low B-low W) and Inhibited (low B-high W). The scales are related to interpersonal behavior, and they are supposed to be able to find those individuals labeled psychopaths on the basis of Cleckley's criteria who differ from each other along the interpersonal dimensions, e.g. impulsive aggression or sociability (see Blackburn & Maybury, 1985).

In the study by Blackburn and Maybury (1985), one group of the psychopaths was both affectionless and impulsive-aggressive and the other although showing likewise a lack of affection and empathy was less impulsive and aggressive. The researchers interpreted these findings as indicating the heterogeneity of the Cleckley psychopaths. In addition to a lack of affection and a low degree of impulsive aggression, one of the groups in the study was characterized by an elevated score on SW. The subjects of the group were socially withdrawing. Since social withdrawal is not involved in Cleckley's description, labeling these subjects Cleckley psychopaths could be called in question. Only the affectionless, impulsive-aggressive and moderately sociable subjects appeared to meet Cleckley's criteria.

Absence of anxiety, low arousal and sensation seeking behavior are associated both with Cleckley's psychopathy and the primary type delineated by Howard. It could be argued that only the primary type is psychopathy in the classic (Cleckley's) sense. When comparing the North-American concept of psychopathy by Howard with Cleckley's psychopathy, contradictions between the latter and Howard's secondary type become obvious. It has already been stated above that social withdrawal fits in poorly with Cleckley's description. In addition, Howard (1986) stated that there may be electrophysiological abnormalities related to secondary psychopathy, with low cortical arousal marking the secondary type (see also Blackburn, 1979; Howard, 1984). Hare (1970, 1978; Hare & Cox, 1978b) reported, however, that abundant slow activity and low cortical and autonomic activation characterize the Cleckley psychopath, that is, the primary type in Howard's theoretical framework.

Thirdly, Howard (1986) distinguished between criminal behavior and the personality of the psychopath, and, further, between the "ordinary criminal" and the psychopath without making the distinction on the basis of the personality characteristics described by Cleckley. Howard's classification is behavioral in the sense that regarding the individual as the primary type, the secondary type, or the ordinary nonpsychopathic offender, is determined by how he/she reacts to incoming and threatening stimulation or to boredom. Nonpsychopathic recidivists are not particularly susceptible to stress induced by either threat or boredom (Howard, 1986). It remains unclear how criminal behavior in this group could be explained in the absence of personality deviation and coping-failure explanations. In conclusion, the emphasis on chronic antisocial behavior and the inclusion of the secondary type in the concept of psychopathy signify that Howard's North-American concept is not in agreement with the classic psychopathy of Cleckley.

Raine (1988b) touched upon the problems of Howard's (1986; Barbour-McMullen et al., 1988) psychopathy construct. In his view, defining the concept of psychopathy by virtue of early chronic antisocial behavior and assessing psychopathy with the Socialization scale are the core problems. Raine also remarked on the European constituents of the so-called North-American concept. Namely, that Howard's model of psychopathy is partly influenced by a British line of research, as represented in the studies by Blackburn (1975, 1979, 1987; Blackburn & Maybury, 1985). Hence, the division of psychopathy into the North-American and the European concept is less apposite.

Howard (1988) tried to confute Raine's criticism but admitted that the Anglo-American concept, in contrast to the continental, particularly German, concept, might be a more appropriate choice of term than the North-American concept. Raine adhered, however, to the notion that the Anglo-American concept rests on chronic socially-deviant behavior, while the European concept stresses the deviation of personality. Howard

(1988) denied having stated the early onset of antisociality as a criterion of the Anglo-American concept, as Raine claimed. The early onset of antisociality is, however, described recursively in Howard's studies (e.g. Barbour-McMullen et al., 1988; Devonshire, Howard, & Sellars, 1988).

Howard thus vigorously defends his conceptualization, in which (early?) chronic antisocial behavior and Cleckley's psychopathy converge but in which the European concept still remains undefined. "The European concept", presented for example in the study by Schneider (1923), also has elements in common with Cleckley's psychopathy, as suggested above in section 2.1. Moreover, Cleckley's psychopathy could be seen as a deviation of personality or as a personality type. Is there, then, any sense in assuming that the European concept and the Anglo-American concept are separate? There seems to be no reason to differentiate between psychopathy as chronic antisocial behavior and psychopathy as a deviation of personality. Howard's definitions may have increased more than decreased conceptual confusion.

An acute, conceptual entanglement emerges when attempting to operationalize psychopathy using the new assessment methods. Cleckley's description of psychopathy was criticised for overemphasizing lack of empathy and general affective poverty instead of also considering cognitive-behavioral characteristics, such as impulsivity and aggressiveness (Blackburn & Maybury, 1985). Difficulties have also arisen in mediating Cleckley's psychopathy from one researcher to another (Hare, 1980b; Schroeder, Schroeder, & Hare, 1983).

The Psychopathy Checklist (PCL) developed by Hare (1980b) purports to clarify and measure Cleckley's psychopathy in a valid and reliable way. However, its ability to discriminate between the Cleckley psychopaths and other clinical groups has been disputed (Barbour-McMullen et al., 1988; Hare & Harpur, 1986; Hart & Hare, 1989; Howard, 1990; Howard, Bailey, & Newman, 1984; Raine, 1986, 1988b). Howard et al. (1984) claimed that the PCL failed to differentiate accurately enough a schizophrenic group from a group of psychopaths but actually misclassified half of the schizophrenic group as psychopaths. Hare and Harpur (1986) resented the criticism and pointed out that Howard had neither defined the clinical groups clearly according to well-established criteria nor made sure that the patients classified as psychopaths would score high enough on the PCL. They also referred to other methodological defaults such as inappropriate scoring procedures, small group sizes and principles of group formation. Hare and Harpur (1986) and Raine (1986) raised the justified question of whether the subjects examined by Howard were psychopaths at all in the proper sense of the word. Later, Howard (1990) proposed that schizophrenic and psychopathic offenders share a common affective deficit, which could explain the failure of the PCL to discriminate adequately between them. These disputes apparently stem from the fact that there are disparate views on the definition of

psychopathy.

To summarize, modern research on psychopathy indicates that the concept has been used in at least the following meanings:

1. The classic psychopathy described by Cleckley (1941, 1982) and Hare (1970, 1986).
2. Psychopathy as defined according to scales based on personality inventories (e.g. the MMPI, Eysenck's scales, the Socialization scale of the California Psychological Inventory, the B and W scales of the SHAPS). The distinction between primary and secondary psychopathy is often included in these definitions, the primary psychopath being emotionally cold and sociable and the secondary type neurotic and socially withdrawing.
3. Psychopathy defined by chronic socially-deviant or antisocial behavior. The emphasis is on the behavioral patterns in lieu of the personality characteristics, and psychopathy is considered similar to sociopathy or the APD.

To avoid conceptual confusion, a clear choice between these alternatives is required. Definitions based merely on various personality scales appear somewhat mechanical and resort to self-reporting. The picture of the psychopath or even types of psychopaths arising on the basis of such scales is complicated and variable. Furthermore, the concept of psychopathy seems to refer to something more than mere antisocial behavior. The APD and psychopathy are not interchangeable, either. If the concept of psychopathy is used, it must have a clear definition of its own. Clinical observations accumulated and documented in the course of several decades confirm the existence of a clinically discernible syndrome, perhaps best reported by Cleckley. When referring to a personality profile described by Cleckley, the concept of psychopathy can be retained for the sake of consistency.

2.5 Methods of assessing psychopathy

A plethora of indices exist based on the scales of personality inventories and developed for measuring psychopathy. For example, indices including scales from the MMPI and the California Psychological Inventory (CPI) have been utilized (e.g. Blackburn, 1975, 1979, 1987; Blackburn & Lee-Evans, 1985; Blackburn & Maybury, 1985; Hare, 1985a; Heilbrun, 1979, 1982; Heilbrun & Heilbrun, 1985; Sutker & Allain, 1987). The Psychopathic Deviate (Pd) and Hypomania (Ma) scales from the MMPI and the Socialization (So) scale from the CPI are the most commonly used inventory-based indices for the assessment of

psychopathy. However, there are reasons for assuming that these indices are not valid measures of Cleckley's psychopathy and, for that matter, fail to evidence sufficient reliability (Hare & Cox, 1978a; Hare, 1985a, 1986; Hundleby & Ross, 1977).

Hare (1980b; Schroeder et al., 1983) noted the drawbacks of inventories and framed a reliable and valid assessment method for psychopathy. The Psychopathy Checklist (PCL), first as a 22-item instrument (Hare, 1980b) and later with 20 items (Hare, 1985b), consists of behavioral and personality items closely associated with Cleckley's description. Each PCL item is scored on a 3-point scale from interview and file data according to the extent to which it fits the subject. Examination of the psychometric characteristics of the PCL has shown that it reaches sufficient reliability and discriminant validity in male criminal populations (Hare, 1985a; Hare & Harpur, 1986; Hart & Hare, 1989; Kosson, Smith, & Newman, 1990).

The PCL is specifically designed to assess the Cleckley psychopath who behaves antisocially. The critique on its inability to discriminate between the primary and secondary psychopaths (Blackburn & Maybury, 1985; Howard et al., 1984) is thus unwarranted. The PCL classifies accurately individuals labeled psychopaths after global assessments (Hare, 1985a; Hart & Hare, 1989). The global assessment was previously used as a coarse-grained method, by which the inmates were rated along a 7-point rating scale with the aid of interview and file data and classified as psychopaths if scoring 6-7 on the scale (Hare, 1986).

The revised PCL (Hare, 1985b) comprises 20 items with detailed descriptions and possible sources of information for scoring the item. The Finnish translation of the PCL with reliability data was presented in Report 5. Only the item titles are enumerated here in Table 1.

TABLE 1. Items in the Psychopathy Checklist (Hare, 1985b)

-
1. Glibness/superficial charm
 2. Grandiose sense of self-worth
 3. Need for stimulation/proneness to boredom
 4. Pathological lying
 5. Conning/manipulative
 6. Lack of remorse or guilt
 7. Shallow affect
 8. Callous/lack of empathy
 9. Parasitic lifestyle
 10. Poor behavioral controls
 11. Promiscuous sexual behavior
 12. Early behavior problems
 13. Lack of realistic, long-term goals
 14. Impulsivity
 15. Irresponsibility
 16. Failure to accept responsibility for own actions
 17. Many short-term marital relationships
 18. Juvenile delinquency
 19. Revocation of conditional release
 20. Criminal versatility
-

The nature of psychopathy assessed with the PCL has emerged clearly in factor analyses. Harpur, Hakstian and Hare (1986) analyzed the factor structure of the 22-item PCL in a sample of 329 male inmates and ended up with three factors. The first factor concerned Chronic antisocial, criminal and impulsive behavior. The second factor was named Egoistical and callous lack of concern for others. It dealt with the core personality characteristics of the Cleckley psychopath. The third factor was designated Superficial relationships.

Previously, Hare (1980b) found five PCL factors in the principal components analysis. They reflected (1) an impulsive, unstable lifestyle with no long-term plans or commitments, (2) self-centeredness, callousness and a lack of empathy and concern for others, (3) superficial relationships, (4) early appearance of chronic antisocial behavior and (5) impulsive and inadequately motivated criminal acts. Also, the analysis conducted by Raine (1985) yielded the factors Impulse control, Emotional detachment, Egocentricity/duplicity, Superficial relationships and Early antisociality with an additional two undefined factors. Raine's factors corresponded well to the components extracted in the analyses by Hare (1980b).

The factor solutions produced by Hare (1980b) and Harpur et al. (1986) are rather similar. In the three-factor model of Harpur et al. the first factor covers factors 1, 4 and 5 in Hare's analysis. The second and the third factor were alike in both analyses. The results of the analyses favor the hypothesis of a reliable factor structure for the PCL.

In order to clarify how many PCL factors could be replicated across several samples of inmates, Harpur, Hakstian and Hare (1988) examined the factor structure of the PCL scores for six different samples of male inmates ($N = 1119$). The results showed that two correlated factors could be found across the samples. Factor 1 was labeled Selfish, callous and remorseless use of others. It involved high loadings on the personality characteristics. Factor 2, entitled Chronically unstable and antisocial lifestyle, lumped together items describing antisocial behavior or social deviance. Among others, the items Glibness/superficial charm, Pathological lying and deception, Lack of remorse or guilt and Callous/lack of empathy loaded heavily on the first factor. The items Parasitic lifestyle, Early behavior problems, Lack of realistic long-term plans and Many types of offense received high loadings on the second factor. The two-factor structure was confirmed by Harpur, Hare and Hakstian (1989). Also in the studies by Hare (1980b) and Harpur et al. (1986), most of the total variance was accounted for by the factors related to psychopathic personality characteristics and criminal or antisocial behavior. To conclude from all available results, the factor structure of the PCL is stable and replicable.

2.6 Cortical and autonomic activation in psychopaths

Clinical evidence of emotional flatness, lack of anxiety, fearlessness and a strong need for stimulation in the Cleckley psychopaths has served as an impetus for psychophysiological research on psychopathy. As the biological correlates of psychopathy have been reviewed previously (Haapasalo, 1986), only a few major findings will be repeated in the present study to promote an understanding of possible background factors in psychopathy.

In his classical experiment of avoidance learning, Lykken (1957) observed the Cleckley psychopaths having a relatively low level of anxiety during the experimental session. Their anticipatory skin conductance responses to a conditioned signal stimulus prior to an electric shock were lower than in the student control group. Lack of anticipatory fear or anxiety and deficits in avoidance learning in the Cleckley psychopaths have been stated in numerous reviews (e.g. Hare, 1978, 1986; Hare & Cox, 1978b; Mednick, Pollock, Volovka, & Gabrielli, 1982; Siddle & Trasler, 1981). Briefly, the following major findings of psychophysiological research on psychopathy can be presented:

1. Baseline electrodermal autonomic activation indicated by a tonic skin conductance tends to be lower for psychopaths than for controls (Hare, 1965, 1980a; Ellis, 1987; Siddle, 1977). The group differences generally emerge in monotonous, threatening or undemanding experimental conditions (Jutai, Hare, & Connolly, 1987). Under ordinary task demands or in situations requiring passive attention no differences can be discovered (Jutai & Hare, 1983).
2. In anticipation of an aversive stimulus (e.g. electric shock, loud tone) psychopaths evidence less electrodermally recorded anticipatory anxiety than controls (Hare, 1965, 1982; Hare, Frazelle, & Cox, 1978). They also acquire conditioned electrodermal responses less readily than others and show electrodermal hyporesponsivity when anticipating a noxious stimulus ostensibly delivered to another subject (see e.g. Hare, 1978). There is no exhaustive explanation for the fact that psychopaths fail to show anticipatory fear in response to the premonitory cues of an aversive stimulus. It might be that they are able to observe and become aware of the contingencies between the cues and the aversive stimulus at the cognitive but not at the psychophysiological level (Hare & Jutai, 1986). Alternatively, it is possible that low levels of tonic and anticipatory electrodermal activation do not reflect abnormalities of the autonomic nervous system functions but are related to some motivational and cognitive processes in psychopaths (Hare, 1978, 1986).
3. When anticipatory fear reactions for psychopaths have been registered both electrodermally (GSR) and cardiovascularly (e.g. heart rate, pulse volume), a reaction pattern characteristic of psychopaths has emerged. Pronounced cardiovascular autonomic reactions are concurrent with low electrodermal activation (Hare, 1982; Hare & Craigen, 1974; Hare et al., 1978; Hare & Quinn, 1971). For example, psychopaths show greater

anticipatory heart rate responses, cardiac acceleration, than other subjects (Hare & Craigen, 1974). Interpretations of this finding, considered in the previous review (Haapasalo, 1986), are tentative.

4. Excessive slow activity (theta and delta waves in EEG) has been found in psychopaths (Hare, 1970; Hare & Cox, 1978b). Studies concerning aberrations in cortical activity are, however, imbued with many methodological problems. For this reason, the conclusions drawn from these results must be tentative. It could be assumed that the abnormal cortical activity is associated with the functioning of the limbic system and thus with the regulation of emotions. The limbic system plays a role in the arousal of anticipatory fear.
5. Endocrinological findings on catecholamine excretion in psychopaths are also related to the level of activation. It has been shown that catecholamine excretion in psychopaths fails to increase to the same extent as in other subjects in anticipation of unpleasant events (Lidberg, Levander, Schalling & Lidberg, 1978). Increased excretion of catecholamines can be associated with increased anticipatory anxiety or fear. Accordingly, low excretion of catecholamines in psychopaths would seem to indicate relatively small emotional reactions prior to a stressful situation.

The results of the studies on autonomic and cortical activation in psychopaths are not entirely consistent or interpretatively unambiguous. The significance of the findings can be interpreted, for example, in the light of arousal theory. The premise of arousal theory is that the reticular activating system, extending its neuronal connections from the brain stem into the higher brain centers, regulates arousal by keeping the stimuli-intake at the preferred level. If the level of arousal falls behind the optimal level, the individual seeks sensory stimulation more than usual. If arousal surpasses the optimal level, he/she avoids sensory stimulation.

On the basis of psychophysiological observations, it would appear that psychopaths need much stimulation to maintain an optimal level of arousal. Their small electrodermal reactions could reflect boredom, drowsiness and, overall, lowered arousal in monotonous experimental situations (Hare, 1980a). Large cardiovascular reactions could play a subservient role in modulating or inhibiting sensory input and thus reduce the impact of impending aversive stimuli, if needed (Hare, 1978; Hare & Cox, 1978b). Arousal theory has been widely applied to criminal and psychopathic behavior (e.g. Blackburn, 1979; Ellis, 1987; Eysenck, 1987; Fowles, 1980; Hare, 1970; Raine, 1988a, 1989; Zuckerman, 1979). The putative low level of arousal in psychopaths could lead to stimulation seeking behavior. A tendency for psychopaths to get bored and seek excitement in their lives may result in antisocial behavior. The sensation seeking trait, to be presented in the next section, has to do with a proneness to seek sensations, excitement and change. The psychophysiological findings may also be relevant from the point of view of sensation seeking theory.

2.7 Psychopaths as sensation seekers

Assumptions germane to sensation seeking in psychopaths emanate from the theory by Zuckerman (1979, 1983) and the early accounts of pathological stimulation seeking by Quay (1965). The classic description of psychopathy also pointed to an avoidance of boredom and to attempts among psychopaths to alleviate boredom by antisocial and impulsive acts (Cleckley, 1941, 1982). Of course, as argued by Hare and Jutai (1986), the low cortical arousal and need for stimulation models provide only limited theoretical speculations about psychopathy. These models poorly explain the core personality characteristics of the Cleckley psychopath, for example callousness, lack of empathy, guilt or remorse and irresponsibility.

In accordance with Cleckley's description, Quay (1965) described the psychopath as behaving impulsively and being incapable of delaying gratification. He explained the psychopath's behavior by the need for variable sensory stimulation and by adaptation to stimuli. Adaptation may be exceptionally fast or psychopaths may have a hyporesponsive autonomic nervous system. The psychopath perhaps needs more stimulation in order to maintain a state of well-being than others. Quay's hypotheses on the physiological basis of psychopathy approach those of modern psychophysiological research on psychopathy.

Sensation seeking is a personality trait referring to a need for novel, variable and complex sensations and experiences and a willingness to take physical and social risks for them (Zuckerman, 1979). The trait can be manifested in socially acceptable ways (e.g. dangerous hobbies and professions) or in antisocial activities (e.g. drug abuse, gambling, criminality) (Zuckerman, 1979). The theory was presented more thoroughly in Reports 1 and 5. It suffices to reemphasize that corroborating evidence for the relationship between sensation seeking and psychopathy or antisocial behavior has been obtained. However, consistent or strong relationships between the Sensation Seeking Scale (Zuckerman, 1979) and Cleckley's psychopathy have not been found (Hare & Jutai, 1986; Zuckerman, 1979). Along with its branches into arousal, or optimal level of activation and stimulation, theory, the sensation seeking model can provide a tenable explanation for the antisocial behavior of the Cleckley psychopath. The limbic system with its regions that mediate rewarding stimulation might be important in regard to sensation seeking. Since the limbic system is associated with emotional regulation, these brain regions could have a bearing on the affective poverty observed in the Cleckley psychopaths. Firm conclusions must be avoided, though, as findings on the relationships between biological factors (e.g. levels of neurotransmitters) and sensation seeking are correlative at best.

2.8 On cognitive processes in psychopaths

The main lines of recent neuropsychological research on psychopathy concern neurological deficits in frontal and prefrontal regions, dysfunction in attentive processes, lateralization of cognitive functions and abnormalities in linguistic processes. The purpose of these studies has been to pinpoint possible organic factors or aberrant cognitive processes underlying psychopathy. Differences, especially in verbal tasks and attentional processes, between psychopaths and nonpsychopaths have been discovered across studies. Unfortunately, the drawing of conclusions from the studies is complicated by different definitions of psychopathy.

As the frontal lobe dysfunction hypothesis and linguistic processing in psychopaths have been studied widely, they will be reviewed also here.

Frontal lobe dysfunction usually is accompanied by deficits in the planning and execution of activities, abstraction difficulties, disinhibition, attentional problems, decreases in spontaneity and initiative, impaired memory, rambling thoughts, mood changes and difficulties in changing the cognitive set flexibly (Kandel & Freed, 1989; Miller, 1987; Stuss & Benson, 1984). The concept of the frontal lobe syndrome covers a wide range of deficits of diverse origin and in various locations. The concept of the frontal lobe personality specifically refers to personality changes ensuing from frontal lobe damage, including unrestrained and tactless behavior, jocularity, bawdy and puerile joking, blunted feelings, callous unconcern, boastfulness and grandiose, obstinate and childishly egocentric behavior (Stuss & Benson, 1984). This bundle of pathological changes seems to correspond to the pseudopsychopathic personality with the location of pathology in the orbital regions of the frontal lobe (see Blumer & Benson, 1975).

Using neuropsychological assessment methods, several researchers have investigated whether prefrontal, frontal or fronto-temporal dysfunction bears a relationship to psychopathy and criminal behavior. Miller (1988) inferred from these studies that delinquency and violent or aggressive behavior is often associated with an impaired performance in complex problem solving, response regulation, verbal reasoning and linguistic skills. This is not to argue, however, that there were specific lesions in specific loci leading to cognitive dysfunction. The brain has to be viewed as an interactive complex of systems, on the coordinated operation of which cognitive processes depend.

Most of the studies cited by Miller (1987, 1988) or Kandel and Freed (1989) do not relate to the Cleckley psychopath, although the terms psychopath and nonpsychopath are used on several occasions. For example, Gorenstein (1982) defined psychopathy differently from Cleckley's criteria but concluded that psychopaths did worse on the tasks

assessing cognitive flexibility and made more perseverative errors than nonpsychopaths. This conclusion was attacked by Hare (1984; see also Hart, Forth, & Hare, 1990), who allocated his subjects to the low, medium and high psychopathy groups according to Cleckley's criteria. Also, Sutker and Allain (1987) failed to find greater deficits in cognitive flexibility for psychopaths as compared to nonpsychopaths. The results were in line with those obtained by Hare (1984), but neither of the studies was a replication of Gorenstein's (1982) investigation. Moreover, Sutker and Allain (1987) classified subjects as psychopaths using Pd and Ma scores, the Pd - So index and the diagnosis of APD. The discontinuity between their approach and that of Hare (1984) is clearly due to different definitions of psychopathy. All three studies used different assessment procedures for psychopathy, and thus remain incomparable with one another. Hoffman, Hall and Bartsch (1987) tried, by contrast, a replication of Gorenstein's study but no significant relation between frontal lobe dysfunction and psychopathy was ascertained.

For stronger conclusions about the relationships attested between psychopathy and frontal lobe dysfunction, more uniform definitions of psychopathy are needed. Over and above that, the true accuracy and validity of assessment methods purporting to measure frontal lobe functions should be determined. The Wisconsin Card Sorting Test, the MWCST and other sorting tests, maze learning tests (e.g. the Porteus Mazes), tests of verbal fluency, the Halstead-Reitan Neuropsychological Battery, the Necker Cube, a sequential matching memory task, the Stroop Color-Word Test, block design tests, the WAIS and the Visual-Verbal Test of abstraction and concept formation have all been used in examination of frontal lobe dysfunction (Gorenstein, 1982; Hare, 1984; Kandel & Freed, 1989; Lueger & Gill, 1990; Stuss & Benson, 1984; Sutker & Allain, 1987). There is no definite evidence for their ability to measure cognitive processes related to the frontal lobe.

Linguistic processing is another popular area in neuropsychological psychopathy research. Cleckley (1982) applied the concept of "semantic aphasia" to describe discrepancies between verbalized thoughts, emotions or values and the actual behavior of psychopaths. His clinical findings indicated the inability of psychopaths to perceive the emotional and value loadings of the words. The words seem to want affective tones. Psychopaths operate more with denotative than connotative meanings (Hare, 1988). The phrase "knows the words but not the music" illustrates well the nature of verbal processing in psychopaths (see Cleckley, 1982; Hare, 1988). This observation made by Cleckley caused researchers to unravel specific characteristics of verbal processing and cerebral lateralization in psychopaths (see Hare, 1986).

Dysfunction of the dominant, usually left, hemisphere (Flor-Henry, 1978; Flor-Henry, Fromm-Auch, Tapper, & Schopflocher, 1981; Yeudall, 1977) and cerebral asymmetry in verbal processing (Hare, 1979;

Hare & Jutai, 1988; Hare & McPherson, 1984a; Raine, O'Brien, Smiley, Scerbo, & Chan, 1990) have been the main objects of study. Tasks eliciting (or at least being assumed to elicit) lateralization have been utilized, including the divided visual field technique, using a tachistoscope with verbal stimuli projected onto the right and left visual fields, and the dichotic listening procedure. In normal subjects, right visual hemifield (left hemisphere) or right ear (left hemisphere) advantages in performance are generally observed. For most people the left hemisphere seems to be specialized in linguistic functions and verbal processing.

The results for psychopaths have shown consistently that the left hemisphere among psychopaths does not seem to be as clearly specialized in verbal processing as among control groups (see Hare, 1986). Verbal performance for psychopaths appears to be less lateralized in favor of the left hemisphere than for others. It might be observed here that nowhere has it been indisputably confirmed that, for example, the right ear advantage in dichotic listening truly reflects lateralization (Kinsbourne, 1976). Hare and his co-workers have, however, accepted this presumption.

In tasks demanding the abstract and semantic categorizing of verbal material, left hemisphere verbal processing has been shown to be less efficient in psychopaths than in other subjects (Hare, 1986; Hare & Jutai, 1988). The following explanations were suggested: (a) the verbal processes of psychopaths are not as lateralized as those of other subjects; (b) the left hemisphere arousal of psychopaths is unusually low leading to limited processing resources; or (c) psychopaths use unusual strategies in processing verbal information (Hare, 1986). Recent experimental evidence is consistent with the hypothesis of reduced lateralization of linguistic processes among psychopaths (Raine et al., 1990). The suggestion regarding lower left-hemisphere arousal in psychopaths has not received support (e.g. Forth & Hare, 1989; Jutai et al., 1987).

The weak discrimination found between affective and neutral words among psychopaths is also worth noting. On the basis of behavioral assessments (e.g. reaction time to words) and electrocortical recordings, it appears that psychopaths fail to discriminate normally between affective and neutral words (Williamson, Harpur, & Hare, 1986). Hare, Williamson and Harpur (1988) found that in word categorization tasks psychopaths categorized more according to the denotative meanings of the words, for example opposites (deep and shallow), than to their emotional connotations, for example metaphor (warm and loving). It is possible that the formal, semantic and affective components of language are less integrated in psychopaths than in other subjects (Hare & Jutai, 1988). Work is currently being done, especially by Hare and his colleagues, on the putative unusual or defective verbal processing in psychopaths. Empirical observations related to verbal processing link modern research on psychopathy to the original clinical accounts of "semantic aphasia" in psychopaths.

2.9 Psychopathy and criminality

The association between criminal or antisocial behavior and psychopathy is tolerably well-established. According to Cleckley (1982), inadequately motivated antisocial behavior is a characteristic of psychopaths. The Cleckley psychopath may commit thefts, forgeries, frauds etc. without any tangible profit, the risk of detection being considerable. Criminality in psychopaths is not regular, motivated or limited (cf. pyromania) (Cleckley, 1982).

There are a number of empirical studies on crimes committed by psychopaths and on features of their criminal career. Theoretically grounded hypotheses on the types of offense that psychopaths tend to commit have been put forward to a lesser extent. Aggressive and violent behavior and crimes of violence have been related to psychopathy (Hare, 1981; Hare & McPherson, 1984b; Heilbrun, 1979, 1982, 1984; Heilbrun & Heilbrun, 1985; Williamson, Hare, & Wong, 1987), although Cleckley (1982) did not attribute either extreme aggression or violent crime to psychopathy. Cleckley (1982) claimed the following:

The typical psychopath...usually does not commit murder or other offenses that promptly lead to major prison sentences...Of course I am aware of the fact that many persons showing the characteristics of those here described do commit major crimes and sometimes crimes of maximal violence. There are so many, however, who do not, that such tendencies should be regarded as the exception rather than as the rule. (p. 150)

The Cleckley psychopath does not manifest violent rage or other intense emotions. When he commits a violent crime, it is usually a casual act neither resulting *from* any strong emotions nor resulting *in* any emotions, remorse or other (Cleckley, 1982).

The findings on aggression and violent crimes in psychopaths imply a risk of circular inferences. It may be that the violent offenders will be too easily classified as psychopaths, whereupon they are found to be more violent than others. Hare and McPherson (1984b) tried to diminish the problem of circularity by dropping the PCL items related to violence. Psychopaths had, nonetheless, more charges for violence than others. Also, psychopaths have received more charges per year overall and appeared at court younger than other inmates (Hare & Jutai, 1983). Furthermore, it has been found that criminal behavior among the Cleckley psychopaths is more persistent than among other offenders. Hare and Jutai (1983) observed the number of charges in the age groups 32 - 36 and 37 - 41 to be higher for psychopaths than for others. It appeared from the data that the so-called burn-out phenomenon and

decline in criminal activities after age 30 does not apply to psychopaths. In agreement with this, Hare, McPherson and Forth (1988) reported that criminality among psychopaths flourished until around age 40, whereas recorded criminal behavior among other offenders faded steadily between the ages of 16 - 45.

To summarize, the findings show that the Cleckley psychopaths may engage in criminal activities to a greater extent than other offenders. Their criminal behavior starts earlier, continues longer and the degree of criminality is more pronounced than in others. However, there is a considerable lack of knowledge concerning the types of offense preferred among the Cleckley psychopaths and possible specialization in certain crimes.

In Cleckley's description of psychopathy, unreliability, pathological lying, duplicity and callous unconcern and manipulation of other people could point to a tendency towards committing frauds and fraud-like crimes. One of the PCL items, Conning/manipulative, is "concerned with the use of deceit and deception to cheat, bilk, defraud or manipulate others" (Hare, 1985b, p. 17). Further, the item states that "the psychopath may have a record of charges or convictions for fraud, embezzlement, impersonation, promoting phoney stocks and worthless property, and swindles of all sorts, both large and small" (Hare, 1985b, p. 17). In addition, when classifying individuals showing antisocial behavior as psychopaths, antisocial persons and sociopaths according to the dynamics of their criminal acts, Schlesinger (1980) argued that the criminality of the psychopath is smoother (e.g. frauds or swindles) than that of the antisocial personality or the sociopath. These chains of reasoning suggest that the Cleckley psychopaths are swindlers. Committing frauds would be expressive of their personality characteristics.

3 OBJECTIVES OF THE STUDY

The present empirical study was focused on the methods of assessing psychopathy, offender groups formed on the basis of the Psychopathy Checklist (PCL) and criminal behavior among the Cleckley psychopaths. The concept of psychopathy was taken from Cleckley and is used in that meaning in the present summarizing report. Three different techniques were used to find the Cleckley psychopaths: global assessments, the total PCL score and a clustering of the PCL items.

The review of psychopathy above aimed to summarize what we know and do not know about the Cleckley psychopath. The problems addressed by the study aimed at increasing the existing knowledge of psychopathy in Finland, particularly in regard to the methods of assessment. The objectives were as follows:

A. Methods of assessing psychopathy.

1. What is the factor structure for the Finnish version of the 20-item Psychopathy Checklist (PCL) developed by Hare (1985b)?
2. What is the relationship between clinical-behavioral assessments (the total PCL score and the PCL factor scores) and assessments based on self-report (personality questionnaires)? In order to study this question, a sub-objective of the study was to standardize the Eysenck Personality Questionnaire (EPQ) and Zuckerman's Sensation Seeking Scale (SSS), since there were no standardized versions available in Finland. On the basis of the previous findings and the bulk of the literature, the EPQ and the SSS were assumed to relate to psychopathy.
3. What portrait of the Cleckley psychopath emerges in the light of the interview responses and file data when the assessments of psychopathy are made on the basis of global impressions?

B. Offender groups.

1. What kind of offender groups can be discerned on the basis of the clustering of the PCL items?
2. How do the offender groups differ from each other in personality questionnaire scores?
3. How do the offender groups overlap with the psychopathy groups formed by using the clinical-behavioral assessments (the total PCL score) and the global assessments of psychopathy?

C. Criminal behavior.

1. What types of offense do the Cleckley psychopaths commit when the psychopathy groups are formed by using the clinical-behavioral assessments (the total PCL score)?
2. How do the offender groups derived by the clustering of the PCL items differ from each other with respect to criminal behavior?

4 EXECUTION OF THE STUDY

4.1 Subjects

Subjects in the offender sample. The subjects in the offender sample were described in Report 5. The selection process will be repeated here, since Report 5 is accessible only to Finnish readers. The study is limited to a sample of inmates as no proper methodology exists for studying psychopaths outside institutions (Hare & Cox, 1978a).

Three central prisons and one prison for offenders awaiting trial, situated in different provinces, comprised the target population. The Department of Corrections agreed to the study. In the selection process, the following criteria were strictly observed:

1. age over 20 but under 55 years
2. conviction for, at most, three milder violent offenses (e.g. assault), robberies excepted
3. no severe violent offenses (e.g. aggravated assault, manslaughter)
4. conviction for property offenses, particularly frauds or fraud-like offenses, traffic offenses and/or narcotics offenses
5. absence of acute mental illness, heavy medication, severe physical illnesses or symptoms, severe brain damage, illiteracy or mental handicap

Neither the youngest offenders below the age of 21 nor the oldest inmates were accepted for the offender sample. In the youngest offenders, the development of the personality may be uncompleted, and the oldest prisoners may have a burn-out syndrome resulting in marked behavioral changes.

The most violent offenders were not included as Cleckley (1982) does not regard psychopaths as extremely violent individuals. Thus,

there seems to be no particular reason to select violent offenders, but rather more appropriate to pick out nonviolent, especially fraudulent, offenders, if the objective is to investigate Cleckley psychopaths.

All the offenders who satisfied criteria 1 - 4 were drawn from the prison rosters in four institutions. They were divided into age and recidivism groups. The recidivism groups were 1 - 2 times, 3 - 5 times, 6 - 8 times and at least 9 times in prison. The age groups were 21 - 25, 26 - 35, 36 - 45 and 46 - 55 years. The aim was to include an approximately equal number of inmates in each cell formed by the age and recidivism groups. Thereafter, systematic random sampling was used to form the sample. The cross-tabulation of the age and recidivism groups was presented in Report 5. Because there were few old first-time offenders and few young recidivists, the sampling goal was not fully achieved. After the sample had been formed, those inmates who failed to meet the fifth criterion were excluded with the assistance of prison staff and files. Finally, the sample comprised 92 inmates, aged 21 - 53.

Subjects in the standardization sample. The subjects for the standardization of the Eysenck Personality Questionnaire and the Sensation Seeking Scale (Form V) were presented in detail in Report 1 and also in Reports 2 - 4. In brief, the standardization sample comprised 967 (463 females and 504 males) Finnish respondents aged 17 - 71 years at the moment of the data analysis. The subjects below the age of 18 were girls and boys from a vocational training school. The other subjects were selected randomly from the national population register. The mean age for the women was 39.79 (SD = 15.55) and for men 37.74 (SD = 14.73), the women being significantly ($p < .05$) older than the men. In the analyses carried out in England (Report 2), only 949 (448 females and 501 males) subjects were used due to a minor data loss.

4.2 Methods

Prison data. The methods used in gathering the prison data were described in more detail in Reports 5 and 6. The Psychopathy Checklist ratings were made on the basis of files and interviews. *Files* comprised offense and conviction data from the Criminal Record Office, reports of prison behavior and disciplinary problems, health problem and therapy reports, applications, letters, etc. The prison files contained fairly inconsistent and miscellaneous information, mostly comprising judicial documents, applications, complaints and administrative decisions. Mental state assessments and social enquiry reports for young offenders under age 15 were put at the researchers' disposal, insofar as they existed. Since there were no offenders convicted for serious violent crimes in the sam-

ple, mental state assessments were rare. Hence, file information about the subjects' personality was scanty. In respect of developmental history, family relations and alcohol or drug abuse, file information was also inadequate. The documents used in the study were listed in Report 5.

The interviews were based on a structured format consisting of both open-ended and forced-choice questions and divided into the following areas: (a) family background, behavioral problems and school history between ages 0 - 15 years, (b) educational and work history, (c) family life since age 18, (d) criminality and antisocial lifestyle and (e) hobbies and general interests. Questions probing the emotional reactions of the subjects under certain conditions (e.g. reactions in connection with crimes and close relationships) were included in the interview. The areas and questions were chosen to elicit information pertinent to psychopathy. The interviews were guided by the questions, but the subjects were also allowed to talk freely about issues related to the questions. Also, additional questions were elaborated during the interviews when needed. The interviews took from one and a half to as long as three hours. The Finnish interview form is available from the author on request.

The Psychopathy Checklist (PCL) ratings were made on the basis of files and interviews by two researchers independently. The 20-item Checklist (Hare, 1985b) was translated into Finnish, and the items were modified to suit Finnish jurisdiction. In particular, items 19 (Revocation of conditional release) and 20 (Criminal versatility) were worked up as the parole system and types of offense are different from those in Canada. The Finnish translation of the PCL can be found in Report 5. Interrater reliability (Pearson r) for scorings in the subset of 71 subjects was .79. The internal reliability (alpha coefficient) for the 17-item Psychopathy Checklist total score was .90. Items 11 (Promiscuous sexual behavior) and 17 (Many short-term marital relationships) were dropped because of assessment difficulties. Item 14 (Impulsivity) which correlated negatively with the total score was also dropped in order to increase internal reliability.

The subjects in the offender sample completed non-anonymously *personality questionnaires* traditionally related to psychopathy and antisocial behavior. The scales were selected due to their popularity in psychopathy research. The 101-item Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and the Sensation Seeking Scale-Form V with 40 forced-choice items (Zuckerman, 1979) were translated into Finnish and standardized in a sample of 967 subjects, as described in Reports 1-4. The reliabilities (alpha coefficients) for Eysenck's Psychoticism (P), Extraversion (E), Neuroticism (N) and Lie (L) scales were .67, .86, .86 and .85, respectively. The reliabilities for the Zuckerman's Thrill and Adventure Seeking (TAS), Experience Seeking (ES), Disinhibition (Dis) and the total Sensation Seeking scales were, in order, .86, .58, .77 and .87. Further, the Psychopathic Deviate (Pd) and Hypomania (Ma) scales from the Minnesota Multiphasic Personality Inventory (Graham, 1983; Hathaway &

McKinley, 1951) and the Socialization (So) scale from the California Psychological Inventory (Gough, 1969) were administered to the subjects. For the Pd, Ma and So scales only were previous nonstandardized translations available. The responses of 86 subjects were accepted after scanning for omissions and unacceptable answers. The internal reliabilities for the Pd, Ma and So scales were .65, .68 and .67.

Standardization data. The standardization data for the EPQ and the SSS was collected by mail and during group investigations. Both questionnaires were translated into Finnish by means of ordinary back-translation procedures.

The Finnish analyses of the EPQ and SSS responses were carried out using principal axis factoring followed by varimax rotation from the SPSSx program. The British analyses of the questionnaires were completed using principal components analysis with rotation by direct oblimin. The choice of method is always arbitrary to some extent (Kline, 1987), and, for example, the use of the eigenvalue 1 criterion in extracting factors and the rotation of factors by varimax in the Finnish analyses are not necessarily the best methods available (Comrey, 1988).

The EPQ and SSS responses were also subjected to another set of analyses carried out in England. The British analyses were deemed necessary for factor comparisons. The results of the Finnish analyses were presented in Report 1, and the British analyses can be found in Report 2.

The scales based on the Finnish analyses were utilized in the subsequent analyses. With respect to the SSS, the reason for this was longer scales and higher internal reliabilities for the subscales in the Finnish analyses as compared to the British subscales. For the EPQ, the choice between two sets of subscales was of minor importance, since the same factors and scales with adequate reliabilities were obtained in the Finnish and British analyses. For consistency with the SSS factor structure, the orthogonal factors based on the Finnish results were chosen.

The four EPQ factors were Psychoticism (P), Extraversion (E), Neuroticism (N) and a Lie scale (L). The Finnish SSS factors were labeled Thrill and Adventure Seeking (TAS), Disinhibition (Dis) and Experience Seeking (ES). In addition, the total SSS score was computed for each respondent. The usual fourth SSS factor, Boredom Susceptibility (BS), thus did not emerge. The EPQ and SSS scores by sex groups were presented in Reports 1 and 2. Age differences on the scales were examined in Report 4. Differences in the EPQ and SSS scores between the offenders and other Finnish men of the same age are presented in Report 3. Overall, Reports 1 - 4 lay the foundation for using the EPQ and the SSS in Finland.

4.3 Procedure

The research process started with the standardization of the EPQ and SSS. In addition, the 20-item Psychopathy Checklist was translated and adapted for the Finnish judicial system. After these methodological tools were prepared, the study proceeded with data collection in the prisons.

An oral consent was asked from each of the potential subjects in an information meeting prior to the presentation of the personality questionnaires. Confidentiality respecting all information was emphasized. The subjects then filled in the personality questionnaires, including the Psychopathic Deviate (Pd) and Hypomania (Ma) scales of the Minnesota Multiphasic Personality Inventory (MMPI), the Socialization (So) scale of the California Psychological Inventory (CPI), the Sensation Seeking Scale-Form V (SSS) and the Eysenck Personality Questionnaire (EPQ).

After completion of the personality questionnaires, the subjects were interviewed individually. Alternately, one of the researchers interviewed, while the other took notes and observed. It was decided not to use a tape recorder, as its presence could have been detrimental and conducive to creating an atmosphere of suspicion in a prison setting. Secondly, transcribing the tapes would have been laborious. The researchers acquainted themselves independently with the prison files both before and after the interview.

After completing the interview and the file review, both researchers made the PCL assessment independently for each subject. In the statistical analyses, the PCL item scores decided by the rater having more experience with the concept of psychopathy were used. All statistical analyses were carried out using the SPSSx program.

5 RESULTS

5.1 The Psychopathy Checklist, personality questionnaires and global interview impressions as methods of assessing psychopathy

5.1.1 Homogeneity of the Psychopathy Checklist

After the item analysis had been completed and the final items for the Finnish Psychopathy Checklist (PCL) determined, the factor structure of the PCL was examined using principal axis factoring followed by oblimin rotation. The results can be found in Report 6. The alpha coefficient for the PCL, items 11 (Promiscuous sexual behavior), 14 (Impulsivity) and 17 (Many short-term marital relationships) having been discarded, was high (.90) indicating the unitary nature of the Checklist. For this reason, it seemed plausible that the underlying PCL factors would correlate with one another. Therefore, oblique rotation was used in extracting factors. Item 14 (Impulsivity) was retained in the factor analysis, although it was excluded from the total PCL score due to its negative correlation with the total score.

The analysis yielded a two-factor solution accounting for 50.3 % of the total variance. The criterion for the number of factors was an eigenvalue > 1 . The correlation between the factors was .24. Factor 1 covered the core personality characteristics of the Cleckley psychopath (e.g. Pathological lying, Shallow affect, Lack of remorse or guilt and Glibness/superficial charm). Factor 2 referred less to personality characteristics than to chronically unstable and antisocial lifestyle (e.g. Early behavior problems, Criminal versatility, Revocation of conditional release, Poor behavioral controls).

5.1.2 Questionnaires and the Psychopathy Checklist

The relationships between the PCL and the traditional self-report personality questionnaires used to assess psychopathy and antisocial behavior were studied by correlating questionnaire scores with the total PCL score and the PCL factor scores. The correlations were presented in Report 6.

The personality scale scores failed to correlate positively with the total PCL score, with the exception of the MMPI Hypomania score. The Factor 1 score capturing the core personality characteristics of the Cleckley psychopath showed a clear and negative relationship with antisocial behavior as measured on the MMPI Psychopathic Deviate scale, whereas the Factor 2 score, describing chronically unstable and antisocial lifestyle, related positively to both MMPI scales and correlated negatively with Socialization. Low Socialization is bound up with antisocial tendencies. Hence, its relation to Factor 2 is expected.

Overall, the second factor of antisocial lifestyle seems to be associated with traditional questionnaire indicators of antisocial tendencies, which is not the case with the first factor of personality characteristics.

The relationship between sensation seeking and psychopathy was also examined. As observed in Reports 1 and 3, the offenders were sensation seekers to a greater extent than the other men of the same age, aside from Thrill and Adventure Seeking (TAS) which mostly relates to socially acceptable forms of sensation seeking. The TAS scale measures, for example, a willingness to try special "yuppie" sports (e.g. parachuting, surf-board riding, waterskiing), which may be relatively unattainable for the offenders. The offenders are sensation seekers in the disinhibitory and experience seeking way and like to have fun, drink, have sex and try drugs, as pointed out in Report 3.

The degree of sensation seeking in the offender sample in general does not necessarily illuminate the relationship between sensation seeking and Cleckley's psychopathy. Therefore, the factor scores derived from the PCL factors in addition to the total PCL score were correlated with the SSS and its subscales. Report 6 showed the results of the correlation analysis. There was virtually no relationship between sensation seeking and the total PCL score. Only Experience Seeking had a significant but, surprisingly, negative correlation with the PCL, particularly with Factor 1. The scale included items concerning drugs, social relationships and art and dressing preferences, which might have lured the Cleckley psychopaths to answer in a socially desirable, "correct" way.

Correlations between the EPQ scales and the PCL were around zero for Psychoticism and Neuroticism, but the Extraversion and Lie scales correlated negatively with the core personality characteristics of the Cleckley psychopath (Factor 1). The negative correlation between the Lie score and the PCL could be interpreted as indicating that the Cleckley psychopaths are neither very conscientious nor norm-abiding persons. In

Report 1 it was stated that high Lie scores may indicate conscientiousness and a sincere belief in one's own norm-abiding behavior. The Cleckley psychopaths do not seem to be extraverted. In light of previous assumptions on extraverted behavior in psychopaths this result is difficult to explain. It might be that nonviolent offenders are less extraverted than violent offenders. If this is true, the present result is logical.

With reference to the Eysenckian model of psychopathy (Eysenck & Eysenck, 1978), which links primary psychopathy (cold and callous) with high Psychoticism and secondary psychopathy (neurotic) with high Extraversion and Neuroticism, correlations between the separate EPQ scales and the PCL are of no particular importance. It was more convenient to look at the PCL scores in various combinations of the Psychoticism, Extraversion and Neuroticism scores and only then form conclusions as to the possible relationships. In Report 3 it was demonstrated that most of the inmates were assigned to the group of low scorers on the EPQ scales Psychoticism, Extraversion and Neuroticism (P-E-N-). The second largest group was that of high scorers (P+E+N+). These two types of offender personality (or types of response set) prevailed, and there were no cogent grounds for splitting the subjects into so-called primary and secondary psychopaths. On this account, no comparisons of the PCL scores in primary and secondary groups of psychopaths were attempted.

5.1.3 The Cleckley psychopath in the interview

The PCL assessments were partly based on information obtained from the semistructured in-depth interviews with the inmates. Pending the interviews, ample qualitative data was gathered. This data was advantageous in the search for the personality and behavioral characteristics distinctive to the Cleckley psychopath. With no pretense of being exhaustive or systematic, the interview data was analyzed in the light of possible inherent differences between the interview responses given by the Cleckley psychopaths and the other inmates. The analysis extended beyond verbalizations in the interview to letters, applications etc. in the prison files. Linguistic processing in psychopaths was not one of the objectives of the study. Hence, possible observations on verbal processes will be used only qualitatively to illustrate the portrait of the Cleckley psychopath.

For the analyses, described in Report 5, the subjects were subdivided into psychopaths ($n = 19$) and nonpsychopaths ($n = 73$) on the basis of global impressions obtained in the interview. The author decided on the final global rating. All but three of the inmates assessed globally as Cleckley psychopaths were also among the highest third in the total PCL score assessments. Three inmates belonged to the middle group (see 5.2., Table 2).

The responses of the psychopaths and nonpsychopaths were dissected to find idiosyncratic features in the Cleckley psychopath's verbal behavior. Translation of the responses into English could have obscured subtleties in expression.

The qualitative analysis of the interview and file information resulted in the following major observations allied to the Cleckley psychopath and his verbal behavior:

1. Rambling. The psychopaths were loquacious, verbose, meandering and easily wandered away from the topic. Exuberant circumlocution was present.
2. Posing counterquestions. After having heard the interview question, the psychopaths often themselves posed questions to the interviewers and seemed to await answers.
3. Exaggeration and lying by means of giving precise but false details. The psychopaths' lies centered around occupational or career status and work history. They professed to be, for example, managers, businessmen and entrepreneurs. They self-conceitedly adopted the glory of high prestige or status despite their obvious situation as a prison inmate. Portraying oneself as an admired and respected person was usual (e.g. "I call the shots."; "I like to be the centre of the group.").
4. Vague expressions. The psychopaths often used phrases like "in a sense", "I am working in business" etc. without specifying their answers or giving exact information. When lying, however, they produced many exact but fabricated numerical details of their successful enterprises or managerial duties.
5. Artificial use of phrases and quotations and a tendency to eloquence.

The psychopaths presented themselves as winners, not as losers as many of the nonpsychopaths did, and overemphasized their attested good abilities and qualities. An inflated or grandiose sense of self-worth, as described in the PCL, was evident for most of the Cleckley psychopaths. They claimed to be admired, prominent, respected, honest, diligent and reliable persons. The prison files indicated that when serving their sentences, some of them had been selected as the most trustworthy inmates by prison officials. Obviously, the staff did not always see through their façade.

The psychopaths' lack of genuine emotions, mimicry of affective reactions and tendency to deceive others leaked out in the interviews. Also the prison files disclosed that the Cleckley psychopath has a facility in perpetrating frauds or otherwise exploiting or manipulating others. His convincing and superficially adroit behavior leads others to believe his words, which subsequently tend to contradict strongly with what he actually does.

Genuine emotional contact between the interviewers and the psy-

chopath as interviewee failed to develop. The psychopaths behaved theatrically as if they were on camera, as described by Hare (1985b), and the look in their eyes seemed empty, as if the eye muscles were not moving at all. Much gesturing and counterfeit laughter were usual.

While the correlations between the PCL and the SSS gave only exiguous information about the Cleckley psychopath as a sensation seeker, the interview responses turned out to be more enlightening. In Report 5, some examples of sensation seeking were offered. Sensation seeking expressed itself in descriptions of committing crimes, gambling, drug abuse, adventuring and aimless travel, dangerous hobbies and an inability to endure routine.

5.2 Offender groups

A cluster analysis was used to form the offender groups. Clustering methods render it possible to analyze similarities between individuals (a person-oriented approach; see e.g. Magnusson & Bergman, 1988) instead of operating purely on a variable level (a variable-based approach). Report 6 presented the derived clusters in more detail.

Three clusters were obtained in the analysis of the 18 PCL items (item 14, Impulsivity, included). In Cluster 1, there were 27 subjects, who scored high on the PCL items describing the personality characteristics of the Cleckley psychopath. This group most probably comprises Cleckley psychopaths. It is worth noting that all inmates assessed globally as Cleckley psychopaths on the basis of the interviews were included in Cluster 1. Cluster 2 was a group of 23 inmates with high scores on the items that relate to chronically unstable and antisocial lifestyle. However, they were not glib or grandiose individuals as described by Cleckley. Cluster 3 with 42 subjects scored comparatively low on almost all items, particularly those relating to the personality characteristics of the Cleckley psychopath. Cluster 3 subjects were impulsive but not as criminally versatile or poorly controlled as Cluster 2 subjects. They were also less parasitic, needed less stimulation and had less early behavior problems than Clusters 1 and 2.

The offender groups differed from each other on the MMPI Pd and Ma, Socialization, Extraversion and Experience Seeking scales. The personality questionnaire scores in Cluster 1 were relatively low. The Socialization score was, however, the highest among the groups and significantly higher than in Cluster 2. Cluster 2 subjects were also antisocial in the light of the personality questionnaires. They scored highly on the MMPI and Extraversion scales. Cluster 3 inmates had higher MMPI Pd and Experience Seeking scores than Cluster 1 subjects.

The third cluster had comparatively high scores on sensation seeking. These subjects might have a tendency impulsively to seek alcohol- or drug-related experiences as measured on the subscale of Experience Seeking.

In order to examine the possible effect of age on the differences between the groups on the scales, the inmates grouped into three clusters and the men of the same age in the standardization sample were divided into age-groups (21 - 25, 26 - 35, 36 - 45 and 46 - 55 yrs) and compared with respect to the personality questionnaire scores. Two-way analyses of variance indicated no significant interaction between the subject groups and age for any of the scales. The fact that Cluster 1 subjects were older than Cluster 2 subjects did not explain the differences in the scores.

The overlap between the clusters and the global and the total PCL score assessments was also a question of interest. In addition to the three clusters and the two groups formed by means of global assessments, the subjects were divided into psychopaths and other inmates in the third way. They were grouped into approximate thirds using the total PCL score (see Hare, 1985b). The low psychopathy group ($n = 29$) scored 8 or less, the middle group ($n = 33$) scored from 9 through 19 and the high psychopathy group ($n = 30$) had a score of 20 or higher. The cut-off score of the Finnish 17-item PCL for the high group was unduly low. After being prorated to approximate to the original 20-item PCL score by multiplying it by 20/17, the present cut-off score is equivalent to a score of 23.5 for the 20-item PCL (for an account of the prorating procedures, see Hare, 1985b). A cut-off score of 30 is typically used. In this study, a cut-off score this high would have greatly reduced the size of the high psychopathy group rendering statistical analyses impossible. However, due to the very low cut-off score it is likely that all 30 inmates in the high psychopathy group did not actually meet Cleckley's criteria.

TABLE 2. Overlap between the psychopathy groups formed in three different ways

Cluster	Total PCL score group			Total
	Low ($n=29$)	Middle ($n=33$)	High ($n=30$)	
Cluster 1 ($n=27$)				
- Psychopaths (global)	0	3	16	19
- Nonpsychopaths (global)	0	1	7	8
Cluster 2 ($n=23$)				
- Psychopaths (global)	0	0	0	0
- Nonpsychopaths (global)	0	16	7	23
Cluster 3 ($n=42$)				
- Psychopaths (global)	0	0	0	0
- Nonpsychopaths (global)	29	13	0	42

The subjects in the three clusters are cross-tabulated with the subjects globally assessed as psychopaths and nonpsychopaths and with the subjects in the low, middle and high PCL groups in Table 2. It shows that the overlap between the three different ways of differentiating psychopaths was considerable.

5.3 Criminal behavior in the offender groups

Criminal behavior among the offenders was examined in two ways. First, types of offense in low, middle and high psychopathy groups formed on the basis of the total PCL score were analyzed. Secondly, the three offender clusters were compared with respect to criminality variables (age at first crime, number of convictions, number of types of offenses, length of severest sentence). The results concerning the types of offense committed by the Cleckley psychopaths are presented for the first time in the present report. The differences between the clusters in criminality variables were presented in Report 6.

Offenses were categorized into 15 groups following, by and large, the categorization for item 20 (Criminal versatility) on the PCL. For the sake of brevity, the specific content of the categories is not reported here. A detailed description of the categories is available from the author and included with item 20 in Finnish in Report 5. Due to the sampling criteria, a high percentage of the subjects in each group were convicted of theft, traffic offenses and fraud. The high PCL group had been sentenced for robbery, narcotics offenses, assault, illegal possession of weapons, fraud, escape and miscellaneous minor offenses more often than the low PCL group. By contrast, the low PCL group had a slightly higher percentage of traffic offenses. The differences between the high, middle and low PCL groups in types of offense were examined using the SPSSx HILOG-LINEAR program with the Likelihood Ratio (LR) chi square as a goodness-of-fit test. The differences between the groups were significant only for fraud, $LR \chi^2(2) = 17.917, p = .000$.

There is a pitfall of circular reasoning when considering the links between the PCL score and fraud-like offenses. The PCL assessments include item 4 (Pathological lying) and item 5 (Conning/manipulative). Frauds, in turn, often necessitate lying, conning and manipulation. Thus, it is logical that psychopaths commit fraud-like crimes more often than nonpsychopaths. In order to exempt the conclusions from circularity, item 5 was dropped from the list. Thereafter, the total PCL score still correlated positively with the number of frauds ($r = .21, p < .05$). Removing item 5 does not, however, totally resolve the problem of circularity.

Secondly, the differences between the three clusters derived from the PCL items on criminal behavior were examined. The results were compiled in Report 6. The severest sentences in Cluster 1 were longer as compared to the other groups. Cluster 2 comprised inmates who had started their criminal career early and who had more convictions than the other offenders. Cluster 3 inmates had the lowest number of convictions and types of offenses and their severest sentences were the shortest.

6 DISCUSSION

6.1 Assessment of psychopathy

A multitude of shifting definitions of psychopathy have made it difficult to investigate it as a clinical phenomenon. Being one of the most significant contributions in the field, the work by Cleckley (1941, 1982) has been an outstanding and continuous inspiration to psychopathy researchers. Also in the present study, psychopathy means Cleckley's psychopathy and psychopath means Cleckley psychopath. A historical overview of the concept demonstrated confluences between Cleckley's construction and earlier descriptions of psychopathy or psychopathic personalities. These confluences were previously reviewed in Report 5, but will be repeated here because of their significance from the conceptual point of view.

Schneider's (1923) callous psychopaths, Kraepelin's (1909 - 15) group of morbid liars and swindlers, Henderson's (1939) swindlers in a group of predominantly passive or inadequate psychopathic states and the neurotic character proposed by Alexander (1930) share many features with the Cleckley psychopath. However, neuroticism, anxiety and aggressiveness as clinical manifestations in several earlier descriptions are not included in the criteria of psychopathy introduced by Cleckley. Similarities also exist between some diagnostic categories, particularly the Antisocial Personality Disorder (APD) and the Narcissistic Personality Disorder (NPD), and Cleckley's psychopathy. The APD emphasizes antisocial and criminal behavior at the expense of personality characteristics. The NPD implies intense emotions, anxiety, depression, feelings of emptiness, profound meaninglessness or worthlessness, which do not mark the Cleckley psychopath. On the other hand, it has been posited that antisocial behavior conforms to a narcissistic pattern of activity and that all

psychopaths are narcissistically disturbed (Wells, 1988).

Narcissistic traits evident in the Cleckley psychopaths, e.g. grandiosity (see Ronningstam, 1988), and common features in the NPD and psychopathy, e.g. lack of empathy, superficial relationships, parasitic exploitation of others and a disposition to antisocial behavior, were reviewed in the discussion part of Report 5. It also was stated that the essential differences between the APD or NPD and psychopathy lies in the lack of emotional reactions and pathological and confabulatory lying found in the Cleckley psychopaths. Unlike the psychopath, those individuals diagnosed with the NPD can experience anxiety, depression, emptiness and other genuine feelings. Genuine emotional reactivity is not excluded from the APD, either, although lack of remorse belongs to the diagnostic criteria of the APD. It was suggested in Report 5 that the Cleckley psychopath could be characterized as a narcissistic personality *without emotions*. Emotional coldness and specific features of verbal expression merit consideration if, following the example of some researchers, the relationships between frontal areas and psychopathy are examined (Gorenstein, 1982; Gorenstein & Newman, 1980; Newman, 1987). Lack of genuine emotions could be thought as having its origin in a disorder of the cortical and subcortical areas crucial to the emergence of emotions. The entire limbic system exerts an effect on the hypothalamus, which has an important role in the regulation of emotions. The limbic system has connections with the cortical, particularly frontal, areas (Heilman, Watson, & Bowers, 1983). Emotions are related to cortical areas, limbic structures and, specifically, the hypothalamus. Frontal areas participate in regulating emotions. Hence, studies concerned with the relationships between psychopathy and frontal lobe dysfunction are pertinent in this context. Of course, the behavioral accompaniments of frontal lobe dysfunction are only to some degree analogous to psychopathy, and they cannot be used as grounds for causal or etiological conclusions.

Verbal disinhibition characterizes both frontal patients and the Cleckley psychopaths. During the interviews, the psychopaths often wandered from the point or shifted the subject abruptly. Frontal patients also are known for their tendency to wander away from the subject, circumlocution, tangential speech and other forms of verbal disinhibition, e.g. confabulatory responses (Joseph, 1986; Kandel & Freed, 1989; Stuss & Benson, 1984). The expression of erroneous and fantastical "facts" in an uninhibited way and a tendency to believe in his/her own confabulations are typical of frontal patients (Joseph, 1986).

Furthermore, the Cleckley psychopaths and frontal patients seem to share emotional flatness, lack of anxiety, behavioral disinhibition, superficial boasting, defective anticipation with regard to the consequences of their own behavior and weak social judgment (for a frontal pathology, see Damasio & Van Hoesen, 1983; Kandel & Freed, 1989; Miller, 1988; Stuss & Benson, 1984). Frontal patients also may suffer

from an impaired ability to change a cognitive set flexibly according to task demands (Stuss & Benson, 1984). In avoidance learning experiments, similar indications of inability to flexibly change a response strategy have been found in psychopaths (Gorenstein & Newman, 1980; Newman, 1987; Newman & Kosson, 1986).

The findings regarding verbal expression in the Cleckley psychopaths remain at a descriptive level, as do the speculations around the similarities between frontal pathology and psychopathy, since these issues were beyond the scope of the present study. The observations concerning frontal patients and the Cleckley psychopaths must be treated as highly analogous, though interesting in view of the recent studies on language processing in psychopaths. Meandering or rambling, counter-questions, lying, exaggeration using exact but phony details, vagueness and the artificial usage of abstract words and phrases evidenced by the Cleckley psychopaths in the present study may have some relevance, if psychopathy is associated with an unusual way of processing language. It is worth noting that language-related disturbances also exist in other clinical syndromes. For example, schizophrenic speech may include discourse failure, vagueness, tangential speech, wandering away from the subject and an excessive amount of speech (Rochester & Martin, 1979). Hence, language processing may be an important route in investigating possible functional or structural differences in the brain activity of various clinical syndromes.

In order to assess reliably shallow affect, superficial charm or glibness, all included in the concept of psychopathy by Cleckley, it seems important to use interviews and/or file material. For testing emotional reactions, this kind of information supersedes traditional personality scales. However, personality questionnaires are still utilized in the assessment of psychopathy. In this study, the relationships between some of the most popular psychopathy-related personality inventories and one of the most recent clinical-behavioral assessment method, the Psychopathy Checklist (PCL), were investigated.

There was an effort made to adapt the Eysenck Personality Questionnaire, Zuckerman's Sensation Seeking Scale and the PCL to Finnish cultural conditions, as described in Reports 1 - 5 and summarized above. The overall result is that none of the questionnaires aptly measures Cleckley's psychopathy. They have more to do with antisocially oriented and criminal behavior. The offenders in general scored high on the Psychopathic Deviate, Hypomania, Psychoticism, Neuroticism, Lie scale, Disinhibition, Experience Seeking and Total score of the Sensation Seeking Scale, but the same does not hold for the Cleckley psychopaths. On the contrary, it seems that they are skillful at concealing their personality characteristics and tendencies to antisocial and criminal behavior in questionnaires, as is evident from their high Socialization scores and low scores on the other scales.

Antisocial behavior, criminality and psychopathy have been explained by the sensation seeking theory proposed by Zuckerman (1979). The study also purported to clarify the presumed relationship between a sensation seeking trait and psychopathy. To this end, both the Sensation Seeking Scale (SSS) scores and the interview responses were examined. The nonviolent offenders scored higher on sensation seeking than the other Finnish men of the same age, but Cleckley's psychopathy as measured with the PCL was not associated with the total SSS score. The correlations of the PCL with the SS subscales were, in part, even negative. This is somewhat surprising, as the PCL itself includes an item (Need for stimulation/proneness to boredom) which appears to describe a sensation seeker.

The PCL with its two factors has several advantages over the personality questionnaires in measuring Cleckley's psychopathy. The fact that similar factors, one reflecting Selfish, callous and remorseless use of others, or the core personality characteristics of the Cleckley psychopaths, and the other tackling Chronically unstable and antisocial lifestyle, have also been identified in some previous analyses (Harpur et al., 1988, 1989) lends support to a reliable factor structure of the PCL. The importance of Factor 1 was, however, paramount to that of Factor 2. Since the factor including the personality characteristics accounted for most of the variance, the PCL could as well be seen as a one-dimensional measure having basically one factor only. Division of the PCL into "the personality factor" and "the antisocial lifestyle factor" is somewhat forced. Some of the items in Factor 1, arguably reflecting personality, are in fact quite behavioral in nature (e.g. pathological lying, conning/manipulative, parasitic lifestyle).

The effect of different sources of information on the emergence of two factors is worth consideration. Factor 2 items were assessed mainly by using file data, whereas Factor 1 item assessments were largely based on the interviews. Also, the raters might have applied their latent personality conceptions in a way that produced a two-factor structure. Harpur et al. (1989) discussed these possibilities but concluded them to be unlikely.

The internal reliability for the PCL was high, which increases its utility in assessing Cleckley's psychopathy. The measure of internal reliability in the present study was the alpha coefficient, although Harpur et al. (1989) advocate the use of the mean interitem correlation above .20 and the ratio of the interitem correlations to the product of the item communalities as measures of homogeneity instead of alpha. However, also in this study, the difference in the variance explained by Factor 1 and Factor 2 was large, supporting the unidimensionality of the PCL. First and foremost, the PCL seems to be a measure of the core personality characteristics of the Cleckley psychopath.

With reference to the psychopathy criteria listed by Cleckley, the PCL seems, however, to have shifted the balance towards antisocial and

criminal behavior. This is illustrated, for example, in the high and positive correlations between the diagnosis of APD and the PCL score (Hare, 1983; Hart & Hare, 1989). It might be possible and even recommendable to assess the domains of the core personality characteristics of Cleckley psychopath and chronically unstable and antisocial lifestyle separately instead of incorporating them in the same Checklist. Harpur et al. (1989) argue that both personality characteristics and social deviance are essential factors in psychopathy, but is this also true in noncriminal populations? If Cleckley's psychopathy is a descriptive construct of personality also in noncriminal populations then items concerning antisocial and criminal behavior in the PCL are of lesser importance.

The factors correlated differently with the personality questionnaire scores, Factor 1 having a negative relationship with Pd, Extraversion and Experience Seeking and Factor 2 relating positively with both MMPI scales but negatively with Socialization. In Harpur's et al. (1989) study, the correlations between Factor 1 (selfish, callous and remorseless use of others) and MMPI Pd, MMPI Ma, Extraversion and Experience Seeking were around .10, and the correlations between Factor 2 (chronically unstable and antisocial lifestyle) and the same scales larger. Both in this study and in Harpur's et al. (1989) sample, Factor 2 clearly was associated with those scales that describe antisocial behavior and low socialization. The differential correlative patterns of the two factors with the personality questionnaire scores seem to support the notion of two different measures (personality characteristics/antisocial lifestyle) in the PCL.

In summary, three main conclusions from the results of assessing psychopathy seem to be as follows:

1. The traditional personality questionnaire scales do not permit reliable assessments of Cleckley's psychopathy.
2. Among offenders, the traditional psychopathy-related personality questionnaire scales deal more with antisocial and criminal behavior than psychopathy.
3. The results favor the use of the Psychopathy Checklist as a reliable measure of Cleckley's psychopathy, though it should perhaps be elaborated to comprise only the core personality characteristics of the Cleckley psychopath.

6.2 Three nonviolent offender groups

In the cluster analysis it became evident that Cluster 2 offenders had high scores on the PCL items belonging to the factor of antisocial lifestyle

(Factor 2), whereas Cluster 1 subjects obtained high ratings on the items describing the core personality characteristics of the Cleckley psychopath (Factor 1). The results of the cluster analysis and the factor analysis were thus complementary. The subjects in the third cluster did not receive high scores either on the items belonging to Factor 1 or on the items of Factor 2. Cluster 3 simply depicted variations around the lower end of the PCL item scores.

The total PCL score does not tell much about how the score was reached. Kosson et al. (1990) also noted that subjects with high PCL scores frequently obtain high anxiety scores, although so-called secondary psychopaths with high anxiety should not receive high PCL scores, if the high PCL score is to measure Cleckley's psychopathy. In the case of severe antisocial and criminal behavior, the PCL may unnecessarily label a person a Cleckley psychopath irrespective of the fact that his/her high PCL score is due to high scores on the items pertaining to antisocial and criminal lifestyle.

If the PCL is to assess purely Cleckley's psychopathy, one solution could be a revision of the PCL to exclude items measuring antisocial and criminal lifestyle. Another option, tentatively experimented with in this study, is not placing too much reliance solely on the total PCL score when differentiating the Cleckley psychopaths from others but grouping individuals on the basis of the similarity of their profiles in the PCL item scores.

It is noteworthy that the differences in the SSS scores between the three clusters were negligible, apart from Experience Seeking. The SSS scores failed to differentiate between the offenders. Cluster 1, coming closest to the Cleckley psychopath, is not higher on sensation seeking than the other groups. In contrast, Cluster 3, scoring low on most of the PCL items, was comparatively high on Experience Seeking. The items on the SSS measure moderate forms of sensation seeking. It is possible that sensation seeking in the Cleckley psychopath arises in more self-destructive and extreme forms. Indeed, the interview responses gave evidence of sensation seeking channeled into committing crimes, heavy drug use and risk-taking among the offenders globally assessed as Cleckley psychopaths.

In differentiating the Cleckley psychopaths from other offenders by cluster analysis, the variable-to-subject ratio should be within the limits recommended, for example, by Comrey (1988). In the present study, the size of the sample could have been larger. Apart from enlarging the sample, the cross-validation of the present cluster structure with new samples would also be important. Thirdly, there is a wide variety of alternative clustering procedures, the method used here not necessarily being the best available. Despite these criticisms, the three-cluster structure was accepted mainly because it was neatly in line with the results of the factor analysis. Ultimately, the validity of cluster

solutions is tested in clinical practice (Skinner & Blashfield, 1982). If clusters are useful for clinicians, they will be retained.

The results of clustering were restricted to a Finnish nonviolent sample of offenders, many of whom were convicted for fraud-like offenses. The overinterpretation of the cluster structure to cover all Finnish offenders or even all samples of similar kind is inappropriate. Special caution has to be exercised regarding the extent to which these results can be generalized. At best the cluster structure could be a source of new hypotheses. A cluster analysis solution should be the beginning of a research process, not its end (Blashfield, 1980).

6.3 Criminal behavior among the Cleckley psychopaths

Cleckley's psychopathy does not necessitate crime since many manipulative and deceptive activities within legal boundaries are accessible to psychopaths. Neither is crime indicative of psychopathy, since crimes can be committed for a variety of reasons. In this respect, crime and psychopathy are similarly related to crime and criminality; criminality is not a sufficient condition for crime, and crimes are not necessarily good evidence of criminality (Hirschi & Gottfredson, 1988). However, this study was limited to offenders for methodological reasons.

It was assumed that the Cleckley psychopaths would be disposed to commit fraud-like crimes on account of their unreliability, lying and tendency to deceive others. Therefore, and because the description given by Cleckley does not emphasize violence in psychopaths, nonviolent offenders were investigated. Of course, it is possible that some of the nonviolent offenders were in effect violent without having committed violent crimes or even without having been convicted of them. The latter alternative is, however, improbable owing to the conspicuousness of violent offenses.

The number of fraud-like offenses in the sample was high. The results showed that the percentage of fraud-like offenses was greater for the psychopaths than for the other inmates. Unfortunately, interpretations concerning the relationship between frauds and Cleckley's psychopathy are beset by circular reasoning. The psychopathy ratings were attained with the PCL, which includes items about committing fraud and deceiving others. Hence, it is only natural that the Cleckley psychopaths assessed with the PCL were found to perpetrate fraud-like offenses more often than others. Such an offense pattern seems to be a safe indication of Cleckley's psychopathy in a criminal population. The fact that the Cleckley psychopaths totalled 19 inmates in the global assessments, i.e. nearly 21 % of the sample, could be explained by the great number of fraud-like

offenses among the subjects. Perhaps the exclusion of fraud-like offenses from the sample would have reduced the number of Cleckley psychopaths considerably.

The question of specialization in certain types of offense among Cleckley psychopaths should be addressed further. The findings of this study encouraged the tentative assumption that a certain constellation of personality characteristics prompts the perpetration of certain kinds of offenses. It would also be of interest to examine personality differences between violent psychopaths and those psychopaths who principally commit fraud-like crimes. What might be the preconditions of different patterns of specialization?

Previous studies found that psychopaths are charged more often and appear at court younger than other offenders (Hare & Jutai, 1983). In the present study, Cluster 2 inmates were the most productive offenders, starting their criminal behavior early and having more convictions and many types of offense. However, they could not be designated Cleckley psychopaths, since they scored lower on the PCL items describing the relevant personality characteristics than Cluster 1. For this reason, the results failed to verify that the Cleckley psychopaths were responsible for most crimes or started their criminal activities younger than others.

The present study established that offenders who fit the description of psychopathy by Cleckley can be found among prison inmates convicted for property, traffic and narcotics offenses. The main method of finding them was the PCL. When the subjects were divided into three groups according to the total PCL score, 30 inmates were regarded as psychopaths due to the very low cut-off score for the high psychopathy group. In the global assessments, the number of Cleckley psychopaths fell to 19. Finally, the clustering technique produced a cluster of 27 inmates who scored high on the PCL items describing the core personality characteristics of the Cleckley psychopath. In future, it might be more sensible to use multivariate procedures to differentiate the Cleckley psychopaths from other offenders or to rest on immediate global assessments instead of rigid trichotomizing into low, middle and high psychopathy groups. The risk of circular reasoning is greater if the subjects are first assessed with the PCL and the PCL groups then compared with each other in regard to, for example, their fraud offenses.

Side by side with the development of methods for differentiating psychopaths from others, efforts to increase a theoretical understanding of Cleckley's psychopathy are essential. For the time being, there is no agreed-upon theory of psychopathy. Without valid theoretical premises it is difficult to proceed from a description of psychopathy to an understanding of it.

TIIVISTELMÄ: PSYKOPATIA RIKOKSENTEKIJÖIDEN PERSONALLISUUTTA KUVAAVANA KONSTRUKTIONA

Tutkimus nojautui Hervey Cleckleyn klassiseen psykopatiakuvaukseen, jonka mukaan psykopatian tunnusmerkkejä ovat mm. pinnallinen viehäytysvoima, hyvä älykkyys, psykoottisten ja neuroottisten oireiden puuttuminen, epäluotettavuus, valehtelu, tunteettomuus ja suunnitelmaton elämäntapa. Aikaisempi tutkimus on selvittänyt esimerkiksi psykopaattien psykofysiologisia reaktioita, elämishakuisuutta ja kognitiivisia toimintoja. Psykopatian arviointimenetelmänä on käytetty persoonallisuuskyselyitä ja Robert Haren kehittämää psykopatian piirrelistää.

Tutkimuksen yleisenä tavoitteena oli Cleckleyn psykopatian arviointi eri menetelmin lähinnä omaisuus-, liikenne- ja huumerikoksista tuomittujen rikoksentekijöiden joukossa. Tutkimusongelmat jaettiin kolmeen osaan: (a) psykopatian arviointimenetelmien (persoonallisuuskyselyt, psykopatian piirrelista ja globaali arvio) analyysi, (b) rikoksentekijöiden ryhmittely piirrelistan avulla ja (c) psykopaattien ja muiden rikoksentekijöiden rikollisen käyttäytymisen vertailu.

Tutkimukseen osallistui 92 miesvankia, jotka olivat 21 - 53 -vuotiaita. Vangit täyttivät Eysenckin persoonallisuuskyselyn, Zuckermanin elämishakuisuusasteikon, MMPI:n Psychopathic Deviate- ja Hypomania-asteikot ja CPI:n Socialization-asteikon. Sen jälkeen kaksi tutkijaa arvioi jokaisen vangin asiakirjojen ja haastattelun perusteella psykopatian piirrelistalla. Ennen psykopatiatutkimuksen alkua Eysenckin ja Zuckermanin kyselyt oli standardoitu Suomen oloihin sopiviksi yhteensä 967 suomalaisen 17 - 71 -vuotiaan naisen ja miehen otoksessa. Molemmat kyselyt soveltuivat persoonallisuuden arvioimiseen Suomessa, ja tavanomaiset sukupuoli- ja ikäerot asteikkopistemäärissä tulivat esiin. Myös psykopatian piirrelista käännettiin ja muokattiin suomalaiseen oikeuskäytäntöön sopivaksi. Kyselyjen standardointi ja piirrelistan muokkaaminen sisäl-

tyvät siten metodisena kehittelytyönä tutkimuskokonaisuuteen.

Piirrelistan faktorianalyysissa tuli esiin kaksi faktoria, jotka muistuttivat aikaisempien tutkimusten faktorirakenteita. Faktori 1 kuvasi Cleckleyn psykopaatin keskeisimpiä persoonallisuuden ominaisuuksia (esim. patologinen valehtelu, tunteiden pinnallisuus). Faktori 2 liittyi krooniseen epävakaaseen ja antisosiaaliseen elämäntapaan (esim. varhaiset käyttäytymisongelmat, rikollisuuden monipuolisuus). Piirrelistan kokonaispistemäärän ja persoonallisuuskyselyjen väliset yhteydet olivat vähäisiä, mutta piirrelistan faktorit korreloivat eri tavoin persoonallisuuskyselyihin. Faktori 2 (antisosiaalinen elämäntapa) oli yhteydessä persoonallisuuskyselyiden asteikkoihin, jotka mittasivat antisosialisuutta. Faktori 1 (persoonallisuuden ominaisuudet) sitä vastoin ei mittaa samoja asioita kuin persoonallisuuskyselyjen asteikot.

Arviointimenetelmänä käytettiin myös globaalia vaikutelmaa, jonka nojalla vangit jaettiin Cleckleyn psykopaatteihin ($n = 19$) ja ei-psykopaatteihin ($n = 73$). Haastatteluvastausten laadullinen analyysi osoitti, että psykopaattien verbaaliselle ilmaisulle oli tyypillistä rönsyily, vastakysymysten esittäminen haastattelijoille, valehtelu ja liioittelu tarkkojen yksityiskohtien avulla, epämääräiset ilmaisut ja fraasien ja sivistyssanojen teennäinen käyttö. Haastattelussa tulivat esiin myös psykopaattien vahvalta vaikuttava omanarvontunto siten, että psykopaatit esiintyivät mielellään menestyjinä ja luottomiehinä ja ylikorostivat omia myönteisiä ominaisuuksiaan. Ihmissuhteiden ja tunteiden pinnallisuus ilmeni niin ikään vastauksista.

Vangit ryhmiteltiin piirrelistan osioiden klusterianalyysin perusteella kolmeen ryhmään. Klusterin 1 ($n = 27$) vangit saivat korkeita pistemääriä piirrelistan faktoriin 1 sisältyvillä, persoonallisuuden ominaisuuksia kuvaavilla osioilla. Klusterin 2 ($n = 23$) vankien pistemäärät olivat korkeita faktoriin 2 kuuluvilla, antisosiaaliseen elämäntapaan liittyvillä osioilla. Kolmas klusteri ($n = 42$) sai alhaisia pistemääriä lähes kaikilla piirrelistan osioilla impulsiivisuutta lukuun ottamatta. Klusteri- ja faktorianalyysien tulokset täydentävät toisiaan, sillä faktorit 1 ja 2 erosivat toisistaan samaan tapaan kuin klusterit 1 ja 2. Myös persoonallisuuskyselyissä klustereiden välinen ero tuli esiin siten, että klusteri 2 oli antisosiaalinen myös MMPI-asteikkojen valossa. Klusteri 1 sen sijaan ei saanut kovin korkeita pistemääriä antisosiaalista elämäntapaa mittaavilla persoonallisuusasteikoilla. Impulsiivinen klusteri 3 oli persoonallisuuskyselyillä arvioituna verraten elämyshakuinen.

Kolmanneksi tutkittiin Cleckleyn psykopaattien ja muiden vankien rikollista käyttäytymistä. Klusterin 1 Cleckleyn psykopaateiksi tunnistetut vangit saivat pidempiä rangaistuksia kuin muut. Klusterin 2 kroonisesti antisosiaalista elämää viettävät vangit aloittivat rikollisen uran nuorina ja saivat enemmän tuomioita kuin muut. Klusterin 3 vankien rikollinen käyttäytyminen oli vähäisintä. Petosrikollisuuden yhteys psykopatiaan tuli esiin, kun verrattiin piirrelistan kokonaispistemäärän nojalla

kolmeen ryhmään (psykopaatit, $n = 30$; keskiryhmä, $n = 33$; ei-psykopaatit, $n = 29$) jaettujen vankien syyllistymistä eri rikoslajeihin. Ryhmät erosivat toisistaan vain petoksien suhteen: suurempi osa psykopaateista oli tuomittu petoksista.

Tutkimustuloksia pohdittaessa keskityttiin psykopatian arviointimenetelmiin, vankien ryhmittelyyn ja psykopaattien rikolliseen käyttäytymiseen. Cleckleyn psykopatialla on kuvailevalla tasolla yhteyksiä narsistisiin häiriöihin, mutta tunteettomuus ja konfabulatorinen valehtelu näyttää olevan tyypillistä vain Cleckleyn psykopaateille. Psykopaattien tunteettomuudella ja eräillä verbaalisen ilmaisun piirteillä (esim. rönsyily) on yhtymäkohtia frontaalipatologiassa tavattaviin käyttäytymispiirteisiin.

Persoonallisuuskyselyjen asteikot eivät näytä mittaavan Cleckleyn psykopatiaa vaan antisosiaalista ja rikollista elämäntapaa. Sen sijaan piirrelista on psykopatian reliaabeli arviointimenetelmä, ja tutkimuksessa esiin saatu kahden faktorin rakenne vastaa aikaisempien tutkimusten tuloksia. Klusterianalyysin tulokset tukivat käsitystä piirrelistan kahdesta erilaisesta sisältöalueesta (persoonallisuuden ominaisuudet ja antisosiaalinen elämäntapa), jotka faktorianalyysissa tulivat esiin kahtena faktorina. Tutkimuksen perusteella näyttää siltä, että Cleckleyn psykopatiaa arvioidessa tulisi keskittyä psykopaatin keskeisten persoonallisuuden ominaisuuksien arviointiin. Psykopatia-arviota ei tulisi tehdä pelkän piirrelistan kokonaispistemäärän perusteella, koska piirrelistaan sisältyy krooniseen antisosiaaliseen elämäntapaan liittyviä osioita. Näillä osioilla voivat saada korkeita pistemääriä myös muut kuin Cleckleyn psykopaatit. Tutkimuksessa Cleckleyn psykopaateiksi arvioidujen vankien määrä vaihteli sen mukaan, millä menetelmällä psykopaatteja eroteltiin (globaali arviointi, piirrelistan kokonaispistemäärä tai klusterointi). Arviot olivat suurelta osin päällekkäisiä. On kuitenkin parempi ryhmitellä rikoksentekejiä persoonallisuudeltaan erilaisiin ryhmiin siten, että yksilöiden väliset samankaltaisuudet psykopatiaa kuvaavilla piirrelistan osioilla otetaan huomioon, kuin siten, että yksilöt jaetaan karkeasti kolmeen ryhmään piirrelistan kokonaispistemäärän avulla tai kahteen ryhmään globaalin vaikutelman nojalla.

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ORIGINAL PAPERS

I

Eysenckin persoonallisuuskyselyn ja Zuckermanin
elämishakuisuusasteikon faktorirakenteet ja pisteitys Suomessa

(Factor structures and scoring of the Eysenck Personality
Questionnaire and Zuckerman's Sensation Seeking Scale in Finland)

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CROSS-CULTURAL COMPARISONS OF PERSONALITY: FINLAND AND ENGLAND

SYBIL B. G. EYSENCK¹ and JAANA HAAPASALO²

¹Department of Psychology, Institute of Psychiatry, De Crespigny Park, Denmark Hill,
London SE5 8AF, England and ²Turk Central Prison, Turku, Finland

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Summary—The EPQ translated into Finnish was completed by 501 males and 448 females. Factor comparisons, on the EPQ, all exceeded 0.96, so that factors Psychoticism (P), Extraversion (E), Neuroticism (N) and Social Desirability (L) were deemed to be identical in Finland and England. Sex differences were in line with the usual results, i.e. males scoring higher than females on P and E but lower on N and Social Desirability. Reliabilities (alpha coefficients) were satisfactorily high, except perhaps that for females on Psychoticism. National differences on these personality variables were barely significant for P (Finnish Ss scoring slightly higher than the English). Both sexes in Finland scored higher on E than their English counterparts, Finnish females scored lower on N and Finnish males lower on Social Desirability.

The same Ss also completed the Zuckerman Sensation Seeking (SS) Scales (form V). Factor comparisons between Finnish males and females were high for Thrill and Adventure Seeking and Experience Seeking, but low for Disinhibition and Boredom Susceptibility. Reliabilities (alpha coefficients) were high for Thrill and Adventure Seeking and Disinhibition but low for the other two scales.

Intercorrelations of EPQ and SS scales are presented, and were, in the expected direction, i.e. total SS scale was highly correlated with P, E and negatively with L (Social Desirability) but not at all with N. Disinhibition aligned with P and E and Thrill and Adventure Seeking mainly with E.

INTRODUCTON

The Eysenck Personality Questionnaire (EPQ) was standardized in England (Eysenck and Eysenck, 1975), after which a considerable number of cross-cultural studies were carried out (Barrett and Eysenck, 1984). The methodology employed in these is described in detail elsewhere (Eysenck, 1983; Eysenck and Eysenck, 1982). Briefly, the threefold aims were: (1) to show that the EPQ factors of Psychoticism (P), Extraversion (E), Neuroticism (N) and the Lie, or Social Desirability scale (L) existed in whichever country was being studied; (2) to obtain a scoring key which will give a valid and reliable EPQ test for that country and finally (3) to compare means on the above factors between England and the other country concerned using only scales with items in common. This paper reports such a study comparing England with Finland.

In addition, data were also available for these Ss on Zuckerman's Sensation Seeking (SS) Scale (Form V) (Zuckerman, 1979) and here we were mainly concerned with the intercorrelations of these scales with those of the EPQ in Finland, a similar study having been done in England by Eysenck and Zuckerman (1978).

METHOD AND RESULTS

The 101 item EPQ was translated into Finnish and completed by 501 male and 448 female Finnish Ss aged 38.49 ± 14.48 and 40.23 ± 15.07 years, respectively. Altogether 967 (463 females and 504 males) Ss aged 18-70 years were randomly drawn from the national register of the population. The aim was to include roughly equal numbers of respondents within various age-groups. Occupational status of respondents varied considerably due to the sampling method. Ss below the age of 18 years were not reached by random sampling and a group of 16- and 17-year-old respondents consisted of girls and boys from a trade school.

The data were analysed using principal components analysis, extracting the first four factors, followed by rotation by direct oblimin. The resulting factor loadings are not given here, for the sake of brevity, but are available from either author on request.

Table 1. Indices of factor comparisons

	P	E	N	L
Finnish males vs British males	0.962	0.985	0.970	0.994
Finnish females vs British females	0.994	0.999	0.997	0.992
Finnish males vs Finnish females	0.996	0.997	0.997	0.991

To establish the first of our aims, factor comparisons were calculated after the method of Kaiser, Hunka and Bianchini (1971), and are shown in Table 1. It will be seen that none of these values are below 0.96, the majority being 0.99, so that we have no hesitation in claiming that the factors of P, E, N and L are identical in Finland and England.

Next, the factor loadings were inspected with a view to constructing a valid scoring key for Finnish Ss with adequate reliabilities. Eight items from the British scoring key loaded inadequately on the P scale, there being several that produced loadings in the male but not the female sample (numbers 11, 78, 100) with the rest loading on other scales, though interestingly not on the L scale (numbers 6, 9, 63, 67, 81). These items were, therefore, omitted from the P scale, but three items which loaded on this factor and made sense contentwise were substituted. These were No. 38, "Would you call yourself happy-go-lucky?"; No. 45, "Do you throw waste paper on the floor when there is no waste paper basket handy?"; and No. 90, "Would life with no danger in it be too dull for you?". This left the P scale with 20 items. Only two items on the E scale were inappropriate and therefore dropped one being No. 38 which clearly switched loadings to the P scale and No. 70 where loadings were present on E but somewhat weak. No substitute items were available so that the E scale comprises 19 items. Similarly, two items on the N scale were unsatisfactory as they had equally high loadings on P and N (Nos 24 and 68) and were, therefore, omitted from the scale. Two extra items, however, loaded very highly on N and were consistent with the concept of the N scale contentwise so were duly added to the scale. These were No. 48, "Do you feel self pity now and again?"; and No. 56, "Do you sometimes sulk?" This left the N scale at 23 items. Finally all items of the British L scale loaded satisfactorily in Finland, but since there were three additional items with high loadings on L, as well as good content conformity with the concept of the L scale, these were additionally included. They were No. 33, "Do you always say you are sorry when you have been rude?", No. 73, "Are you always polite even to unpleasant people?" and No. 83, "Have you ever deliberately said something to hurt someone's feelings?" Hence the L scale comprised 24 items, the sum total of items, therefore on the Finnish scoring key being 86 (Table 2).

Using this scoring key, reliabilities (alpha coefficients) were calculated and are given in Table 3, together with the intercorrelations of the scales. All reliabilities, except for P are well above 0.8 so that E, N and L can be accepted as satisfactory scales without reservation. As far as P is concerned, adding those items on which males but not females had adequate loadings, would have put the reliability for males into the 0.7 plus range, which is quite acceptable. However, in order to compromise in the interest of gaining a reasonable reliability for females on P also, the scoring key items were left at the 20 mentioned, producing the optimum reliabilities of 0.69 for males and 0.57 for females. Though they are less than those for the other scales we still feel that the P scale is reasonably acceptable in Finland, perhaps with some caution in the interpretation of the results for females.

Table 2. Finnish scoring key

(P)	Yes: 23, 27, 31, 35, 38, 45, 47, 51, 55, 71, 74, 85, 88, 90, 93, 97, No: 2, 19, 39, 59	(20)
(E)	Yes: 1, 5, 10, 15, 18, 26, 34, 42, 50, 54, 58, 62, 66, 77, 92, 96 No: 22, 30, 46	(19)
(N)	Yes: 3, 7, 12, 16, 20, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 72, 75, 79, 82, 86, 89, 94, 98	(23)
(L)	Yes: 13, 21, 33, 37, 61, 69, 73, 87, 99 No: 4, 8, 17, 25, 29, 41, 49, 53, 57, 65, 76, 80, 83, 91, 95	(24)
		(86)

Table 3. Reliabilities (alpha coefficients) and intercorrelations of P, E, N and L

	Reliabilities		Intercorrelations: (scales)	
	Males	Females	Males	Females
P	0.69	0.57	PE	0.15
E	0.86	0.87	PN	0.18
N	0.84	0.84	PL	-0.33
L	0.83	0.84	EN	-0.22
			EL	-0.03
			NL	-0.18

Table 4. Means and standard deviations for Finnish Ss on P, E, N, L and age

	P		E		N		L		Age		n
	M	SD	M	SD	M	SD	M	SD	M	SD	
Finnish males	3.77	2.74	10.58	4.80	10.13	5.02	8.19	4.88	38.49	14.78	501
Finnish females	2.75	2.15	10.01	4.86	12.25	4.87	10.31	5.05	40.23	15.07	448

Means and Standard Deviations were computed for Finnish Ss and these can be seen in Table 4. The usual sex differences obtain, i.e. males score higher than females on P and slightly so on E, but lower on N and the L scale.

Finally, Table 5 gives the comparative norms for Finnish and English groups, using only items in common for both scoring keys. Though there are some slight differences on P, with Finnish Ss scoring higher than the English, this is barely statistically significant. They do, however, score lower on E, N and L, although curiously on N only significantly for females and on L only significantly for the males.

Zuckerman SS scales

Since the same Ss who had been given the EPQ to complete had also answered the SS scale (Zuckerman, Eysenck and Eysenck, 1978; Zuckerman, 1979), this 40-item (Form V) questionnaire was analyzed in the same way as the EPQ, except that factor comparisons were only calculated to gauge the concurrence between the Finnish males and females and no English samples were involved. These values are given in Table 6 and it will be seen that only Thrill and Adventure seeking (TAS) and Experience Seeking (ES) are really in good agreement with each other, Disinhibition (DIS) and Boredom susceptibility (BS) indicating quite a considerable amount of discrepancy between the sexes.

When the loadings were inspected, it was found that TAS and DIS had 13 and 10 items, respectively but ES and BS could only really achieve 7 and 6 items, respectively (Table 7). Hence, when reliabilities (alpha coefficients) were calculated, (Table 8), only TAS and DIS have viable

Table 5. Comparison of means and standard deviations of Finnish Ss and British Ss on scales of common items

	P		E		N		L		Age		n
	M	SD	M	SD	M	SD	M	SD	M	SD	
Finnish males	2.76	2.25	10.58	4.80	8.75	4.68	7.13	4.30	38.49	14.48	501
Finnish females	2.04	1.74	10.01	4.86	10.75	4.55	8.92	4.44	40.23	15.07	448
British males	2.46	2.21	11.45	4.88	8.87	4.79	8.81	4.79	37.57	15.40	562
British females	1.73	1.97	11.67	4.53	11.95	4.91	9.50	4.61	39.26	13.83	333
Males	<0.05	<0.01	NS	<0.001							
Females	<0.05	<0.001	<0.001	NS							

Table 6. Indices of factor comparisons

Males vs Females
TAS = 0.99
ES = 0.93
DIS = 0.87
BS = 0.71

Table 7. Scoring key for Finnish SS scales

TAS			
Yes:	(A) 3, 6, 14, 16, 17, 18, 23, 28		
No:	(B) 11, 20, 21, 38, 40	(13)	
ES			
Yes:	(A) 9, 22, 24		
No:	(B) 10, 12, 19, 26	(7)	
DIS			
Yes:	(A) 1, 29, 32, 36		
No:	(B) 13, 25, 27, 30, 33, 35	(10)	
BS			
Yes:	(A) 4, 5, 8, 39		
No:	(B) 2, 15	(6)	
Plus Total: 36 items all summed above			

Table 8. Reliabilities (alpha coefficients) and intercorrelations of the scales

	Reliabilities: (alpha coefficients)		
	Males	Females	No. items
TAS	: 0.85	0.85	13
ES	: 0.61	0.56	7
DIS	: 0.76	0.76	10
BS	: 0.44	0.37	6
Total (T)	: 0.85	0.87	36
Intercorrelations			
	Males	Females	
TAS × ES	: 0.33	0.58	
TAS × DIS	: 0.41	0.59	
TAS × BS	: 0.07	0.00	
TAS × T	: 0.84	0.88	
ES × DIS	: 0.45	0.59	
ES × BS	: 0.01	0.04	
ES × T	: 0.58	0.75	
DIS × BS	: 0.21	0.16	
DIS × T	: 0.79	0.85	
BS × T	: 0.33	0.25	

values, BS particularly being very low (possibly due to the brevity of the scale). Intercorrelations of the scales show all scales except BS to be highly interrelated for both sexes. Means and Standard Deviations were calculated (Table 9) although only TAS and DIS are really viable scales in this study. Males score higher than females on both which is in accord with other studies (Zuckerman, 1979; Zuckerman *et al.*, 1978; Eysenck and Zuckerman, 1978).

Finally, we intercorrelated the EPQ scales P, E, N and L, with those of the Zuckerman SS scales, TAS, ES, DIS, BS and a total score (Table 10).

These intercorrelations reveal that P and E are correlated with TAS, ES and DIS, but that P seems more associated with DIS and E with TAS (particularly for females). Interestingly, N is again

Table 9. Means and standard deviations on SS scales

	Males	Females
TAS	: 6.52 ± 3.82	4.61 ± 3.52
ES	: 0.95 ± 1.30	1.14 ± 1.31
DIS	: 4.60 ± 2.68	2.73 ± 2.45
BS	: 1.61 ± 1.33	1.41 ± 1.21
T	: 13.67 ± 6.50	9.90 ± 6.47

Table 10. Intercorrelations of P, E, N and L with TAS, ES, DIS, BS and T

	Male	Female
P		
TAS	: 0.15	0.29
ES	: 0.27	0.31
DIS	: 0.42	0.45
BS	: 0.22	0.18
T	: 0.36	0.43
E		
TAS	: 0.27	0.44
ES	: 0.18	0.37
DIS	: 0.31	0.38
BS	: -0.01	-0.01
T	: 0.32	0.46
N		
TAS	: -0.17	-0.09
ES	: 0.07	-0.08
DIS	: 0.08	0.08
BS	: 0.05	0.20
T	: -0.04	-0.00
L		
TAS	: -0.30	-0.32
ES	: -0.21	-0.36
DIS	: -0.42	-0.43
BS	: -0.07	-0.13
T	: -0.40	-0.43

uncorrelated with any of the SS scales which was found in earlier studies, also. (Eysenck and Zuckerman, 1978). Finally, the substantial negative relationship of the L scale with all but the BS scale is not surprising or unusual, since some of the SS items are not wholly socially desirable in content.

DISCUSSION

Except for a somewhat weak reliability coefficient for females on the P scale, the Finnish EPQ is satisfactory in its present form. Factor comparisons indicate close agreement between the factors of P, E, N and L in both countries and for both sexes. Intercorrelations between scales are pleasingly low, except perhaps for the usual negative relationship between P and L. Sex differences of means are as usual, males having higher scores than females on P and to some extent on E, but lower ones on N and L.

In attempting a cross-cultural comparison of norms, the extremely unusual situation arose that the Finnish sample, especially the males, scored *lower* than the English one on Social Desirability. This has not occurred before in our cross-cultural studies and is hard to explain. Suffice it to say that clearly the Finnish samples did not dissimulate so that the results obtained on the other scales can be relied upon to be truthful responses. All in all, we can confidently recommend the use of the EPQ in Finland, albeit a certain caution needs to be exercised in the interpretation of the P scale scores for females.

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Sensation seeking and Eysenck's personality dimensions in an offender sample.

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Sensation seeking and Eysenck's personality dimensions in an offender sample

JAANA HAAPASALO

Turku Central Prison, Box 222, SF-20100 Turku, Finland

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Summary—In numerous studies criminality and psychopathy have been interlinked with Psychoticism (P), Extraversion (E), Neuroticism (N) and sensation seeking. Links between sensation seeking and P, E or N have also been of interest. To clarify these relationships, Eysenck's 101-item personality questionnaire (EPQ) and Zuckerman's Sensation Seeking Scale (SSS, Form V) were presented to a sample of 343 males, aged 21–53 yr, and to 86 prison inmates of the same age. Offenders scored higher on the P, N and Lie scales and lower on E than the men in the larger sample. Scores on the SSS were also higher for offenders, apart from the Thrill and Adventure Seeking scale. No significant correlations between the EPQ and SS scales came through in the offender sample. The MMPI Psychopathy and Hypomania and CPI Socialization scales showed interesting correlations with both the EPQ and SS scales. All in all, the results were in line with the previous findings. The percentage of inmates belonging to the high and low PEN groups differed, however, from the results obtained previously.

INTRODUCTION

The 3-dimensional description of personality established by Eysenck (1957, 1967, 1981; Eysenck & Eysenck, 1976, 1985) has given rise to wide-ranging empirical research. Extraversion–introversion, neuroticism–emotional stability and psychoticism–impulse control are the main dimensions of universal human nature and defined as a bundle of correlated traits. A methodological corollary of Eysenckian theory is a succession of personality inventories (Eysenck, 1959; Eysenck & Eysenck, 1964, 1975; Eysenck, Eysenck & Barrett, 1985). The four-scale Eysenck Personality Questionnaire (EPQ) has been used in several cross-cultural studies (Barrett & Eysenck, 1984). Extraversion (E) tackles such traits as sociability, activity, liveliness and sensation seeking. Neuroticism (N) involves anxiousness, tenseness, guilt feelings and depression. Psychoticism (P) has to do with aggressive, egocentric, impulsive and emotionally cold tendencies, and the L(ie) scale is intended to measure a propensity to “fake good” (see Eysenck *et al.*, 1985).

Empirically testable hypotheses have been derived from Eysenck's theory also in the domain of criminality and antisocial behavior. In his first theory of criminality Eysenck (1964) focused on differences in conditionability between extraverts and introverts. He presumed that antisocial individuals and offenders are more extraverted and more inefficient in conditioning than others. Since efficient conditioning is a prerequisite for the development of conscience, the criminal conscience remains deficient (Eysenck, 1964). After having introduced psychoticism, Eysenck and Eysenck (1976, 1978) outlined a model of primary and secondary psychopathy. Primary and secondary psychopaths do not necessarily refer to two distinct categories but rather to two types which are located differently on the dimensional space formed by P, E and N. Primary psychopaths are those who are high on P, whereas secondary psychopaths are neurotic extraverts. More recently, Eysenck (1987) summarized the major findings around his theory of criminality and stated that the importance of psychoticism, extraversion and neuroticism in criminality is well-founded.

Criminality, antisocial personality and psychopathy have also been related to the sensation seeking trait (Zuckerman, 1978, 1979). Sensation seeking is a trait referring to the need for varied, novel and complex sensations and experiences and the willingness to take physical and social risks in order to fulfil that need (Zuckerman, 1979). Risk taking in dangerous hobbies (e.g. mountain climbing, parachuting, scuba diving, motor racing) and occupations (e.g. firemen, riot squad police, risky rescue and salvage work), using drugs and alcohol and fearlessness in potentially phobic situations could be explained by high sensation seeking. A Sensation Seeking Scale with four 10-item scales (Thrill and Adventure Seeking, TAS; Experience Seeking, ES; Disinhibition, DIS; Boredom Susceptibility, BS) has been developed to assess the trait (see Zuckerman, 1979).

Zuckerman (1979) compiled studies examining the relationships between extraversion, psychoticism, neuroticism and sensation seeking. Extraversion correlated with sensation seeking in the range of 0.12–0.58. In this connection it could be pointed out that Eysenck *et al.* (1985) treat sensation seeking as a primary factor in the dimension of extraversion. The correlation between psychoticism and sensation seeking varied from 0.00 to 0.50. Neuroticism did not show any correlation with sensation seeking.

Zuckerman (1979) also scrutinized correlations between other popular psychopathy measures and sensation seeking. The Psychopathy Deviate (Pd) scale of MMPI correlated to some extent with sensation seeking (-0.08 – 0.25), and correlations ranging from 0.40 to 0.47 were computed for the Hypomania (Ma) scale. In these studies the Ss were prisoners in psychiatric care and other offenders. Likewise, links between sensation seeking and psychopathy were investigated in terms of the California Personality Inventory (CPI) and its Socialization (So) subscale. Zuckerman (1979) summarizes that, on the basis of the CPI results, sensation seeking aligns with impulsivity, extraversion, nonconformism, norm breaking, irresponsibility and weak self-control. The So scale correlated negatively with sensation seeking, that is, high sensation seekers tend to be less socialized.

Correlative studies show that sensation seekers are somewhat antisocial and extraverted persons. Psychoticism and extraversion seem to be linked with both criminality or psychopathy and sensation seeking. The object of the present study is to clarify the picture of these intertrait links. First, the question is posed as to whether male prisoners get higher scores on the EPQ and SS scales than male Ss in general. Secondly, the association between sensation seeking and EPQ dimensions

in the sample of offenders is examined. In addition, the study is concerned with the combinations of P, E and N scores among the offenders.

METHOD

The 101-item personality questionnaire (EPQ) developed by Eysenck *et al.* (1975) and Zuckerman's (1979) Sensation Seeking Scale (SSS, Form V) have previously been standardized in Finland (Eysenck & Haapasalo, 1989; Haapasalo, 1988). The standardization sample comprised 463 females and 504 males. Their ages ranged from 17 to 71 yr, with a mean of 39.7 yr (SD = 15.5) for the females and 37.7 yr (SD = 14.7) for the males. Both questionnaires have been subjected to principal components analysis with rotation by direct oblimin (Eysenck *et al.*, 1989) and principal axis factoring followed by varimax rotation (Haapasalo, 1988). Varimax rotation yielded four factors and scales for the EPQ (N, E, L and P scales) and three for the SSS (TAS, DIS and ES). In the present study the scales based on the varimax method were utilized.

The prison Ss comprised 92 male volunteers. The age of the prisoners varied from 21 to 53 yr, with a mean of 33.7 yr (SD = 8.2). They were convicted of property and traffic offences (e.g. theft, fraud, drunken driving, careless driving). Extremely violent offenders were not included. The convicts came from four institutions, three central prisons and one prison for offenders on remand. The questionnaire data was collected non-anonymously in group tests. The Ss were asked to complete two forms one of which contained the EPQ and SSS and the other the MMPI Pd and Ma scales (Hathaway & McKinley, 1951) and the CPI So scale (Gough, 1957). The responses were scanned for possible omissions and unacceptable answers. The sample of inmates finally contained 86 Ss.

All the men ranging in age from 21 to 53 yr were selected out of the larger standardization sample in order to make comparisons between the offenders and the men in general. The sample of 'normal' men thus contained 343 Ss.

The answers were scored appropriately, and descriptive statistics were computed. In addition, the Pearson product-moment correlation coefficients were calculated in order to study the relationships between the EPQ and SSS scores. All computations were made using the SPSSx program.

RESULTS

An inspection of Table 1 shows that the offenders scored higher on the P, N and L scales but lower on E. Moreover, the offenders were more sensation seeking than the other males. On the TAS scale, however, the men of the standardization sample scored significantly higher than the offenders.

In the offender group there were no significant correlations between the EPQ and SS scales (Table 2). Table 2 also shows that P, E and N correlated appreciably with the MMPI Pd and Ma scales and the CPI So scale. Neuroticism was related particularly to the Hypomania score and extraversion to the Psychopathy score. Low scores on the CPI So scale were most clearly linked with high extraversion.

As is apparent from Table 3, the MMPI Pd scale was strongly associated with the SS scales, with the exception of TAS which correlated positively with the CPI So scale. It was also interesting to examine the proportions of offenders with high P scores (i.e. primary psychopaths) and with high E and N scores (i.e. secondary psychopaths). For these purposes the

Table 1. Means and standard deviations of the EPQ and the SSS for men in the standardization sample ($n = 343$) and for offenders ($n = 86$)

Scale	Standardization sample		Offenders		<i>t</i>
	\bar{X}	SD	\bar{X}	SD	
P	4.58	3.08	10.18	2.54	15.56***
E	11.12	4.95	9.11	2.56	3.63***
N	11.13	5.66	12.94	3.60	2.81**
L	8.18	4.79	11.89	2.21	7.00***
TAS	6.26	3.51	5.51	1.79	2.79**
ES	2.87	1.75	3.87	1.60	4.78***
Dis	6.63	3.55	8.46	2.12	6.14***
TOT	15.77	6.79	17.84	3.83	3.75***
Age†	35.66	8.75	33.78	8.29	1.85

P = Psychoticism, E = Extraversion, N = Neuroticism, L = Lie score, TAS = Thrill and Adventure Seeking, ES = Experience Seeking, Dis = Disinhibition, TOT = Total score of the SSS.

†*n* for age in the offender group = 92.

** $P < 0.01$; *** $P < 0.001$.

Table 2. Correlations between the EPQ subscales and the SSS, MMPI and CPI scales for offenders

EPQ scales	SS scales				MMPI		
	TAS	ES	Dis	TOT	Pd	Ma	CPI So
P	-0.12	0.13	0.18	0.10	0.34***	0.32***	-0.34***
E	-0.12	0.00	0.12	0.01	0.44***	0.53***	-0.42***
N	-0.05	0.09	0.18	0.12	0.38***	0.72***	-0.38***
L	0.10	0.15	0.07	0.15	0.05	-0.12	0.21*

Abbreviations for the EPQ and SS scales as in Table 1.

MMPI Pd = Psychopathy Deviate in the Minnesota Multiphasic Personality Inventory.

MMPI Ma = Hypomania in the Minnesota Multiphasic Personality Inventory.

CPI So = Socialization in the California Personality Inventory.

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Table 3. Correlations of the MMPI and CPI scales with the SSS for offenders

MMPI and CPI scales	SS scales			
	TAS	ES	DIS	TOT
MMPI Pd	-0.17	0.36***	0.31**	0.24*
MMPI Ma	0.15	-0.11	0.06	0.06
CPI So	0.29**	0.12	0.08	0.23*

Abbreviations as in Tables 1 and 2.

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Table 4. Percentage of offenders falling into each EPQ octant in three samples

Sample	P-				P+			
	E+N+	E+N-	E-N+	E-N-	E+N+	E+N-	E-N+	E-N-
Finnish inmates	9.8	4.3	4.3	31.5	17.4	7.6	9.8	8.7
Canadian inmates*	15.6	15.6	11.0	12.7	9.2	8.1	19.7	8.1
British inmates†	14.0	10.0	10.9	4.6	20.1	11.1	24.6	4.7

*The mean age of the Ss ($n = 173$) was 28.6 (SD = 6.9). The cut-off points were P4 and over, E14 and over and N10 and over.†The age range of the Ss ($n = 1426$) was 20-39 yr. The cut-off points were P4 and over, E14 and over and N10 and over.

offenders were divided into eight groups on the basis of their combination of P, E and N scores. The medians of P (10), E (9) and N (13) were used as the cut-off points when relegating the Ss to the low and high P/E/N groups. This procedure of zone (octant) analyses was adapted from Eysenck *et al.* (1975) and Hare (1982). The cut-off points were, however, slightly different due to the different scoring keys for the Finnish EPQ.

Table 4 contains the percentages of offenders falling into the EPQ octants. 43.5% of the offenders belonged to the high P group, and 27.2% were neurotic extraverts. The majority of Ss belonged either to the group P - E - N - (31.5%) or to the group P + E + N + (17.4%). For comparison, Table 4 presents the results by Eysenck *et al.* (1975) and Hare (1982) together with the results in this study.

DISCUSSION

According to Hare (1982) psychoticism describes antisocial and criminal tendencies. The P factor that emerged in the Finnish standardization sample seems to have items which express emotional flattening or bluntness and indifference to norms. With this in view, the higher score on P obtained by the offenders in the present study, as opposed to the lower P score in the standardization sample, makes sense.

Criminals have also been looked on as more extraverted and neurotic than noncriminals (Eysenck, 1964; Eysenck *et al.*, 1978; Eysenck & Eysenck, 1977). Eysenck *et al.* (1985) point out that the association between criminality and extraversion has not been very consistent. However, criminals are not commonly less extraverted than others, as observed in this study. It could be that the extraversion items were difficult to answer in prison where the study was carried out. Some of the items relate to sociability (e.g. "Can you get a party going?") and thus can be affected by incarceration, as mentioned by Eysenck (1987).

Eysenck *et al.* (1985) refer to the low L scores observed among the criminal population. Conversely, high L scores have often been related to low P and E. There are grounds for assuming that conscientious individuals, who sincerely believe their behavior to be always in line with norms and good manners, get high scores on the L scale. On the other hand, criminals do not mind giving a less favorable picture of themselves and more readily admit their norm-breaking behavior. They would thus score lower on L. Nevertheless, in this study the offenders scored higher on L than the others. It is hard to interpret this sort of finding. It could be conjectured, of course, that high L scores reflect unreliability in respect of the answers given by the criminals.

It is interesting to note that the majority of offenders belonged either to the high PEN group (17.4%) or to the low PEN group (31.5%). This finding is not compatible with previous results. The figures presented by Hare (1982) were 9.2 and 12.7%, and by Eysenck *et al.* (1975) 20.1 and 4.6%, respectively. The cut-off points for the scales, as well as the age range of the offenders in this study, differed from those of the previous studies. However, the finding seems to require an explanation. As compared to the previous results, the proportion of low PEN scorers was exceptionally large. It might be possible that the low PEN scorers and the high PEN scorers represent common personality types among Finnish offenders. The finding could also be explained by faking-bad and faking-good response sets on the part of the offenders. Another possibility is that the differences in criminality, psychiatric symptoms etc. between this and the previous samples would explain the findings.

Furthermore, it is noteworthy that the distribution of offenders was, to some extent, similar to that of Hare's (1982) inmates. 43.5% of the offenders had high scores on P and 27.2% had high scores on E and N. The figures reported by Hare (1982) were 45.1 and 24.8%, respectively. The high P scorers could be identified as primary psychopaths and the high E-N scorers as secondary psychopaths. Categories of this kind appear, however, to be of doubtful validity, as long as overlapping among the groups remains. Those offenders who scored high on P often scored high on E and N as well.

The MMPI Psychopathy Deviate and Hypomania scales correlated significantly with the P, E and L scales. It could be concluded that the MMPI scales and the EPQ scales, particularly the Hypomania scale and neuroticism, measure a common aspect of psychiatric abnormality among the offenders. This conclusion is confirmed by the fact that the CPI So scale assessing the degree of socialization shows a negative relationship with the P, E and N scales. By and large, the correlations between the MMPI scales and the SS scales on the one hand, and the EPQ scales and the SSS on the other, lie in the region stated by Zuckerman (1979).

The results lent support to the assumption that criminals are sensation seekers, especially in the disinhibition and experience seeking way. Criminals like to have fun, drink and try various drugs. They are eager to get new experiences.

In contrast, the Thrill and Adventure Seeking (TAS) factor seems to be linked with socially more acceptable and less antisocial sensation seeking. The offenders did not have higher scores on TAS, and the MMPI scores reflecting antisocial liabilities did not correlate with TAS. The more socialized an individual is (a high score on the CPI So scale), the higher he scores on TAS. The TAS scale contains a number of items examining willingness to try special sports (e.g. parachuting and surf-board riding). It is possible that these sports do not belong to the criminal way of life. Thus, they are not to be considered as possible channels for sensation seeking.

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IV

The Eysenck Personality Questionnaire and Zuckerman's Sensation Seeking Scale (Form V) in Finland: Age differences.

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THE EYSENCK PERSONALITY QUESTIONNAIRE AND ZUCKERMAN'S SENSATION SEEKING SCALE (FORM V) IN FINLAND: AGE DIFFERENCES

JAANA HAAPASALO

Turku Central Prison, Box 222, SF-20100 Turku, Finland

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Summary—Finnish versions of the Eysenck Personality Questionnaire (EPQ) and Zuckerman's Sensation Seeking Scale (SSS, Form V) were completed by 463 women and 504 men, aged 17-71 yr. Results showed that the P and E scores and all the SSS scores declined with age. In contrast, the L scores increased as a function of age. Age differences on the EPQ and SSS scales were in accordance with earlier findings. Possible implications of the differences are discussed briefly.

INTRODUCTION

A host of studies have focused on the personality dimensions evolved by Eysenck (1957, 1967, 1981; Eysenck & Eysenck, 1976, 1985). Extraversion (E), neuroticism (N) and psychoticism (P) make up the fundamental higher order personality factors, which are composed of several primary traits, such as impulsivity (Eysenck, 1983; Eysenck & Eysenck, 1985). There is solid evidence for the universality and validity of these main dimensions (Barrett & Eysenck, 1984; Eysenck & Eysenck, 1982). The Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1975) has been standardized in many cultures, and the Eysenckian factor structure has been buttressed by cross-cultural investigations.

The EPQ encompasses four scales: E, N, P and a Lie (L) scale. Interpretation of P as psychoticism or L as social desirability or dissimulation, however, is not clear-cut (Claridge, 1983; Gong, 1984). The EPQ has also been criticized on account of its psychometric weaknesses (see Hammond, 1987). Eysenck, Eysenck and Barrett (1985) dissected the item pool of psychoticism and published the EPQ-R (Revised). Corulla (1987) employed the EPQ-R in his study and confirmed the improvements attained by revision. Unfortunately, the EPQ-R has not yet been thoroughly examined in a cross-cultural perspective. Because norms and cross-cultural findings for the EPQ-R are still lacking, the EPQ remains the most applicable instrument in measuring the above-mentioned personality domains.

An interesting ramification of the EPQ studies is the endeavour at elucidating relationships between sensation seeking and Eysenck's dimensions (e.g. Zuckerman, Eysenck & Eysenck, 1978). Zuckerman (1979, 1983) argues that sensation seeking is a personality trait with biochemical, psychophysiological and behavioral correlates. Sensation seeking is embodied in the need for various sensations and experiences and in a willingness to take social and physical risks while fulfilling this need. The trait can be measured by the Sensation Seeking Scale (SSS) (Zuckerman, 1979). The SSS consists of the following subscales:

- (1) Thrill and Adventure Seeking (TAS) betrays a willingness to participate in activities providing danger and risks (e.g. mountain climbing, parachuting).
- (2) Experience Seeking (ES) conveys a liability to seek fresh sensations and experiences and adopt an unconventional life-style.
- (3) Disinhibition (Dis) measures a conventional sort of sensation seeking, such as unfettering social inhibitions by drinking or having fun.
- (4) Boredom Susceptibility (BS) reflects an avoidance of repetitive experiences, routine work and bores.

The 4-factor structure of the SSS has been scrutinized, resulting in more or less consistent findings (Ball, Farnill & Wangeman, 1983; Birenbaum, 1986; Birenbaum & Montag, 1987; Eysenck & Zuckerman, 1978; Rowland & Franken, 1986; Zuckerman *et al.*, 1978).

Age and sex differences in the EPQ and SSS scores have been observed in a number of studies. Eysenck and Eysenck (1975) showed that the P, E and N scores decline with age, while the age trend for L is the opposite. Women tend to get higher scores than men on N and L but lower on P and E. The E scores for men drop more sharply than for women (see Eysenck & Eysenck, 1975). A negative correlation between age and sensation seeking has also been convincingly reported, as well as the finding that men score higher than women on the SSS (Zuckerman, 1979; Zuckerman *et al.*, 1978).

The factorial structures of the EPQ and the SSS have previously been studied in Finland (Eysenck & Haapasalo, 1989; Haapasalo, 1988). As a result, the Finnish scoring keys for both questionnaires have been constructed. The present study focuses on the age differences in the EPQ and SSS scores.

METHOD

Subjects

Eysenck and Eysenck's (1975) EPQ and Zuckerman's (1979) SSS (Form V) were sent to 1000 potential Ss, aged 18–71 yr and selected randomly within each age group from the national population register. In this connection an age group refers to all those persons born in the same year. The sample was thereafter enlarged by a random sample of industrial employees and a group of trade school students. The data was collected by post, apart from the student Ss, and the response rate was satisfactory. Eventually, all 967 anonymous respondents, 463 women and 504 men, were treated as a single sample. The mean age of the Ss was 39.79 yr (SD = 15.55) for the women and 37.74 yr (SD = 14.75) for the men.

Procedure

Before gathering the data, the 101-item Eysenck Personality Questionnaire (EPQ) was translated into Finnish, as well as the Form V of the Sensation Seeking Scale (SSS) with 40 forced-choice items. The Finnish versions were compared with the original forms by means of the back-translation procedure. The SSS items 9 (trying marihuana) and 12 (swingers) were slightly modified. Hashish was substituted for marihuana, as the former is more common in Finland. The term swinger has no simple correspondent in Finnish, so had to be expressed some other way. Similarly, hippies (item 19) and jet set (item 33) sound a little outmoded, but they were accepted.

Responses were analyzed by using a principal axis factoring with varimax rotation in order to produce a simple and adequate factor structure for the Finnish EPQ and SSS. The scales were based on the obtained factors. The answers were then scored appropriately and age differences in the scores were computed. All computations were carried out with the SPSSx program.

RESULTS

A brief description of the EPQ and SSS factors

Three, four and five factors were extracted for the EPQ. Interpretatively and statistically the 4-factor solution was optimal. Theoretically, the orthogonal factor structure corresponds well to the assumption that the EPQ factors are independent of each other. The factors consisted of items having loadings >0.20 . Those factors with eigenvalues >1 accounted for 20.4% of the variance.

The EPQ factors were labelled neuroticism (N), extraversion (E), lie (L) and psychoticism (P). The N scales in England (Eysenck & Eysenck, 1975) and Finland are much alike. Some items had, however, loadings high enough to be considered as extra items on the Finnish N scale. Hence, the N scale has 27 items as opposed to 23 items on the British scale.

The Finnish E scale consists of 20 items, including one new item and after omission of two items. The L scale has also gone through some changes. The four extra items had significant loadings

Table 1. Correlations between the scales and age for all Ss and for sex groups

Scale	Items	All (n = 967)	Women (n = 463)	Men (n = 504)
P	24	-0.26	-0.22	-0.28
E	20	-0.25	-0.30	-0.20
N	27	(0.01)	(0.07)	(0.07)
L	25	0.44	0.51	0.36
TAS	12	-0.51	-0.55	-0.49
ES	9	-0.34	-0.43	-0.26
Dis	17	-0.48	-0.54	-0.44
TOT	38	-0.57	-0.61	-0.54

P = Psychoticism, E = Extraversion, N = Neuroticism, L = Lie (Social Desirability) scale, TAS = Thrill and Adventure Seeking, ES = Experience Seeking, Dis = Disinhibition, TOT = Total score for the SSS.

All but the coefficients in parentheses are significant ($P < 0.001$).

on this scale. The L scale thus has 25 items instead of the 21 items in the British scoring key. Four new items were added to the P scale, and five items were dropped.

Two, three and four factors were presented as possible solutions for the SSS. The 3-factor pattern accounting for 24.5% of the total variance proved to be interpretable and statistically meaningful. The factors were entitled Thrill and Adventure Seeking (TAS), Disinhibition (Dis) and Experience Seeking (ES). The Boredom Susceptibility (BS) factor did not arise in the present analyses.

The TAS scale bears a marked similarity to the original TAS scale. Further, all the original Dis items loaded on the Finnish Dis scale, except from the item about swingers (number 12). In addition to the Dis items there are eight items that belonged originally to the BS scale. Zuckerman's ES items loaded on the factor named ES with the exception of one item.

Reliabilities (α coefficients) for the EPQ and SSS were close to those for the scales based on the direct oblimin rotation of the factors presented by Eysenck and Haapasalo (1989). The scoring keys, the factor loadings and the reliability data are not presented here but are available from the author on request.

Age differences

To begin with, the relationships between age and the EPQ and SSS scores are described simply by correlative data in Table 1.

An inspection of Table 1 shows that only the N scale did not correlate with age. The negative correlations between the SS scores and age were very strong, especially for the women.

Table 2 shows that the correlations between the EPQ and SS scales were mostly significant. The correlations remained high, the effect of age being partialled out (see Table 3). It should be noted, however, that the correlations between the L scale and SS scales dropped considerably, when age was controlled. With respect to the Lie scores the effect of age seems to be crucial.

Further, the Ss were divided into six age groups with cut-off points at 20, 30, 40, 50 and 60 yr. This procedure was chosen to make the age groups comparable to the ones reported by Eysenck and Eysenck (1975). The SS scores have also previously been examined in similar age groups (e.g. Zuckerman *et al.*, 1978).

The mean scores of the EPQ scales for the women and the men are summarized in Table 4.

It can be seen that the P and E scores declined with age, whereas the L scale mean showed a sharp increase. On the E scale, the linear declining trend was more pronounced for the women than

Table 2. Correlations between the EPQ and SS scales for all Ss and for sex groups

EPQ scales	TAS			ES			Dis			TOT		
	All	Women	Men	All	Women	Men	All	Women	Men	All	Women	Men
P	0.35	0.37	0.25	0.22	0.30	0.22	0.55	0.49	0.52	0.50	0.48	0.46
E	0.34	0.43	0.26	0.24	0.33	0.17	0.29	0.33	0.26	0.37	0.44	0.31
N	-0.17	(-0.06)	-0.16	(-0.02)	(-0.06)	(0.00)	(0.06)	0.16	0.10**	(-0.06)	(0.02)	(-0.03)
L	-0.37	-0.34	-0.32	-0.30	-0.40	-0.26	-0.47	-0.45	-0.42	-0.49	-0.47	-0.44

Abbreviations as in Table 1.

All but the coefficients in parentheses are significant ($P < 0.001$).

** $P < 0.01$.

Table 3. Partial correlations between the EPQ and SS scales for all Ss and for sex groups with age being partialled out

EPQ scales	SS scales											
	TAS			ES			Dis			TOT		
	All	Women	Men	All	Women	Men	All	Women	Men	All	Women	Men
P	0.26	0.30	0.14	0.14	0.24	0.16	0.50	0.45	0.46	0.44	0.45	0.37
E	0.25	0.33	0.19	0.17	0.23	0.13	0.20	0.21	0.20	0.29	0.34	0.25
N	-0.19	-0.12**	-0.15	(-0.01)	-0.11**	(0.01)	0.07**	0.14	0.15	-0.06*	(-0.02)	(0.01)
L	-0.19	-0.08*	-0.17	-0.18	-0.24	-0.18	-0.32	-0.23	-0.31	-0.32	-0.22	-0.31

Abbreviations as in Table 1.

All but the coefficients in parentheses are significant ($P < 0.001$).

* $P < 0.05$; ** $P < 0.01$.

for the men. Both sexes were equally extraverted in the four youngest age groups, but the men over 49 yr were more extraverted than the women of the same age. This finding is contradictory to the results given by Eysenck and Eysenck (1975). The one-way analyses of variance between the age groups indicated that the differences between the groups were highly significant on P, E and L. The two-way analyses of variance showed no significant interaction of sex and age for the EPQ scales.

Table 5 lists the mean scores of the SSS for the women and the men.

The SS scale mean scores clearly declined with increasing age. The results of the one-way analyses of variance between the age groups are also presented in Table 5. Again, the two-way analyses of variance failed to show any significant interaction between sex and age.

The mean scores showed a linear declining trend for both sexes on all scales except the ES scale, where the decline was less marked.

DISCUSSION

The age trends for the SSS scores were surprisingly similar to those presented by Zuckerman *et al.* (1978). For the EPQ scales the age trends were generally in the usual direction (see Eysenck & Eysenck, 1975), except for the E scores. The E score for the men did not decline linearly with age, while for the women there was a clear declining trend. In contrast, the analyses performed by Eysenck and Eysenck (1975) showed that extraversion declines with age also for men. It may be that extraverted behavior, for example having fun and celebrating, is more acceptable for older men than for older women in the Finnish culture.

The age groups differed in their L scores. The older Ss had higher scores on L than the younger respondents. The question might be posed as to whether these findings mirror differences in identifying and accepting socially undesirable qualities and activities in oneself. The L scale seems

Table 4. Means and standard deviations of the EPQ scales for sex groups by age group

Age groups (yr)	n	P		E		N		L	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Women									
17-19	48	4.58	2.59	13.41	3.63	15.12	5.74	7.58	4.72
20-29	98	3.72	2.50	12.78	4.29	13.87	5.25	8.47	4.27
30-39	100	3.22	2.18	10.60	4.87	13.38	5.50	9.48	4.33
40-49	85	2.80	2.21	10.24	5.57	13.61	5.48	11.47	4.60
50-59	59	2.77	2.10	9.88	4.76	13.71	5.58	13.08	4.95
60-71	73	2.63	2.23	8.72	4.33	13.26	5.65	15.93	4.44
Total	463	3.24	2.37	10.90	4.91	13.73	5.50	10.91	5.25
F^*		6.23***		10.04***		< 1		34.00***	
Men									
17-19	62	7.09	3.86	13.45	3.85	10.74	5.75	6.90	4.02
20-29	107	5.72	3.49	12.87	4.24	11.42	5.46	6.53	4.03
30-39	123	4.26	2.91	10.55	4.97	11.56	5.96	8.50	5.22
40-49	103	4.23	2.83	10.12	5.01	10.51	5.26	8.50	4.41
50-59	53	3.88	1.87	11.09	5.04	11.96	6.47	9.92	5.36
60-70	56	3.71	2.48	10.76	5.05	12.83	5.51	13.10	5.43
Total	504	4.81	3.21	11.39	4.86	11.40	5.71	8.54	5.08
F^\dagger		6.95***		12.99***		1.49		16.67***	

Abbreviations as in Table 1.

*d.f. = 5/457.

†d.f. = 5/498.

*** $P < 0.001$.

Table 5. Means and standard deviations of the SS scales for sex groups by age group

Age groups (yr)	n	TAS		ES		Dis		TOT	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Women									
17-19	48	7.27	2.84	3.64	1.73	8.41	3.00	19.33	5.17
20-29	98	5.66	3.41	3.93	1.82	6.07	3.45	15.67	7.10
30-39	100	4.40	3.24	3.31	1.80	4.90	2.93	12.61	6.39
40-49	85	2.70	2.66	2.80	1.54	3.22	2.42	8.72	5.16
50-59	59	2.38	2.59	2.30	1.30	2.71	2.10	7.40	4.51
60-71	73	1.24	1.51	1.67	1.13	2.43	2.00	5.35	3.70
Total	463	3.90	3.40	2.99	1.77	4.53	3.32	11.43	7.17
F*		40.55***		21.50***		42.88***		57.30***	
Men									
17-19	62	8.27	2.65	2.87	1.44	10.08	2.63	21.22	3.95
20-29	107	7.98	2.99	3.29	1.82	8.09	3.53	19.37	5.99
30-39	123	5.92	3.32	2.79	1.74	6.70	3.40	15.43	6.27
40-49	103	5.34	3.53	2.69	1.60	5.87	3.42	13.92	6.92
50-59	53	4.33	3.68	1.96	1.49	4.52	2.89	10.83	5.98
60-70	56	2.50	2.22	1.75	1.40	4.82	2.67	9.07	4.63
Total	504	5.98	3.62	2.68	1.70	6.80	3.62	15.48	7.03
F†		32.30***		8.98***		27.42***		41.91***	

Abbreviations as in Table 1.

*d.f. = 5/457.

†d.f. = 5/498.

*** $P < 0.001$.

to disclose a willingness to admit norm-breaking or behavior against good manners. It is necessary to attribute norm-breaking to oneself in order to have a low score on L. The assumption behind the items generated for the L scale is that everyone is, for instance, guilty of breaking promises (item 13) or neglecting to wash hands before a meal (item 61) from time to time. If not admitted, the Lie score would increase. However, it may be that high L scorers do not deliberately gloss over but sincerely believe that their socially desirable answers parallel their true behavior. Presumably, these respondents are conscientious and law-abiding individuals. The negative correlation between P and L found in many studies, with the exception of the EPQ-R results by Corulla (1987, 1988), lends support to this interpretation. High scores on P disclose totally different tendencies in personality, namely antisocial traits and emotional bluntness. High P scorers tend to have low scores on L, as they do not mind admitting their undesirable behavior.

Age seems to be an important factor in the EPQ and SSS scores. The scores change as a function of age, more strikingly on the SS scales. The decline in SSS scores was more marked for TAS and Dis than for ES, which parallels the results reported by Zuckerman *et al.* (1978). The SSS scores for the men stayed at a higher level than for the women, even in the older groups. The finding seems to corroborate the interpretation of the age trend in extraversion. Sensation-seeking and extraverted behavior may not be typical of the older women, while the men continue their outward-oriented and sensation-seeking behavior also at the older age.

The age trends of the EPQ personality dimensions matched those presented by Eysenck and Eysenck (1975). In view of the biological postulates suggested by Eysenck and Eysenck (1985) and Zuckerman (1979, 1983) it could be contended that the biological changes explain the observed changes in the scores. It should, however, be noticed that the study was not a longitudinal one. Consequently, it is likely that the youngest groups have grown up in a different sociocultural context and experienced different kinds of upbringing than the older groups. The quality and quantity of experiences during the course of life could affect the scores. It is also possible that the EPQ personality dimensions and the sensation seeking trait are differently channelled in the various age groups. This being the case, it would be worthwhile to measure the personality dimensions and sensation seeking separately in the younger and older groups.

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V

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The Psychopathy Checklist and nonviolent offender groups

**Jaana Haapasalo and Lea Pulkkinen
University of Jyväskylä
Department of Psychology
P.O. Box 35, 40351 Jyväskylä
Finland**

The Psychopathy Checklist and nonviolent offender groups

**Jaana Haapasalo and Lea Pulkkinen
University of Jyväskylä
Department of Psychology
P.O. Box 35, 40351 Jyväskylä
Finland**

Abstract

Cleckley's concept of psychopathy includes characteristics such as superficial charm, unreliability, and affective poverty. In this study, the Psychopathy Checklist (PCL) and personality questionnaires (MMPI, CPI, EPQ, and SSS) were utilized for assessing 92 male nonviolent offenders. The variable-based approach was applied in order to study the structure of the PCL and the relationships between the PCL, the PCL factors and the personality questionnaire scores. The results indicated that the personality scale scores failed to correlate positively with the PCL score, with the exception of the MMPI Hypomania score. Two PCL factors emerged. Factor 1 related to the core personality characteristics of the Cleckley psychopath, and Factor 2 referred to a chronically unstable and antisocial lifestyle. In the person-oriented approach, three offender groups based on the cluster analysis of the PCL items were distinguished. Cluster 1 subjects scored high on Factor 1 items describing the personality characteristics of Cleckley's psychopathy. Severely antisocial offenders, starting their criminal behavior early and having an active criminal lifestyle, comprised Cluster 2. Cluster 3 was a group of nonpsychopathic but antisocial and experience-seeking offenders. The overall results advocated the importance of the PCL as a method of assessing the Cleckley psychopaths and the usefulness of person-oriented analysis in differentiating them from others.

KEYWORDS: psychopathy, personality, offenders, criminal behavior

The psychopathy checklist and nonviolent offender groups

Introduction

A multiplicity of definitions obscures the concept of psychopathy. Some of the attempts at defining psychopathy deal more with antisocial behavior than with personality traits. The 1983 Mental Health Act in the UK explicated psychopathic disorder as "abnormally aggressive or seriously irresponsible conduct" (Faulk, 1988; Hollin, 1989). The diagnosis of an antisocial personality disorder in the DSM-III-R (American Psychiatric Association, 1987) emphasizes irresponsible and antisocial behavior, although some personality characteristics, e.g. lack of remorse, are included in the diagnosis as well. In addition, psychopathy has been defined by means of questionnaire measures, such as the Psychopathic Deviate (Pd) and Hypomania (Ma) scales from the Minnesota Multiphasic Personality Inventory and the Socialization (So) scale from the California Personality Inventory (e.g. Heilbrun & Heilbrun, 1985; Howard, 1986; Sutker & Allain, 1987). Furthermore, the concept has been broken down into two types: a primary psychopath showing high levels of aggression, hostility and sociability and low levels of anxiety and social withdrawal, and a secondary psychopath likewise showing high levels of aggression but being socially withdrawn and anxiety-prone (Blackburn, 1987). Conceptual confusion increases still further with Howard's (1986) differentiation between psychopathy as chronic antisocial or socially-deviant behavior (the North-American concept) and psychopathy as a personality type (the European concept).

The labels of antisocial personality, sociopath and psychopath have been interchangeably tagged on to individuals sharing a number of common personality traits and behavioral patterns. The

classical description advanced by Cleckley (1941, 1982), however, gives a special meaning to psychopathy. Superficial charm, a good level of intelligence, the absence of neurotic and psychotic symptoms, unreliability, untruthfulness, insincerity, lack of remorse or shame, affective poverty and failure to learn by experience characterize the Cleckley psychopath. He behaves convincingly and lies in such a smooth way that his underlying irresponsibility may not be detected by an untrained observer. Emotional flatness and a lack of genuine affects is essential in psychopathy.

Psychopathy has been conceptualized in various typologies, theories and clinical descriptions both before and since Cleckley (see Werlinder, 1978). Nevertheless, Cleckley's profile remains the most cited definition of psychopathy. Hare (1970, 1986) adopted the Cleckley description and constructed an assessment scale for psychopathy (Hare, 1980; Schroeder, Schroeder, & Hare, 1983). Hare (1985b) calibrated the originally 22-item Psychopathy Checklist (PCL) for 20 items as listed in Table 1. The PCL carefully describes each item to explicate the way in which the assessments are made. The items are scored on a 3-point scale according to the degree to which they fit the subject.

The PCL has been subjected to factor analyses in order to elucidate the possible components underlying the items. When investigating a sample of 1119 inmates, Harpur, Hakstian and Hare (1988) identified two factors: (a) the selfish, callous, and remorseless use of others; and (b) a chronically unstable and antisocial lifestyle. The first factor related to the core personality characteristics of psychopathy, whereas the second factor referred to the lifestyle aspects of psychopathy. The second factor reflecting social deviance correlates more strongly with the personality questionnaire scales, e.g. the MMPI Pd (positively) or the CPI So (negatively), and with diagnosis of Antisocial Personality Disorder than the first factor associated with the psychopaths' verbal and interpersonal style (Harpur, Hare, & Hakstian, 1989).

A growing body of research supports the validity of clinical-behavioral assessment methods, including the PCL (Hare, 1983, 1985a; Hare, Harpur, Hakstian, Forth, Hart, & Newman, 1990;

Hare, McPherson, & Forth, 1988; Harpur et al., 1988, 1989; Hart, Kropp, & Hare, 1988). Despite the existence of reliable and valid checklist assessments, self-report scales and personality questionnaires are still used when studying psychopaths. Most of this research has been done within a correlational framework, studying the relationships between the PCL and personality questionnaire scores (e.g. Harpur et al., 1989). Such an approach is thus clearly variable-oriented. In criminological research, the variable-based approach typically focuses on the relations of a variable measured at an earlier age to a later-emerging variable (e.g. Farrington & Hawkins, 1991). In contrast, a person-oriented approach seeks for configurations, syndromes or interactions beyond the pair-wise correlations of variables and analyzes complex relationships among variables at an individual level (Magnusson, 1988; Magnusson & Bergman, 1988). This approach purports to find groups of subjects showing a pattern of interrelated variables. So far, few studies of psychopathy have applied the person-oriented analysis as a complementary approach (see, however, Raine, O'Brien, Smiley, Scerbo, & Chan, 1990).

In the present study, the variable-based approach was evident in the objectives of (a) examining the factor structure of the PCL in a Finnish offender sample and (b) clarifying the relationships between the PCL and the personality questionnaire scores claiming to correlate with psychopathy. The person-oriented approach was attempted by (c) grouping the offenders on the basis of the PCL items and (d) analyzing the differences between the offender groups on criminal behavior and their responses to personality questionnaires. It was expected that the two PCL factors described above would also be extracted in the Finnish sample. In addition, the assumption was made that the PCL factors would show differential relationships with the personality questionnaire scores. The personality measures relating to antisocial tendencies would be expected to align more with the antisocial lifestyle factor than with the factor incorporating the core personality characteristics of the Cleckley psychopath.

Methods

Subjects

For purposes of stratified random sampling, the subjects were sampled from four institutions. All the nonviolent inmates in each institution were divided into four age groups (21-25, 26-35, 36-45 and 46-53 yrs) and four recidivist groups (1-2, 3-5, 6-8 or over 8 times in prison). Within age x recidivist groups, the subjects were randomly selected so as to obtain approximately equal numbers of subjects in each group. The subjects had been convicted of property and traffic offenses (theft, fraud, embezzlement, forgery, narcotics, robbery, drunken driving, careless driving, and some minor offenses). Violent and sex offenders were excluded, since Cleckley (1982) focused on nonviolent criminal behavior in psychopaths. However, some cases of nonaggravated assault and robbery were accepted for inclusion where no extreme violence was present.

Mentally defective, psychotic and illiterate inmates and those who were unavailable due to trial, home leave or other reasons were also screened out using the information obtainable in files and from the staff. The sample comprised 92 male volunteers aging from 21 to 53 yrs with a mean age of 33.7 yrs ($SD = 8.2$).

Procedure

Questionnaires. The subjects filled in non-anonymously two forms, one of which contained the 101-item Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and the Sensation Seeking Scale-Form V with 40 forced-choice items (Zuckerman, 1979). Both these questionnaires were translated into Finnish and standardized in a sample of 967 subjects (Haapasalo, 1989). On the basis of the Finnish factor analyses of Eysencks' questionnaire, Psychoticism (P), Extraversion (E), Neuroticism (N) and Lie (L) scales could be formed. The reliabilities (alpha coefficients)

were .67, .86, .86 and .85, respectively. The factor analyses of Zuckerman's scale yielded three subscales, Thrill and Adventure Seeking (TAS), Experience Seeking (ES) and Disinhibition (Dis), and the total score. The reliability coefficients were, respectively, .86, .58, .77 and .87.

The other form included the Finnish translations of the Psychopathic Deviate (Pd) and Hypomania (Ma) scales from the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1967) and the Socialization (So) scale from the California Psychological Inventory (Gough, 1969). The responses were scanned for omissions and unacceptable answers. The responses of 86 subjects were accepted. In the present sample, the reliabilities (alpha coefficient) for the Pd, Ma and So scales were .65, .68 and .67.

Interviews. The in-depth interview gathered information relevant to the assessment of psychopathy. Two female researchers, one interviewing and the other taking notes and observing, were present during the interviews. The interview schedule covered childhood up to 15 yrs of age (upbringing, discipline, school, behavioral problems etc.), work history and education, family life and relationships, criminal activities, substance use and general attitudes and interests in life. The interview usually took 1,5 hours or more.

Files. Offense and conviction data from the Central Criminal Record Office, reports of prison behavior and disciplinary problems, mental state examinations, social investigation reports, health problem and therapy reports, applications, letters etc. were also used for the psychopathy assessments.

Psychopathy assessments. The PCL ratings, based on the interview and file information, were made by two researchers independently. The same researchers read the files, interviewed the subjects and made the assessments. The interrater reliability (Pearson r) for scorings in a subset of 71 subjects was .79. In the statistical analyses, the PCL item scores decided by the rater having more experience with the concept of psychopathy were used.

Items 11 (Promiscuous sexual behavior) and 17 (Many short-term marital relationships) were dropped because of lacunae in data and assessment difficulties. Moreover, item 14 correlated

negatively with the total score of the PCL and was discarded in order to increase internal reliability. Alpha reliability for the 17-item PCL (excluding items 11, 14 and 17) was .90. The total PCL score can theoretically range from 0 through 34, as each item has a score of 0, 1 or 2. The true range of scores was 2-31 ($\bar{x} = 14.32$, $SD = 7.94$).

The remaining PCL items and their correlations with the total score are listed in Table 1.

Results

Variable-oriented approach

A principal components analysis with an orthogonal or oblimin rotation has usually been employed in PCL analyses (Hare, 1980; Harpur et al., 1988; Raine, 1985). The alpha coefficient for the PCL was high indicating the unitary nature of the checklist. For this reason it seemed plausible that the underlying PCL factors would correlate with one another. Therefore, a principal axis factoring (PAF) analysis followed by an oblimin rotation was chosen. Item 14 (Impulsivity) was included in the analysis, although it did not add to the total PCL score. Items 11 and 17, however, were excluded due to missing scorings. The criterion for the number of factors was an eigenvalue greater than 1. Two factors met the criterion, accounting for 50.3 % of the total variance. The correlation between the factors was .24. Table 1 shows the factors.

Table 1 about here

Factor 1 comprised the core personality characteristics of the Cleckley psychopath, whereas Factor 2 referred less to personality than to chronically unstable and antisocial lifestyle. The first factor showed high loadings on e.g. Pathological lying, Shallow affect, Lack of remorse or guilt and Glibness/superficial charm. The second factor loaded highly on e.g. Early behavior problems

and Criminal versatility.

Correlations of the total PCL score and the factor scores for the two factors with the personality questionnaire scores are shown in Table 2. The PCL correlated negatively with the Psychopathic Deviate (Pd) and Extraversion (E) scores, generally presumed to relate positively to psychopathy and antisocial behavior. The correlation was negative also for Experience Seeking (ES). By contrast, Factor 2 (chronically unstable and antisocial lifestyle) correlated positively with Pd; its correlations with E and ES were around zero. Thus, Factor 2 had a positive correlation with both MMPI antisociality scales, Pd and Hypomania (Ma) and, in addition, a negative correlation with Socialization (So). These correlations strengthen the notion of antisocial lifestyle depicted by Factor 2. The correlations between Factor 1 and the personality questionnaire scores did not show a positive relationship between psychopathy and the personality scales.

Table 2 about here

Person-oriented approach

To study whether offenders were grouped on the basis of their PCL scores in a way that corresponds to the two factors, a clustering technique (Ward) was applied to the item scores. The number of clusters was determined by dendrogram instead of other available procedures as the cluster solution was clear-cut.

Three clusters emerged in the analysis (Table 3). The means of Cluster 1 were higher than the means of the other clusters for those PCL items which capture the core personality characteristics of the Cleckley psychopaths, particularly Glibness/superficial charm, Grandiose sense of self-worth, Pathological lying, Conning/manipulative, Lack of remorse or guilt, Shallow affect, Callous/lack of empathy, Lack of realistic, long-term goals and Failure to accept responsibility for own actions, i.e., for the items that belonged to the first PCL factor. Cluster 1 consisted of 27

subjects from the sample of 92 inmates.

Cluster 2 inmates scored high on the PCL items that relate to problems of behavioral control, irresponsible and antisocial lifestyle and criminal versatility, i.e., on the items of the second PCL factor. These offenders were severely antisocial but not psychopathic in the glib or grandiose sense described by Cleckley.

The subjects in Cluster 3 had comparatively low scores on almost all the checklist items and especially those which tackled personality characteristics, such as glibness. However, they were more impulsive than Cluster 1 subjects but were not as criminally versatile or poorly controlled as Cluster 2 subjects. Furthermore, they were less parasitic, needed less stimulation and had less early behavior problems than the two other clusters. This cluster covered almost half of the sample.

Table 3 about here

Oneway analyses of variance were carried out to examine the differences between the clusters in age, criminal behavior and personality questionnaire scores. Table 4 summarizes the findings.

Table 4 about here

The severest sentence was longest in Cluster 1. The personality questionnaire scores for this group were relatively low, apart from the CPI Socialization score.

Cluster 2 subjects scored, as expected, high on those items measuring the early emergence of antisocial and criminal behavior. Their criminal behavior was more frequent in terms of number of convictions than in the other groups. They were also antisocial and extraverted with a high activity level according to the personality questionnaire scores. Their MMPI Pd, MMPI Ma and Extraversion scores were higher than those for Cluster 1 offenders.

Cluster 3 comprised offenders whose degree of criminality was clearly low as compared to Clusters 1 or 2. Although they showed antisocial behavior their criminal behavior may have something in common with a tendency towards seeking alcohol- or drug-related experiences since their Experience Seeking scores were the highest among the clusters.

Conclusions

By means of several samples and a split-half cross-validation procedure, Harpur et al. (1988) concluded that only two correlated PCL factors, one relating to the essential personality characteristics of Cleckley's psychopathy and the other to an antisocial and criminal lifestyle, can reliably be extracted. The oblique rotated two-factor structure of the PCL found in this study thus accords well with previous research on the organization of psychopathic personality characteristics into PCL factors.

The factor of Superficial relationships, which has previously emerged in a few studies with the 22-item psychopathy checklist (Hare, 1980; Harpur, Hakstian, & Hare, 1986; Raine, 1985), was not able to show up in the present study because of the exclusion of items 11 (Promiscuous sexual behavior) and 17 (Many short-term marital relationships). As usual, the PCL items covering the core personality characteristics formed a clear-cut factor (see Harpur et al., 1988, 1989). Conclusions regarding these characteristics were drawn largely by consulting the interview information. Factor 2, by contrast, mostly rested on the assessments made of the file data. The files contained more information about antisocial and criminal behavior, while the interviews laid the grounds for assessing personality characteristics. These different sources of information possibly had an effect on the way the factors evolved. Moreover, it is possible that in assessing individuals the raters would apply their own idiosyncratic ways of making observations about personality so as to produce a two-factor structure, although Harpur et al. (1989) disagree with these possibilities.

The splitting of the PCL items into two different though correlated factors suggests that it might be appropriate to assess the core personality characteristics of the Cleckley psychopath separately from chronically unstable and antisocial lifestyle. Reconstruction of the PCL could be considered simply as a way of assessing the core personality characteristics of the Cleckley psychopath. Psychopathy does not necessarily include antisocial or criminal behavior; all psychopaths are not offenders, and all offenders are not psychopaths (Eysenck & Eysenck, 1978). However, as criminality among psychopaths can also differ from that among other offenders (see Hare & McPherson, 1984; Hare et al., 1988), assessing antisocial or criminal behavior among psychopaths is of some importance. The present version of the PCL is tailored for criminal populations (see Hare, 1986), which accounts for the inclusion of the antisocial lifestyle items. Harpur et al. (1989) argue that an adequate measure of psychopathy must be concerned with both personality characteristics and social deviance. They do not, however, state why the antisocial lifestyle or social deviance aspects should be essential for assessing psychopathy in noncriminal populations.

The results of the variable-oriented analyses indicated the poor applicability of personality questionnaires as measures of psychopathy. Most of the personality questionnaire scores, relying on self-rating, failed to correlate strongly with the total PCL score or the factor scores. The MMPI Pd and EPQ Extraversion scores showed a negative relation to the checklist score and thus to Cleckley's psychopathy. Only the PCL factor of antisocial and criminal lifestyle correlated positively with the MMPI Pd. The correlations found differed from those obtained by Harpur et al. (1989), which showed a minor but positive relationship between the MMPI Pd and the first PCL factor describing personality characteristics. Also, the EPQ Extraversion and all the Sensation Seeking scores correlated positively with the first factor in the study by Harpur et al. (1989). All in all, both the study by Harpur et al. and the present results converge in that most of the correlations between the personality measures and the PCL are small. It might not unreasonably be assumed that the personality questionnaires have more to do with antisocial and

criminal behavior starting early in life than with Cleckley's description of the psychopath's personality. Of course, it might also be that the Cleckley psychopaths are incapable of monitoring their disposition and behavior appropriately.

The person-oriented approach was concerned with grouping the inmates on the basis of the PCL items and comparing the derived clusters in regard to criminality and personality scale scores. It is interesting to point out that Cluster 1 scored high on the PCL items relating to the core personality characteristics whereas Cluster 2 subjects had relatively high scores on the items that contributed to the second factor indicating a chronically unstable and antisocial lifestyle. Thus, the differentiation of the PCL items into a measure of socially deviant behavior and a pool of personality characteristics items also received support here (see Harpur et al., 1988, 1989).

On the personality scales, Cluster 1 subjects seemed to be less abnormal and more socialized than the other offenders. Their superficially glib, poised and fluent manner may explain their relatively high socialization scores: they know how to behave. The alternative hypothesis could be that their own view of their antisocial and criminal tendencies, for example as measured by the Pd scale, differs greatly from that of the others.

The third cluster consisted of subjects whose PCL scores were the lowest both on the items for Factor 1 (the core personality characteristics of the Cleckley psychopath) and Factor 2 (chronically unstable and antisocial lifestyle). Technically speaking, the cluster depicted variations at the other end (around zero) of the PCL items.

The factor analysis and clustering technique could be regarded as complementary. The factor analysis depicts dimensions of variations, the clustering technique the actual groups of individuals on the basis of the similarity of their profiles with respect to given items. Factor 2 and Cluster 2 differed from Factor 1 and Cluster 1, respectively, in a similar way, supporting the division of the PCL into the domains of personality characteristics and antisocial lifestyle.

The person-oriented approach seems to overcome the drawbacks of pure correlative data and to emphasize the key role of the PCL items in differentiating Cleckley's psychopaths from other

offenders. In the absence of the PCL or other psychopathy assessments strictly based on Cleckley's description, the Cleckley psychopaths will probably remain unrecognized: personality scales may not differentiate Cleckley's psychopaths from other offenders.

In this study, a considerable problem was the small size of the sample as compared with, for instance, those of Hare (1980, 1985a) or Harpur et al. (1988, 1989). For both the factor analysis and the clustering methods, larger samples would be in order. Consequently, the cross-validation of the results from other samples assumes even more importance. Firm conclusions about personality profiles among nonviolent offenders should be avoided in the absence of cross-validation of the three-cluster structure.

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Table headings

Table 1. Means and standard deviations of the Psychopathy Checklist items (Hare, 1985b), item correlations with the total checklist score, interrater reliability (Pearson coefficient) of the items and an oblique-rotated two-factor pattern for the items.

Table 2. Correlations (Pearson r) of the total Psychopathy Checklist score and the factor scores with the personality questionnaire scores.

Table 3. Means and standard deviations of the items in the three clusters.

Table 4. Differences between th clusters on criminal behavior and personality questionnaire scores.

Table 1 Means and standard deviations of the Psychopathy Checklist items (Hare, 1985b), item correlations with the total checklist score, interrater reliability (Pearson coefficient) of the items and an oblique-rotated two-factor pattern for the items.

Item ¹	x	sd	Correlation ²	Inter-rater reliability	F1	F2	h ²
1. Glibness/superficial charm	0.45	0.73	.72	.73	.82	.02	.74
2. Grandiose sense of self-worth	0.51	0.80	.72	.83	.80	.01	.68
3. Need for stimulation/proneness to boredom	1.22	0.64	.58	.52	.51	.37	.32
4. Pathological lying	0.63	0.76	.84	.67	.89	.24	.80
5. Conning/manipulative	0.92	0.81	.82	.72	.82	.31	.69
6. Lack of remorse or guilt	1.16	0.80	.85	.71	.83	.39	.73
7. Shallow affect	0.70	0.74	.86	.39	.88	.32	.79
8. Callous/lack of empathy	0.77	0.72	.80	.35	.82	.30	.69
9. Parasitic lifestyle	0.92	0.69	.67	.39	.57	.48	.46
10. Poor behavioral controls	0.38	0.59	.36	.40	.24	.33	.14
11. Promiscuous sexual behavior	.	.	.	.	.	.	.
12. Early behavior problems	0.53	0.76	.51	.67	.30	.68	.49
13. Lack of realistic, long-term goals	1.18	0.61	.66	.31	.67	.24	.46
14. Impulsivity	1.47	0.54	-.13	.40	.25	.30	.20
15. Irresponsibility	1.50	0.54	.76	.17	.77	.38	.63
16. Failure to accept responsibility for own actions	0.71	0.66	.61	.28	.63	.10	.40
17. Many short-term marital relationships	.	.	.	.	.	.	.
18. Juvenile delinquency	0.38	0.72	.33	1.00	.16	.32	.11
19. Revocation of conditional release	1.45	0.89	.38	1.00	.17	.44	.20
20. Criminal versatility	0.85	0.79	.38	1.00	.11	.67	.46
Eigenvalue					7.47	1.58	
% Variance					41.5	8.8	

¹Items 11 and 17 were discarded because of assessment difficulties. F1 = Factor 1, F2 = Factor 2.

²Item correlations with the total checklist score not including item 14 Impulsivity

Table 2 Correlations (Pearson r) of the total Psychopathy Checklist score and the factor scores with the personality questionnaire scores.

	Pd	Ma	So	P	E	N	L	TAS	Dis	ES	TOT
PCL	-.17*	.19*	.04	.00	-.20*	.01	-.21*	.04	-.02	-.26**	-.10
Fac1	-.29*	.07	.16	.00	-.29**	-.06	-.18*	.06	-.06	-.29**	-.13
Fac2	.21*	.29**	-.23*	-.02	.07	.14	-.16	-.02	.12	-.01	.04

Note. PCL = total Psychopathy Checklist score, Fac1 = factor score for the 1st PCL factor, Fac2 = factor score for the 2nd PCL factor, Pd = Psychopathic Deviate in the Minnesota Multiphasic Personality Inventory (MMPI), Ma = Hypomania in the MMPI, So = Socialization in the California Psychological Inventory, P = Psychoticism in the Eysenck Personality Questionnaire (EPQ), E = Extraversion in the EPQ, N = Neuroticism in the EPQ, L = Lie scale in the EPQ, TAS = Thrill and Adventure Seeking in the Sensation Seeking Scale (SSS), Dis = Disinhibition in the SSS, ES = Experience Seeking in the SSS, TOT = total score of the SSS.

*p < .05; **p < .01; ***p < .001.

Table 3 Means and standard deviations of the items in the three clusters.

Item	Cluster 1 (n=27)		Cluster 2 (n=23)		Cluster 3 (n=42)		Scheffe ^a
	x	sd	x	sd	x	sd	
1. Glibness/superficial charm	1.44	0.57	0.13	0.34	0.00	0.00	1 > 2, 3
2. Grandiose sense of self-worth	1.59	0.63	0.13	0.34	0.02	0.15	1 > 2, 3
3. Need for stimulation/proneness to boredom	1.62	0.49	1.43	0.50	0.85	0.60	1, 2 > 3
4. Pathological lying	1.51	0.50	0.65	0.64	0.04	0.21	1 > 2 > 3
5. Conning/manipulative	1.77	0.42	1.08	0.66	0.28	0.45	1 > 2 > 3
6. Lack of remorse or guilt	1.92	0.26	1.52	0.59	0.47	0.50	1 > 2 > 3
7. Shallow affect	1.51	0.50	0.86	0.54	0.09	0.29	1 > 2 > 3
8. Callous/lack of empathy	1.44	0.50	1.04	0.56	0.19	0.39	1 > 2 > 3
9. Parasitic lifestyle	1.25	0.52	1.34	0.64	0.47	0.55	1, 2 > 3
10. Poor behavioral controls	0.48	0.70	0.60	0.58	0.19	0.45	2 > 3
11. Promiscuous sexual behavior	.	.	.	.	.	.
12. Early behavior problems	0.62	0.79	1.04	0.92	0.19	0.39	1, 2 > 3
13. Lack of realistic, long-term goals	1.70	0.46	1.26	0.44	0.80	0.50	1 > 2 > 3
14. Impulsivity	1.25	0.44	1.52	0.51	1.59	0.58	3 > 1
15. Irresponsibility	1.96	0.19	1.73	0.44	1.07	0.40	1, 2 > 3
16. Failure to accept responsibility for own actions	1.25	0.59	0.78	0.59	0.33	0.47	1 > 2 > 3
17. Many short-term marital relationships	.	.	.	.	.	.
18. Juvenile delinquency	0.55	0.89	0.52	0.73	0.19	0.55	ns
19. Revocation of conditional release	1.62	0.79	2.00	0.00	1.04	1.01	1, 2 > 3
20. Criminal versatility	0.92	0.78	1.17	0.83	0.64	0.72	2 > 3

^ap = .05 for Scheffe's test.

Table 4 Differences between the clusters on criminal behavior and personality questionnaire scores.

Variable	Cluster 1 (n=27)		Cluster 2 (n=23)		Cluster 3 (n=42)		F ^a	Scheffe
	x	sd	x	sd	x	sd		
Age	37.11	9.19	30.43	6.73	33.47	7.81	4.37 [*]	1 > 2
Age at the 1st crime	22.25	9.46	18.04	3.08	23.16	6.24	4.36 [*]	3 > 2
Number of convictions	11.51	6.02	16.34	7.85	9.78	6.62	7.01 ^{**}	2 > 1,3
Number of types of offenses	4.37	1.94	5.00	1.70	3.69	1.58	4.42 [*]	2 > 3
Length of the severest sen- tence (months)	42.37	21.89	21.43	10.31	17.92	13.61	20.75 ^{***}	1 > 2,3
Pd	21.30	4.90	27.27	5.19	25.57	5.14	9.15 ^{***}	2,3 > 1
Ma	21.46	4.74	25.36	5.04	20.57	5.07	6.74 ^{**}	2 > 1,3
So	26.96	5.19	22.09	5.06	24.57	6.98	3.89 [*]	1 > 2
P	9.88	2.06	10.50	2.79	10.21	2.72	< 1	
E	7.84	2.20	10.31	2.39	9.28	2.56	6.39 ^{**}	2 > 1
N	12.34	2.66	13.95	3.72	12.76	4.04	1.27	
L	11.23	1.75	11.63	2.62	12.50	2.14	2.84	
TAS	5.53	1.88	5.54	1.73	5.74	1.81	< 1	
Dis	8.15	2.11	8.54	1.56	8.63	2.43	< 1	
ES	3.19	1.29	3.86	1.45	4.34	1.74	4.25 [*]	3 > 1
TOT	16.88	3.05	17.95	3.01	18.44	4.62	1.29	
PCL	23.25	3.52	17.34	4.32	6.92	2.92	191.21 ^{***}	1>2>3

Note. Abbreviations as in Table 2.

^adf = 2,89 for age, criminal behavior and PCL; df = 2,83 for personality questionnaire scores; n = 26 (Cluster 1), 22 (Cluster 2) and 38 (Cluster 3) for personality questionnaire scores; p = .05 for Scheffe's test.