

MANUAL for the SURVEY OF THOUGHTS, FEELINGS AND BEHAVIOURS (STFB):

A Test of Criminality

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Introduction

The escalating incidence of criminal behaviour in society is rapidly becoming the most serious source of disruption of community living. If it is to be addressed effectively, whether in political, legislative, judicial, correctional or preventive initiatives, its roots must be understood.

The present Manual provides information about the Survey of Thoughts, Feelings and Behaviours, a test of criminality which (1) measures the main intra-personal sources of criminality, and (2) permits its roots to be characterized in ways that can be both understood and modified. It provides, for the first time, an empirical basis for understanding and treating, and possibly preventing, criminality and its associated thoughts, feelings and behaviours.

Historical Background

In 1976, Samuel Yochelson, Director of the Program for the Investigation of Criminal Behaviour at St. Elizabeth's Hospital in Washington, D.C., and Stanton Samenow, a clinical research

psychologist, published the results of a phenomenological study of criminal thinking. They claimed to have identified the errors of thinking which they said characterized the criminal mind.

They divided the thinking errors which they had observed into three broad clusters. The first cluster, comprised of 16 thinking errors, they called "Criminal Thinking Patterns". They noted that the criminal is extremely energetic and that he directs his energies towards maintaining a constant state of excitement. His fear is wide spread, persistent, and intense throughout his life, but he hides his fears because he doesn't want to be thought of as weak. His over-riding fear is a fear of being a "nothing", and when this fear overtakes him it seems as if it will last forever. The criminal is chronically angry, particularly in response to either criticism or opposition. He has a sense of pride based on something like a need to be macho. He wants power because it bolsters his sense of self-esteem. The criminal is very sentimental but, again, doesn't acknowledge it for fear of being considered weak. His idea of religion is quite primitive. His thinking is concrete in a way that you might expect of the borderline personality. His life is fragmented, and he jumps from one activity to another. Throughout, he experiences a sense of uniqueness, of being different from others. In fact, he feels so unique that he believes no one else could understand him, and that the laws of society were made for others, not for him. He is a

perfectionist. He is suggestible, particularly when the suggestion coincides with what he already wants, such as suggestions for getting rich quick. Because he believes that being open exposes him to being taken advantage of, he remains a loner. His sexual relations are very performance oriented; he regards himself as irresistible, and he thinks of his partner in terms of ownership. Finally, he has made lying an essential and justifiable part of his life and constantly lies about things even when there is nothing specific to be gained by it.

A second cluster of thinking errors was labelled "Automatic Errors of Thinking." The authors claimed that the criminal believes there is nothing he can't do if he wants to, but that he uses the position "I can't" as a way of avoiding responsibility. He portrays himself as a victim. He lacks time perspective. He lacks empathy. He lacks consideration. He fails to assume obligations. He fails to assume responsible initiatives. He believes that, if he wants something, it is his, and that people are pawns who can be made to do what he wants. He harbours both fear and contempt for fear. He lacks trust. He keeps a "closed channel" with people. He refuses to be dependent. He lacks interest in responsible behaviour. He is pretentious. He fails to endure adversity. And he is poor at making decisions for responsible living.

A third cluster of thinking errors, "From Idea Through

Execution", was concerned with the actual execution of criminal activity. The authors concluded that the criminal regards crime as his career, and that he can only temporarily be deterred from it when the penalty for a particular crime is very severe and the risk of getting caught seems high. When considering a crime, he eliminates both internal and external deterrents by contemplating his scheme until the desire to act outweighs his fears. His overly optimistic view that everything is going to work out just the way he wants, seems to cut through any other obstacles to acting as he wishes. He seems to have some kind of automatic cut-off of thought that allows him to act as he wants, and sometimes it happens so quickly that the act might be viewed as an impulsive act or a crime of passion. He continually needs to build up his idea of himself as a basically good person, so that he doesn't have to rationalize or justify himself either before or after the crime. He seems to be able to postpone "the big score." He also seems to be able to postpone going straight, and to be able to postpone assuming any of the responsibilities that would interfere with his life of crime. Interestingly, with some kind of self-protective irrationality, he may hallucinate the voice of God or the voice of his mother telling him not to do a particular crime. However, he isn't frightened by it since he regards it as a form of protection. Although he manages to suppress it most of the time, fear may emerge during the actual execution of a crime, but only enough to ensure that he

takes precautions against getting caught. When a criminal does remain unapprehended, his fear of immediate danger gives way to a feeling of triumph at having succeeded. He likes to celebrate his success, "partying it up" with friends. If he is apprehended, he asks himself "Why did I do it?", meaning "What went wrong?" Getting caught is an injustice, and he feels that he has every right to escape if he can. He tells self-serving stories to justify his behaviour, even to the extent of portraying himself as mentally ill. However, if he does manage to be excused from his crime by reason of insanity, as soon as he is hospitalized he sets about trying to demonstrate his rapid recovery from the mental illness that he never had. Criminal behaviour is not as impulsive as many criminals would have you think. It is premeditated, and it pervades the criminal's entire life. And in general, the risks of being caught and punished just add to, rather than detract from, his execution of the crime.

These three clusters and the behaviours they subsume seem to have a certain face validity. Cluster 1 attitudes, feelings and behaviours such as excitement bred of autonomic arousal, denial of fear, concreteness of thought, the need to appear macho, the feeling of being different, the weak relationship capacity and the readiness to distort the truth, all seem familiar to those working with offenders. Cluster 2 characteristics such as portraying himself as a victim, lack of time perspective, lack of empathy or

consideration, weak responsibility, unwillingness to trust or be dependent and pretentiousness, all have a familiar ring. And Cluster 3 ideas such as crime as a career, rumination about crimes, viewing himself as a good person, viewing his actions in an overly optimistic way, celebrating successes and telling self-serving stories, seem to be recognizable features of offenders. Of course, such Cluster 3 items as portraying himself as mentally ill and then setting out to demonstrate a rapid recovery would most likely be seen among the criminally insane. But, regardless of whether or not these characteristics really portray criminal thinking, or whether they are merely general attributions which could be acknowledged by many other people as well, workers in the criminal justice system have been quick to recognize in these descriptions the offenders with whom they are familiar.

A year after their phenomenological treatise on the criminal mind, Yochelson and Samenow published a description of a treatment programme they designed to modify these supposedly criminalistic patterns of thought and behaviour. In so doing, they were following the cognitive tradition which has become identified with Ellis (1962), Meichenbaum (1977) and Beck (1979), and which was destined to become the bandwagon of the 1980's.

Their treatment programme places the criminal in "a group with three to five participants. Attendance in this group every weekday is part of a disciplined life in which time is programmed. ... The

group meets for three hours a day, five days a week, for at least a year." (Yochelson and Samenow, Vol II, pp. 179, 180). Their work is primarily cognitive: "In summary, we work with the raw data of thinking. We extract thinking errors, establishing the fact that each error is part of a broader criminal pattern. We teach the criminal new corrective, responsible thinking patterns here and now, and prepare him for future situations." (op. cit., p. 176). Success is reported in terms such as the following: "As of May 1976, thirteen men who were hard-core criminals are now living in the community and fulfil our strict criteria of responsible functioning." (op. cit., p. 436). Ignoring for the moment the fact that this doesn't tell us anything at all about the number of participants with whom this approach was unsuccessful, it is apparent that the treatment as described is very labour-intensive. Nevertheless, perhaps their conceptualization of criminal thinking could stand on its own merit, irrespective of its application to treatment.

Unfortunately, that seems not to have been the case. Yochelson and Samenow's (1976) work quickly came under attack from a variety of directions. Academic psychologists, in particular, expressed concern about the fact that no comparative or contrast data were presented. That is, no control group was used. Moreover, it was remarked that the criminally insane criminal group on which they had based their studies was unlikely to be

representative of the criminal population in general. That is, it was evident that these authors had generalized far beyond the limitations of their data. In a later publication, Samenow (1984) responded to this issue by saying: "Well, I'm talking about criminals. This is the way criminals think, and if someone who is incarcerated doesn't think this way then he is not what we would call a 'criminal'." Such tautological reasoning hardly serves as a satisfactory defence of their work. Nevertheless, it is clear that Yochelson and Samenow have provided an important and seminal, if somewhat flawed, study of criminality. And while the pejorative quality of some of their descriptors must raise doubts about the objectivity involved in the phenomenological method of observation which they employed, the descriptions given have found strong support among many people employed in the justice field.

While the debate over the relative merits of Yochelson and Samenow's work was fermenting, Bhardwaj-Keats (1986) decided to test the validity of their observations by attempting to construct a paper-and-pencil psychological test to measure forty-six of the criminal thinking errors Yochelson and Samenow had "identified." This research, which subsequently became her doctoral dissertation, demonstrated a robust difference in the scores obtained on her test by normal community college students and by men incarcerated in provincial correctional facilities. That is, she demonstrated that not only the criminally insane, but "garden variety" incarcerates



as well, could be said to possess "the criminal mind."

In her research, Bhardwaj-Keats found a remarkable correspondence between the three factors that emerged from factor analysis of the scores on her 46 separate scales and the three clusters identified by Yochelson and Samenow. Fifteen out of their first 16 thinking errors loaded on her first factor; 13 out of their second 16 thinking errors loaded on her third factor; and all 14 of the remaining thinking errors loaded on her second factor. And in each case, where one of the thinking errors did not load where it should have, it could be argued that this was due to the lower reliability of that particular scale. Yochelson and Samenow's phenomenological observations appeared to have been exceptionally astute. And the test which Bhardwaj-Keats developed to sample these thinking errors was shown to differentiate clearly between criminals and non-criminals, well beyond the ability of any other measure that might have been used for that purpose.

However, there were problems with the test she developed. Some of the items were sexist. For example, one of the items read, "My idea of good sex is to conquer a woman's body," which would seem to make it less than ideal for use with females. Another item was, "When I'm doing crime, I've more energy than most people," which seems to presuppose what the test might be attempting to discover. Some thinking errors were represented by scales composed of as few as two items and others by scales of seven or eight. In some

scales, all of the items were keyed for answers in the same direction. Each of these features was felt to diminish the test's psychometric value in clinical applications.

#### Construction of the Survey of Thoughts, Feelings and Behaviours

In an attempt to produce a measure of criminal thinking which might be used for clinical purposes, the test development process followed by Bhardwaj-Keats was repeated and extended. Old items were examined and new items written and tested until a set of items was achieved which was stable over successive samples of criminals and normals. The current one hundred item version of this newly-developed test of criminal thinking retains only two of Bhardwaj-Keats' original 181 items in their original form, and another dozen or so in altered form. Its items are organized into 50 two-item scales, in each of which one item is scored if answered True, and the other if it is answered False. A self-conscious effort was made to avoid the pitfalls of sexist and presumptive questions.

A factor analysis of an early version of this new test of criminal thinking, using a three-factor solution in accord with Keats' earlier findings, found that fifteen of its scales loaded on the first factor, but only 6 of those scales were drawn from among the 16 thinking errors that went to make up Yochelson and Samenow's first cluster. The other nine were drawn from their second cluster of items. The second factor was made up of 16 scales which were

distributed almost evenly across the three broad clusters defined by Yochelson and Samenow. The third factor was composed of 10 scales, most of which were drawn from Yochelson and Samenow's cluster "from idea through execution".

The test as a whole readily distinguished between incarcerates and non-incarcerates, but only the first two of these three factors differentiated between the two groups. The two groups did not differ on the sum of the scores from the third factor, comprised primarily of those scales designed to sample thinking errors involved in the actual execution of crimes.

Examination of the scores obtained by incarcerates and by non-incarcerates on each of the (at that time) 46 scales separately, however, led to the discovery that the groups were significantly different on only 20 of the 46 scales, and in three of these scales the difference was in the wrong direction! That is, the non-incarcerates scored significantly higher on three of the scales which differentiated the groups significantly, even though all of the scales were written and scored to represent criminal thinking errors.

At that point it was decided to "go back to the drawing board" and to look at the percentage endorsements by criminal and non-criminal groups of each of the items in the test. It had originally been thought that, given a good item, maybe 90% of the criminals and 10% of the normals would answer in the scored

direction. No single item even approached that result. In a majority of items there was at least a 15 percentage point differential between the criminal and non-criminal groups, and in a majority of these items the difference was in the expected direction. That is, significantly more of the criminals answered the item in the scored direction. At the same time, for a sizable minority of items, the normals were more likely than the criminals to respond in the scored or "criminalistic" direction.

Yochelson and Samenow (1976) had observed that if a criminal wants something badly enough, he sometimes begins to feel that it is already his. This did indeed appear to be true for some 35% of our criminal sample, but it also appeared to be true for some 60% of our normal sample. Yochelson and Samenow wrote about the tendency of criminals to experience non-psychotic hallucinatory deterrents, so that, for example, they would be expected to respond True to an item such as: "I still hear my mother's voice telling me not to do things that are wrong." In fact, 30% of our criminals did respond in the scored direction to that particular item; however, so did 56% of our normals. These examples illustrate one of the dangers in a study, such as Yochelson and Samenow's, in which observations are made about a particular population without reference to any control group. Apparently, some of their so-called criminal thinking errors are even more likely to occur in the normal population.

This differential endorsement strategy for item selection has proven to be very productive. Although sample sizes were generally about two dozen for successive samples of normals and criminals in these item-selection studies, only those items which survived cross-validation over successive samples have been retained in the current (eighth) version of the test. The present version, which contains two items for each of 50 scales, each representing a kind of thinking error, is designated "A Survey of Thoughts, Feelings and Behaviours" (STFB). Of the two items in each scale, one is scored if answered in the True direction while the other is scored if answered in the False direction.

#### Structure of Criminal Thinking

Factor analysis of these 50 scales in a sample of subjects, comprised of 24 "normal" non-offenders, 312 inmates admitted to the Ontario Correctional Institute for treatment (O.C.I.), and 19 career criminals (C.C.'s) produced an acceptable six factor solution which accounted for 67 percent of the variance. The factor loadings, along with a slight adjustment for scale content, produced six interpretable "factor scales" with internal consistencies ranging from  $\alpha = 0.75$  to  $\alpha = 0.85$ , which was judged to be satisfactory for present purposes (see Reliability, later). Based on the content of the items included in each of these factors, the six resultant factor scales were tentatively

labelled as follows:

1. Conversion of guilt to stimulus hunger.
2. Conversion of feelings of inferiority to hypomania.
3. Conversion of interpersonal insecurity/closeness anxiety to lack of restraint.
4. Cognitive simplicity.
5. Splitting, with hostile distancing as a defence against dependency.
6. Rationalized irresponsibility.

#### Discriminant Validity of the STFB and Its Six Factors

The above-mentioned three groups of subjects were compared for their scores on the STFB Total score (Table 1) and Factor scores (Table 2). In each case, it can be observed that the progression of the means is consistent with the interpretation that the scale represents some aspect of criminality, and that the standard deviations are such that the distributions can be seen to permit differentiation of the three groups. That is, it would appear that the total test and its contained factor scores are visibly robust in differentiating between criminals and non-criminals.

Analysis of Variance found the groups to differ from each other on the scale as a whole and on each of the six factor scales, with the exception that Factor 1 (at that time tentatively labelled "conversion of guilt to stimulus hunger") did not discriminate

significantly between the Normals and the O.C.I. group.

Table 1: STFB Total Score Means and Standard Deviations  
(Raw Scores)

	<u>MEANS</u>	<u>STANDARD DEVIATIONS</u>
NORMALS	31.63	11.18
O.C.I.	44.50	13.22
C.C.'s	58.37	13.15

Table 2: STFB Factor Score Means (Raw Scores)

	<u>NORMALS</u>	<u>O.C.I.</u>	<u>C.C.'s</u>
Factor 1	6.88	8.17	11.26
Factor 2	7.04	10.91	13.68
Factor 3	4.42	6.92	9.74
Factor 4	2.67	3.71	4.79
Factor 5	4.96	7.14	10.00
Factor 6	5.67	7.64	8.89

Discriminant Function analysis using the 50 thinking error scales correctly identified 92% of three approximately equal-size



groups of Subjects: Normals, and O.C.I. group and C.C.s. Table 3 displays the results of this Discriminant Function analysis.

Table 3: Discriminant Function Analysis: Scales by Groups

	<u>PREDICTED</u>	<u>PREDICTED</u>	<u>PREDICTED</u>
<u>ACTUAL</u>	NORMALS	O.C.I.	C.C.'s
NORMALS	100%	0%	0%
O.C.I.	0%	95%	5%
C.C.s	0%	22%	78%

Table 3 shows that all of the Normals were classified correctly as Normals. Ninety-five percent of the O.C.I. group were correctly classified, while 5% were classified as C.C.s. This is likely appropriate since some part of each of our O.C.I. samples were probably "career criminals." Furthermore, none of the O.C.I. sample or of the C.C.s were classified as Normal. And the overwhelming majority of the C.C.s were correctly classified as "career criminals." As a result of this initial success, the author was encouraged to explore further the properties and utility of this new test.

### Social Desirability

The next question addressed was that of the "social desirability" of the test items. Given the usual expectation that

criminal offenders might occasionally adopt a response set consistent with high "social desirability," it seemed necessary to develop validity scales for the STFB to address this risk. Accordingly, fifty students from a university psychology class were asked to rate the STFB items for their social desirability, using the following seven-point scale:

- 1 = Very Socially Desirable
- 2 = Moderately Socially Desirable
- 3 = Slightly Socially Desirable
- 4 = Neutral with respect to Social Desirability/Undesirability
- 5 = Slightly Socially Undesirable
- 6 = Moderately Socially Undesirable
- 7 = Very Socially Undesirable

From among those items judged to be relatively neutral with respect to Social Desirability (Mean ratings between 3.5 and 4.5), sixteen items were selected such that eight of the items were scored if answered in the True direction and eight were scored if answered in the False direction. The mean Social Desirability ratings for these 16 items was 4.00. Table 4 presents the means of the scores for the three groups of subjects on this Social Desirability Neutral scale.

Table 4: Means of STFB Social Desirability Neutral Scale scores for Normals, O.C.I. and C.C.'s (Raw Scores)

<u>MEAN</u> Scores	<u>NORMALS</u>	<u>O.C.I.</u>	<u>C.C.'s</u>
NEUTRAL SCALE	6.33	8.43	10.03

Analysis of Variance revealed that each of these three groups differed from the others beyond the .05 level of confidence. It would appear, therefore, that the STFB is at the very least measuring some aspect of criminality other than social desirability.

For purposes of contrast with respect to the social desirability variable, another 16 items were selected from among those rated by the university students as "very socially undesirable". Again, half of these items were scored if answered in the True direction, and half were scored if answered False. The mean rating for these items on the seven-point scale of social desirability was 5.8. This task was undertaken in order to provide a means by which to identify respondents' tendency to adopt a response set which might exaggerate the negative interpretation of an individual's results (analogous to the "F" scale in the MMPI). Table 5 presents the means obtained by the three groups of subjects on this Social Undesirability scale.

Table 5: Means of the STFB Social Undesirability Scale scores for Normals, O.C.I. and C.C.s (Raw Scores)

<u>MEAN Scores</u>	<u>NORMALS</u>	<u>O.C.I.</u>	<u>C.C.'s</u>
<u>UNDESIRABILITY</u>	4.50	5.24	8.47

As can be seen from Table 5, there is relatively little difference between the non-incarcerated "normal" and (O.C.I.) incarcerated groups on this Social Undesirability scale, and a rather dramatic relative willingness of the career criminals to admit to socially undesirable attitudes and behaviours.

### Reliability

Having demonstrated, on a preliminary basis, that the STFB and its factor scales and social desirability scales do appear to measure phenomena related to criminality, the next task was to evaluate these scales' reliabilities. Reliability is not as simple an issue as it is sometimes made to appear. The term is used ambiguously to express (1) the retest "stability," (2) the item-scale internal "consistency" and (3) the "precision" of an instrument, and each of these qualities is expressed in different terms. These three aspects of reliability need to be considered thoughtfully, and each is examined below, along with a brief discussion of its implications.

1. Stability: It is "common knowledge" that the personality disorders are much less amenable to treatment than most other psychiatric conditions. What is not so well known is the fact that this is largely a function of the kinds of methods which have been used to measure change in these particular psychiatric categories. For example, consider the Minnesota Multiphasic Personality Inventory (MMPI). The classical MMPI 4-9 pattern, which is generally considered to be indicative of personality disorder, is defined by elevations on the so-called "Psychopathic Deviant" and "Hypomania" scales (Scales 4 and 9). These two scales are composed of a larger proportion of historical<sup>1</sup> items than any of the MMPI's other clinical scales (Scapinello and Blanchard, 1987). Consequently, scores on these scales are less amenable to change than, for example, scores on Scales 2 (Depression) or 7 (Psychasthenia), from which depression and anxiety are likely to be inferred. This means that MMPI measures of treatment effects in personality disorders are very likely to show minimal changes, and also that their retest stability estimates are likely to be high. Indeed, historical items, which demonstrate high stability and consistency estimates, are commonly used in measures related to personality disorders. For this reason, it is not surprising that

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<sup>1</sup> By "historical" is meant that an item is concerned with past events and, once answered in a given direction, could not thereafter honestly be answered in any other way. This fact, by itself, would be expected to preclude the possibility of recording changes in the person's state following treatment. Nor is this reliance on historical items in the identification of elements of criminality peculiar to the MMPI alone. Many scales, including the Psychopathy Check List (PCL: Hare, 1990) and the Level of Supervision Index (LSI: Andrews, 1983), share in this reliance on historical items which necessarily impair the scales' capacity to measure change.

personality disorders appear to be less amenable to treatment than most other psychiatric conditions.

In psychological assessment, however, only one part of the task has been performed when it is shown that an instrument measures its intended psychological characteristic in valid and consistent ways. In order to demonstrate real psychometric value, in addition to displaying validity, stability over time and adequate internal consistency (see below), an instrument ought to be able (1) to reference a model which can be used to understand/explain, as well as to modify, the underlying psychological phenomena, and (2) to measure, and thus to be susceptible to, changes occurring as a result of treatment. In the case of an instrument such as the STFB, for example, the conceptualization of the underlying factors should provide a basis for understanding the roots of criminality and for designing treatment methods to address them and, of equal importance, the factor measures should be capable of recording changes effected by appropriately designed treatments.

In the development of the STFB, care was taken to ensure that the items used would not prevent therapeutic change from being recorded on the scales, which justifies using the STFB to measure change associated with treatment. That task, in turn, is partly intended to provide an estimate of one aspect of predictive validity, namely, the test's susceptibility to change associated

with therapeutic modifications (if any) in criminality. The intention to use the STFB both as a measure of criminality and as a measure of change in the underlying phenomena means that all the issues involved in its reliability need to be considered in careful detail.

In contrast to most other scales bearing on criminality (whose acceptance has often been justified on the strength of high consistency and stability indices), the STFB was designed to maximize the use of "cognitive" items (and minimize the use of "historical" items), thus seeking to obtain modifiability in exchange for some of the stability of measurement which might have been achieved by using immutable items. However, in doing so, every attempt was made to maintain precision of measurement -- the real essence of reliability, and a necessary element to ensure that the measures produced will not only be dependable but meaningful as well. These perhaps seemingly contradictory statements can be understood if one considers that reality is best represented by instruments which afford precision of measurement, while at the same time recording changes that occur as events or people change.

Reliability studies examining stability of measurement were made possible from data collected as part of a study of the effect of treatment on criminality (see Predictive Validity, below). The results of these investigations appear in Table 6 through Table 11.

Tables 6 and 7 present test-retest stability estimates for the

STFB. From Tables 6 and 7 it can be seen that test-retest reliabilities specifically from admission to pre-treatment are relatively low. These particular low test-retest reliabilities are not unwelcome (in view of other test-retest reliabilities report in Tables 6 and 7), since they demonstrate the real and unpredictable changes which occur from the point of admission to a correctional treatment centre to a time after inmates have decided how they will relate to treatment and have become, each in his own way, involved or uninvolved in his own specific treatment programme. The weak stability over this period of time seems to support our contention that the STFB is capable of detecting real fluctuations in the status of inmates as they undergo a major process of individual orientation and adjustment. Following this disruptive period, test stabilities increase dramatically, as they should, as the inmates, each having adopted his own approach to treatment, work on their own individual treatment programmes.



Table 6: Test-Retest Reliabilities for the STFB Factor Scales

	N	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
<u>1st Retest</u> Admission to Early Treatment	162	0.09	0.08	0.10	0.16	0.15	0.12
<u>2nd Retest</u> Early Tx To 2 Mths Pre- <u>STFB</u> Treatment	108	0.72	0.73	0.84	0.48	0.68	0.76
<u>3rd Retest</u> 2 Mths Pre To 1 Month Pre- <u>STFB</u> Treatment	25	0.83	0.89	0.85	0.37	0.78	0.75
<u>4th Retest</u> Approx. One Month, Post- <u>STFB</u> Treatment	20	0.68	0.82	0.83	0.65	0.78	0.61

The other stability indices shown in the tables, although slightly lower than those reported for some other psychological tests, appear to be quite satisfactory, with the exceptions of those for Factor 4 and the Social Desirability Neutral scale. However, even the low stability indices on these latter two scales may be viewed as satisfactory if considered in the light of other issues to be addressed below and later.

Table 7: Test-Retest Reliabilities for the STFB  
Total, Neutral and Undesirable Scales

	N	<u>STFB</u> Total	<u>STFB</u> <u>Neutral</u>	<u>STFB</u> <u>Undesirable</u>
<u>1st Retest</u> Admission to Early Treatment	162	0.12	0.11	0.20
<u>2nd Retest</u> Early Tx To 2 Mths Pre- <u>STFB</u> Treatment	108	0.85	0.57	0.79
<u>3rd Retest</u> 2 Mths Pre To 1 Month Pre- <u>STFB</u> Treatment	25	0.94	0.69	0.89
<u>4th Retest</u> Approx. One Month, Post- <u>STFB</u> Treatment	20	0.91	0.45	0.85

Aside from the fact that Factor 4 is composed of only eight items, the items contributing to STFB Factor 4 are items which express confusion in understanding, and they appear to exert a particular pull or valence among those people who think rather concretely and who do not grasp generalities or relationships among events well. From the perspective of one kind of respondent (high Factor 4), the person may very well respond in an unstable way because his responses vary from time to time and from situation to situation due to his lack of either abstraction or generalization

ability. From the perspective of another kind of respondent (low Factor 4), his responses may well vary because, given his satisfactory generalization ability, he can't understand what is "the problem" presented in the contents of the items.

A different issue needs to be considered concerning the STFB Social Desirability Neutral scale. Its items were selected intentionally to make it difficult for respondents to determine which is the socially desirable response to give. That is, their contents are ambiguous with respect to their reference and context. This means that these are precisely the STFB items on which it would be expected that chance life circumstances existing from time to time would provide the context of the stimulus, and thus ensure varying responses -- weak stability (and internal consistency).

Regardless of the precision with which these two scales may or may not measure whatever they measure, therefore, the nature of their items is very likely to create considerable instability in any responses to them, at different testings separated by time. Thus it might be argued that all of the STFB scales conform to the kinds of requirements they ought to have in order to perform the psychometric tasks for which they were intended. Admittedly, not all would agree. However, more information about the STFB scales' reliabilities appears below and later (see Predictive Validity).

2. Consistency: Global item-scale internal consistency

estimates have already been reported for an early version of this scale (alphas from 0.75 to 0.85). The rich retest data obtained from the treatment study to be reported later afforded an opportunity to revisit the internal consistencies of the STFB scales. Tables 8 through 11 present the alphas obtained from the four STFBs administered to the inmate participants in the treatment study. The numbers of subjects vary at the several administrations due to availability of inmates for each testing. All of the first tests were administered at the point of admission to the O.C.I. from detention centres. Most of the second testing was done about 2 months prior to the treatment programme. The third testing was done before, during or after completion of the treatment programme. Except for the control group subjects, all of the fourth tests were administered one month post-treatment. The tables display the alpha indices for each STFB administration.

It is important to note that, in contrast to the retest stability estimates, the internal consistency estimates do not differ for the admission and the other test administrations -- as would be expected, since the passage of time and random directions of change are not involved here. This fact adds credibility to the explanation given earlier for the discrepancies between the stabilities of the STFB scales from admission to pre-treatment and following the first pre-treatment test. That is, it is not the scales which are unreliable, but only that they do appropriately

represent changes occurring in the inmate respondents. This fact also underscores the need for thoughtful consideration of what "reliability" means.

It was in light of this kind of thinking that the rather modest alphas of 0.75 to 0.85, reported earlier in this Manual, were judged to represent satisfactory internal consistency for the scales' purposes. These coefficients were deemed high enough to warrant the conclusion of reasonable internal consistency in the scales, and low enough to justify the hope that the scales would be sufficiently malleable to permit them to measure changes occurring in people's lives, such as those associated with any effects which might be occasioned by treatment.

Table 8: Internal Consistency Reliabilities  
for the STFB Factor Scales

	N	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
<u>1st Admin.</u> Admission Testing	198	0.67	0.73	0.72	0.23	0.66	0.67
<u>2nd Admin.</u> Pre- <u>STFB</u> Treatment	154	0.69	0.64	0.67	0.13	0.61	0.63
<u>Last Admin</u> Post- <u>STFB</u> Treatment	50	0.73	0.64	0.69	0.28	0.62	0.67

Table 9: Internal Consistency Reliabilities for the STFB Total, Neutral and Undesirable Scales

	N	<u>STFB</u> Total	<u>STFB</u> Neutral	<u>STFB</u> Undesirable
<u>1st Admin.</u> Admission	198	0.91	0.22	0.80
<u>2nd Admin.</u> Pre- <u>STFB</u> Treatment	154	0.91	0.14	0.77
<u>Last Admin</u> Post- <u>STFB</u> Treatment	50	0.92	0.44	0.80

Table 10: Internal Consistency Reliabilities for the STFB Factor Scales

	N	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
"Normals"	587	0.63	0.58	0.55	0.35	0.48	0.45
<u>Admin. on</u> <u>Admission,</u> Assorted Inmates	634	0.64	0.65	0.70	0.15	0.60	0.50
<u>Admin. on</u> <u>Admission,</u> Career Criminals	27	0.73	0.74	0.81	0.29	0.51	0.45

Table 11: Internal Consistency Reliabilities for the STFB Total, Neutral and Undesirable Scales

	N	<u>STFB</u> Total	<u>STFB</u> Neutral	<u>STFB</u> Undesirable
"Normals"	587	0.85	0.30	0.69
<u>Admin. on Admission</u> , Assorted Inmates	634	0.88	0.17	0.76
<u>Admin. on Admission</u> , Career Criminals	27	0.92	0.20	0.76

3. Precision: The above tables offer a wealth of information about the stabilities of the STFB scales under varying conditions. The overall impression is likely to be that the scales are at best only modestly stable and internally consistent, and that the Factor 4 and Neutral scales are notably unstable. But what of their precision? Since one measure of the standard error of estimate (the best global reliability estimate) is given as the square of the correlation coefficient, the impression would be that the scales are really quite unreliable, error-prone and imprecise. However, the standard error of estimate serves as the best estimate of the variability (unreliability, imprecision, error) of the mean of repeated samples -- an estimate used when only one sample is examined. In the present instance, it is not necessary to estimate how the measures might look on repeated sampling since repeated sampling has in fact been accomplished.

The question addressed in calculating the standard error of estimate is: How much difference would there be in the means (the best estimate of sample behaviour) if repeated samples were to be taken? That is, how would the measures perform on repeated sampling? In this assessment and treatment research programme, some of the repeated samples are independent, and some are dependent (the same subjects). In principle, the dependent samples should behave in more similar ways than the independent samples. But this usual expectation is not met, for example, when one considers the dependent measures taken at the first (admission) and second (pre-treatment) administrations. Putting aside for the moment the admission-to-pretreatment stabilities (already discussed), the repeated samples behave in extremely similar ways for all scales (including the Factor 4 and Neutral scales), regardless of whether the samples were dependent or independent, and regardless of the populations sampled (normals, and O.C.I. or C.C. inmates). The most notable variations from this unexpectedly high degree of consistency of scale performance in the several samples are still on the Factor 4 and Neutral scales -- and probably for the reasons given previously. But even on these scales, there is a surprising degree of consistency of scale performance.

The consistencies referred to in the preceding paragraph are not "internal consistencies" but, rather, are "inter-sample



consistencies." This latter kind of consistency is what the standard error of the mean estimates in its attempt to guess from a single sample at the error variability of the mean -- or its precision. The error variability of the mean is, of course, very well estimated from the amount of variability or inconsistency among data points in a correlation between two samples. But variability among data points in a correlation which really represents inconsistencies or imprecision in the scale will characteristically result in highly variable correlation coefficients across samples. This does not obtain here. That is, although an estimate would lead us to conclude that the several STFB scales are only modestly precise, based on the actual performance of the STFB scales in repeated sampling, it can justifiably be argued that the scales are quite remarkably precise. We will return to this point later, in the section on predictive validity.

### Validity

Like reliability, there are several kinds of validity which need to be considered in evaluating an instrument. No further attempt will be made to address the question of the face validity of the STFB beyond referring back to the Historical Background to remind the reader that the STFB items were originally developed by reference to the work by Yochelson and Samenow, from the author's

long experience in corrections, and through a rigorous process of testing each item against groups of normals and offenders and groups of "garden variety" and "career" criminals. But the other types of test validity require rather more careful attention.

1. Concurrent Validity: The Megargee code types (Megargee and Bohn, 1979), derived from subjects' MMPI scores, purport to represent various types of offenders, each type associated with a different letter code. From within a total sample of 335 subjects whose scores on the 7th edition of the STFB were available, subsets of inmates were defined by their MMPI-based Megargee code types. These subsets of the inmate subjects were then ranked according to their STFB scores, with subjects having lower scores shown to the left (see below).

<u>STFB Total</u>	E	I	D	G	B	A	H	C	F
<u>Factor 1</u>	E	I	D	B	H	G	A	C	F
<u>Factor 2</u>	E	I	G	D	B	A	H	C	F
<u>Factor 3</u>	E	I	D	B	G	A	H	C	F
<u>Factor 4</u>	E	C	D	G	I	H	A	B	F
<u>Factor 5</u>	E	I	D	A	G	B	H	C	F
<u>Factor 6</u>	E	B	I	G	D	H	A	C	F
<u>S.D. NEUTRAL</u>	E	I	D	C	B	H	G	A	F

As can be seen in this rank ordering, Groups E and I of

Megargee's MMPI classification for offenders tend, fairly consistently, to score low on the STFB (although Group I is associated with somewhat higher scores on Factor 4, "cognitive simplicity"). Groups C and F occur fairly consistently at high values of the STFB (although C is low on Factor 4, "cognitive simplicity"). Group B occurs at a relatively high STFB score level on Factor 4, cognitive simplicity, compared to its rank order on the other scales. And Group A ranks higher, and Group C lower, on the STFB Social Desirability Neutral scale than for any of the other scales, except for on Factor 4, "cognitive simplicity." These observations indicate that, with slight variations, the STFB ranks the Megargee code types roughly as might be expected, given their characteristics as described in Megargee and Bohn (1979). However, Group A appears to be more criminalistic than they choose to let on, while Group C is more cognitively complex (less simplistic) and less criminalistic than might have been expected from the manner in which these groups of offenders have been described.

For those not familiar with the characteristics of offenders which are associated with the above coded classifications of offenders' behaviour on the MMPI, it may be worthwhile to illustrate their characteristics on other variables taken from Megargee and Bohn's work. In the following, the code types are ranked (with lower scores to the left) for their relevance to other

criminality-related variables:

<u>Adult Arrest and Conviction Record</u>	I	G	E	A	F	D	C	B	H
<u>Violence of Offence</u>	D	B	I	G	A	E	F	C	H
<u>Psychologists' Assessment of Aggressiveness</u>	E	I	G	B	A	D	H	C	F
<u>Aggressiveness of Behaviour while Incarcerated</u>	E	B	I	A	G	D	F	H	C
<u>Quay's Psychopathic Delinquency Scale</u>	E	I	D	G	A	B	F	H	C
<u>Prisonization</u>	I	E	G	D	B	A	C	H	F
<u>Irresponsibility</u>	E	I	G	D	A	B	H	C	F

These observations show that the Megargee code types are related to a number of variables relevant to criminality. And the consistent and meaningful relationships between the STFB total and factor scores and the Megargee Code types reported above therefore provide both direct and indirect evidence of the very real relationship between the STFB and criminality, at least as far as it is reflected in the Megargee classification system for offenders.

In order to extend the above impressionistic observations, the above rankings of these classifications were correlated with each other, using Spearman's rho. The results appear in Table 12, which shows the correlation matrix among a number of criminality-relevant

variables. (Note: the decimal point in the correlation coefficients has been omitted from Table 12 to conserve space.)

Table 12: Spearman rho correlation matrix: Criminality variables

<u>STFB</u> Tot	Tt	F1	F2	F3	F4	F5	F6	Nt	AR	VO	Ag	AB	QD	Pr	Ir
Fact. 1	92	--													
Fact. 2	98	87	--												
Fact. 3	98	95	95	--											
Fact. 4	53	45	52	47	--										
Fact. 5	95	85	92	93	50	--									
Fact. 6	87	88	88	90	33	73	--								
Neutral	75	83	68	78	73	68	67	--							
AdultRec	57	27	63	47	23	60	30	18	--						
Viol.Off	60	48	55	63	00	53	52	28	30	--					
Aggress.	90	78	95	88	37	85	90	57	63	47	--				
Aggr.Beh	75	68	77	80	03	73	83	40	48	55	87	--			
Quay Del	93	78	92	90	38	93	71	57	73	60	83	77	--		
Prisoniz	95	80	97	92	52	88	82	70	70	62	92	72	88	--	
Irrespon	97	82	98	92	53	95	80	63	70	50	93	73	93	95	--

Table 12 reveals that the STFB scales are more closely related to psychologists' judgements of inmate aggressiveness and to personality scales of psychopathic delinquency, prisonization and irresponsibility than to adult arrest and conviction record, violence of the offence for which an inmate is incarcerated or aggressiveness of behaviour while incarcerated, at least as these

variables are mediated by rankings of Megargee code types. But these variations only express relative differences since most of the correlation matrix shows robust internal relationships, with only one of the Table 12 correlations (Violence of Offence and STFB Factor 4) being negative (-.02, which is shown in Table 12 as .00 for want of space to include the negative sign).

In order to examine further the concurrent validity of the STFB, its scales' relationships to other test scores were examined. In the development of the STFB, there were very few item changes from the fifth to the eighth and current edition. Thus, most of the items chosen for the final edition existed in the same, or essentially the same form, in the fifth edition of the test. This made it possible to calculate STFB8-equivalent scores from the data existing in the STFB5 data base. This latter data base also contained information on 150 inmates for selected MMPI scales, the Millon Clinical Multiaxial Inventory (MCMI)(Millon, 1977), morality scores derived from the Gibbs and Widaman (1982) modification of the Kohlberg Moral Development Scale (Kohlberg, 1976), the Hare Psychopathy Checklist (Hare, 1990), information about the violent or non-violent character of the inmates' offenses, number of violent institutional Misconducts, Age, IQ, Reading Grade-equivalent and socio-economic status. Factor analysis of this data base produced a five-factor solution with factor loadings as shown in Table 13.

Table 13: Relationship of STFB Factor Scores and Selected Other Variables to factor loadings in a five-factor solution

<u>FACTOR A</u>		<u>FACTOR B</u>	
<u>STFB</u> Total Score	.81	MMPI Poor Morale	.78
MMPI Impulsivity	.78	MMPI Ego Strength	-.76
MMPI Violence	.77	MMPI Depression (TSC IV)	.75
MMPI Responsibility	-.76	MMPI Resiliency	-.72
MMPI Manifest Hostility	.74	MMPI Anxiety (TSC VII)	.72
MMPI Self Control	*-.71	MMPI Social Delinquency	.71
<u>STFB</u> Factor 1	.70	MCMI Avoidant Personality	.70
MMPI Anger (TSC V)	.70	MMPI Denial Defence	-.65
<u>STFB</u> Factor 6	.69	MCMI Schizotypal Person.	.64
<u>STFB</u> Factor 2	.68	MCMI Schizoid Personality	.63
MMPI Habitual Criminality	.65	MMPI Anhedonia	.57
<u>STFB</u> Factor 3	.64	Eysenck: Neuroticism	.57
<u>STFB</u> Factor 5	.60	MCMI Histrionic Persona.	-.55
MMPI Drug Abuse	-.54	MMPI Dominance	-.54
MMPI Alcoholism	.49	Eysenck: Extroversion	-.48
Age	-.46		
MMPI Recidivism	.39		
<u>FACTOR C</u>		<u>FACTOR D</u>	
MCMI Passive-Aggressive	.91	Hare Psychopathy Total	.84
MCMI Borderline Persona.	.83	MCMI Dependent Persona.	-.80
MCMI Paranoid Personality	.78	Hare PCL Scale 2	.80
MCMI Antisocial Persona.	.71	Hx: Federal Incarcerate	.73
MCMI Drug Dependency	.70	Violent/Non-violent Off.	.70
Raven P.M. IQ	-.69	Number Violent Misconduct	.67
MCMI Alcohol Dependency	.65	Moral Development Level	.58
MCMI Self-Defeating Pers	.65	Hare PCL Scale 1	.55
MCMI Aggressive-Sadistic	.63		
ABLE Reading Grade Level	-.49		
MMPI Empathy	-.41		
<u>FACTOR E</u>			
Main Offence Sentence	.63		
Main Offence Seriousness	.58		
Aggregate Sentence	.56		
MCMI Narcissistic Pers.	.50		
Hx: Provincial Incarcer.	-.46		
Hx: Juvenile Incarcerate	-.37		
<u>STFB</u> Factor 4	.36		

The first of these five factors, which accounts for about 21% of the variance, is comprised of all the STFB scales (except the maverick Factor 4) and MMPI scales purporting to measure a variety of criminality-related dimensions such as aggressiveness, anger, impulsiveness, alcohol and drug abuse and habitual criminality. The confluence of these attributes in this first of the five factors adds a certain credibility to the STFB as a test of criminality.

The second of these five factors is the familiar general lack-of-well-being which has emerged so often as the first factor in personality questionnaires completed by psychiatric patients. It has also commonly emerged as the first factor in groups of offenders who are undergoing treatment during their incarcerations.

The third of these five factors, which accounts for 10% of the variance, has negative loadings for IQ and reading achievement, and positive loadings for several of the MCMI scales relating to passive-aggressive personality, self-defeating personality, aggressive-sadistic personality, and alcohol and drug dependency. It is interesting to note that, as some of us have suspected, the MCMI (see Factor C) and the MMPI (see Factor A), for the most part, appear to measure different, even independent, qualities. Although this issue is beyond the scope of the present report, the two tests may serve better to supplement, rather than to replace, one another.



The fourth of these five factors, which accounts for 8% of the variance, shows a negative loading for the MCMI dependent personality, and positive loadings on the Hare Psychopathy Checklist (PCL), history of federal incarceration, violence of offence and of Misconducts, and level of moral reasoning development. This fourth factor certainly sounds as though it refers to violence and impoverished behavioural controls.

The fifth of these factors shows its highest relationship to aggregate sentence imposed. In this jurisdiction, the aggregate sentence is an excellent indicator of offence seriousness (Quirk, Nutbrown and Reynolds, 1991). This fifth factor also has positive loadings for the MCMI's narcissistic personality scale and the STFB Factor 4 (cognitive simplicity), as well as negative loadings on histories of training school and provincial incarceration. As implied above, this factor seems to be one referring to offence seriousness and, possibly, poor judgment.

It is worthwhile to remark in these data that the indicators of criminality are scattered throughout the factors, suggesting a degree of independent variation among the several types of measures. Most of the main indicators of criminality load on the first of these five factors (i.e., STFB Total score with five of its Factor scales and the MMPI Habitual Criminality and other criminality-related scales on Factor A), while two load on the third of these factors (MCMI Anti-Social Personality and

Aggressive-Sadistic Personality on Factor C), two load on the fourth of these factors (Hare Psychopathy Checklist and Moral Development Level on Factor D), and two load on the fifth of these factors (Aggregate Sentence and STFB Factor 4 on Factor E). To the extent that all of these different indicators of criminality also represent different aspects of criminality, the amount and variety of information required to characterize an offender fully could be greater than most people have hitherto expected.

Perhaps a word might be said at this point specifically about the relationship between the STFB and Hare's (1990) concept of psychopathy. Table 14 shows the correlations obtained in the preceding factor analysis between the STFB and a number of other criminality-relevant variables, including the Hare Psychopathy Checklist. While there are a few significant correlations in this

Table 14: Correlations between various variables and STFB & PCL

	F1	F2	F3	F4	F5	F6	Tot1	PCL1	PCL2	PCL
--	----	----	----	----	----	----	------	------	------	-----

Age	-.24	-.39	-.26	-.08	-.33	-.26	-.36	.10	.50	.40
I.Q.	-.06	-.17	-.18	-.30	-.09	-.27	-.22	.13	-.24	-.10
ABLE Reading	.02	-.12	.04	-.10	-.12	-.05	-.07	-.04	-.06	-.05
Socioeconomic Status	.01	.13	.02	-.17	.12	-.12	.02	.10	.09	.13
Anxiety	.16	.35	.34	.13	.29	.41	.37	.13	.16	.18
Depression	.24	.33	.40	.07	.30	.41	.40	.18	.27	.27
Anger	.43	.44	.46	.12	.47	.58	.57	.16	.10	.15
Manifest Hostility	.50	.44	.44	.10	.44	.55	.57	.18	.02	.10
Impulsiveness	.46	.42	.42	.10	.39	.55	.54	.24	.03	.14
Violence	.49	.47	.41	.14	.44	.55	.57	.22	.03	.14
Alcoholism	.26	.32	.25	.13	.22	.28	.33	.09	.12	.13
MCMJ Alc. Dependency	.07	.05	.28	-.03	.03	.10	.12	-.37	.27	.09
Drug Abuse	.34	.21	.25	-.12	.19	.31	.29	.32	.26	.34
MCMJ Drug Dependency	.28	.38	.35	-.08	.27	.32	.36	.16	.20	.26
Eysenck: Extrovert	-.03	.09	-.07	-.02	.06	.07	.02	-.09	-.34	-.28
Eysenck: Neuroticism	.06	.13	.19	.08	.11	.26	.18	.21	.01	.10
Habitual Criminality	.41	.37	.37	.01	.36	.37	.45	.37	.33	.41
Aggregate Sentence	-.06	.08	.05	.02	.07	.08	.05	.16	.04	.10
Violent/Non-Violent	-.07	.06	-.06	.15	-.01	-.18	-.04	.48	.63	.70
Violent Misconducts	-.04	-.24	-.22	-.16	-.13	-.06	-.18	.13	.19	.20
Morality	-.07	-.17	-.17	-.11	-.29	-.08	-.18	-.06	.11	.07
<u>STFB</u> Factor 1	1.00	.47	.53	.17	.52	.51	.74	.20	.23	.26
<u>STFB</u> Factor 2	.47	1.00	.65	.39	.63	.63	.84	.16	.15	.18
<u>STFB</u> Factor 4	.53	.65	1.00	.42	.57	.61	.83	.15	.24	.24
<u>STFB</u> Factor 5	.17	.39	.42	1.00	.35	.32	.51	-.17	.01	-.09
<u>STFB</u> Factor 6	.52	.63	.57	.35	1.00	.57	.81	.25	.12	.20
<u>STFB</u> Total Score	.51	.63	.61	.32	.57	1.00	.79	.18	.18	.22
PCL 1	.74	.84	.83	.51	.81	.79	1.00	.20	.22	.25
PCL 2	.20	.16	.15	-.17	.25	.18	.20	1.00	.39	.77
PCL Total	.23	.15	.24	.01	.12	.18	.22	.39	1.00	.89
	.26	.18	.24	-.09	.20	.22	.25	.77	.89	1.00

table, for the most part they are unimpressive (although the factors or subscales of both the STFB and the PCL do correlate well with their respective Total scores). It seems clear that the STFB and the Hare Psychopathy Checklist (PCL) are measuring different aspects of habitual criminality. Nevertheless, for the sake of completeness, the PCL was subjected to the same analyses (looking at its relationships with other criminality-related variables as filtered through the Megargee criminality code typology from the MMPI) which

were reported above for the STFB scores. The purpose of this exercise was to determine whether other common aspects might be found for these two tests.

The Megargee code types were rank ordered according to the offenders' scores on the PCL and the PCL factor scales, as shown below. (Again, groups with lower scores appear on the left). PCL Total scores ranged from 14 for Group B to 25 for Group D. Groups A, B, F and I occur in varying order for low PCL scores; Groups C, E, G and H occur in varying order for the higher PCL scores; and Group D occurs with the highest PCL scores. This pattern is notably different from the picture found with the STFB scales and from that implied in the Megargee Code descriptions (Megargee and Bohn, 1979).

PCL1	B	F	I	A	G	H	C	E	D
PCL2	A	F	B	I	H	C	E	G	D
PCL Total	B	A	F	I	H	G	C	E	D

Again, for completeness, correlations were computed between the ranks derived from these three PCL scores and the same variables taken from Megargee and Dorhout's data which were used earlier for the STFB scales. The correlations obtained are shown in Table 15. From this table, it is clear that the PCL generally does not rank order the Megargee code types in the same way as do these criminality-related variables reported upon by Megargee and Bohn (1979). Indeed, this analysis, far from helping to understand the relationships between the STFB and the PCL, merely indicates once more that the two tests appear to be measuring different aspects of criminality. In addition, it

appears that the STFB provides information about criminality which is comparatively closer to the mainstream views of criminality than does the PCL.

Table 15: Spearman rho correlations of variables with PCL scales

	<u>PCL 1</u>	<u>PCL 2</u>	<u>PCL TOTAL</u>
Adult Arrest/Conviction Recrd	.05	-.08	-.10
Violence of Offence	.12	-.20	.03
Aggressiveness Assessment	-.03	-.23	-.08
Aggressive Behaviour in Jail	.23	.10	.22
Quay Psychopathic Delinquency	-.22	-.33	-.30
Prisonization	-.18	-.43	-.30
Irresponsibility	-.30	-.43	-.35

Although the preceding analyses were carried out on versions five through seven of the STFB, it is felt that they provide satisfactory information concerning the concurrent validity of the current version of the test since, as mentioned above, in the development of the STFB, there were very few item changes from the fifth to the eighth and current edition. Further information bearing upon the concurrent validity of the STFB will be presented later. The next item of information about the concurrent validity of the STFB is to be seen in the scores received by various groups on its scales. This can be accomplished by reference to the scores received by normal and contrast groups.

#### Normative Standards

Volunteers were contacted through a number of agencies and businesses, and

from contacts in public places, and they were asked to complete the STFB. The sole criteria for selection for the (separate male and female) normative samples was "no criminal record," although separate norms were developed for subjects with different educational levels.

Norms appropriate for general use of the STFB and its several scales appear in Appendix A. Tables 16 through 19 present summary information about the performances on the STFB scales of the several groups of subjects studied. In these tables, raw scale scores are converted to range from 0 to 10, so that values might be compared across scales. This was done by dividing the scores by the number of items contributing to the scale and then multiplying by ten. In order to return to the "real" raw scores, the process used would have to be reversed. For example, because the test consists of 100 items, the mean raw score on the "Total" scale for young male normals without college education is ten times the value shown, i.e. 41.0. In order to perform the reverse conversion, the number of items in each scale are given:

<u>STFB</u> Total Scale	100 items
<u>STFB</u> Factor 1 Scale	20 items
<u>STFB</u> Factor 2 Scale	22 items
<u>STFB</u> Factor 3 Scale	18 items
<u>STFB</u> Factor 4 Scale	8 items
<u>STFB</u> Factor 5 Scale	18 items
<u>STFB</u> Factor 6 Scale	14 items
<u>STFB</u> Social Desirability <u>Neutral</u>	16 items
<u>STFB</u> Social <u>Undesirability</u> Scale	16 items

In the following tables, F 1 through F 6 refer to the six factor scales within the STFB. "Neut" refers to the sixteen item "Social Desirability Neutral" scale. "Undes" is comprised of the sixteen items which make up the Social Undesirability scale.

The numbers of subjects in each of the samples of younger and older males and younger and older females was 55, 34, 16 and 16, respectively. In general, males scored higher than females, and younger adults scored higher than older adults on most of the scales. As might be expected, these differences were less noticeable on the Social Desirability Neutral scale.

Normative Data for Non-College Educated Men and Women

Table 16: Younger Adult Male Means for the STFB (Ages 18 - 29)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut	Undes
MEAN	3.96	4.80	3.96	2.86	4.02	5.01	4.10	4.53	3.41
Sigma	1.47	1.89	1.86	2.05	1.31	1.80	1.26	1.30	2.06

Table 17: Older Adult Male Means for the STFB (Ages 30 - 44)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	2.99	4.13	3.19	2.90	3.24	3.76	3.37	4.30	2.34
Sigma	1.73	1.27	1.72	1.53	1.30	1.50	1.07	1.29	1.60

Table 18: Younger Adult Female Means for the STFB (Ages 18 - 29)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	3.41	4.32	3.30	1.95	3.44	4.38	3.47	4.26	2.81
Sigma	1.78	1.65	1.04	1.77	1.22	1.58	1.01	1.21	1.75

Table 19: Older Adult Female Means for the STFB (Ages 30 - 44)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	2.59	3.69	2.95	1.56	2.99	3.93	2.95	3.95	2.15
Sigma	1.46	1.01	1.45	1.74	1.37	1.25	0.88	1.64	1.16

Means for college educated men and women are given in Tables 20 through 23. The numbers of subjects in each of these samples was 29, 59, 30 and 46, respectively. The same score conversions of the raw scores obtained (dividing by the number of items in the scale and multiplying by ten) were applied in these tables as in the preceding tables.

As can be seen from these tables, in most cases, males score higher than females, younger adults score higher than older adults, and non-college educated people score higher than college educated people on these scales. The major exception to this pattern occurs with older college educated females, who tend to score slightly higher than might have been expected.



Normative Data for College Educated Men and Women

Table 20: Young Adult Male Means for the STFB (Ages 18 - 29)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut	Undes
MEAN	3.53	4.28	3.26	1.81	3.53	4.24	3.44	4.12	2.37
Sigma	1.47	1.37	1.33	1.69	1.04	1.57	1.01	1.47	1.61

Table 21: Older Adult Male Means for the STFB (Ages 30 - 44)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	2.75	3.28	2.31	1.59	2.35	3.21	2.58	3.43	1.43
Sigma	1.33	1.25	1.16	1.27	1.27	1.40	0.78	1.26	1.28

Table 22: Younger Adult Female Means for the STFB (Ages 18 - 29)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	2.62	3.29	2.80	1.75	2.74	3.81	2.83	3.48	1.58
Sigma	1.26	1.30	1.21	1.63	1.46	1.49	1.07	1.36	1.69

Table 23: Older Adult Female Means for the STFB (Ages 30 - 44)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	2.44	3.54	2.43	1.55	2.86	3.62	2.74	3.98	1.50
Sigma	1.06	1.37	1.22	1.18	1.22	1.49	0.83	1.03	1.30

Scores for the O.C.I. incarcerated male population are displayed in Tables 24 to 26. The O.C.I. population is comprised of sex offenders (mainly incest offenders), offenders displaying

escalating violence, alcoholics and drug addicts and property offenders (but excluding identified career criminals) admitted to a correctional treatment centre. In so far as they were recognized (through interviews and history alone, without the benefit of test results), inmates identified as "career criminals" are excluded from the O.C.I. samples and their results are presented separately. In contrast to the Normal sample, differences between the O.C.I. 30 to 44 age group and 45+ age group warrant separate reportage. One explanation may relate to the growing evidence that there has been a shift upwards from the ages of 30 to 45+ at which most offenders seem to "graduate" out of crime. A more likely explanation for this difference may be that, in the O.C.I. population, extent of criminality may be related to type of offence (i.e., sex offenses versus property- or addiction-related offenses) which, in turn, may vary with age. That is, although contrast data are reported for the O.C.I. population, they may not be very meaningful, since the population may be unique.

Table 24: Younger Adult Male O.C.I. Means for the STFB (Ages 18 - 29)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	4.34	5.10	4.63	3.68	4.69	5.51	4.66	5.38	4.13
Sigma	1.69	1.54	1.85	1.65	1.67	1.63	1.18	1.21	2.06

Table 25: Older Adult Male O.C.I. Means for the STFB (Ages 30 - 44)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	3.68	4.43	4.03	3.51	4.08	4.89	4.10	5.03	3.45
Sigma	1.56	1.68	1.79	1.72	1.63	1.62	1.23	1.27	2.12

Table 26: Older Adult Male O.C.I. Means for the STFB (Ages 45+)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	3.08	3.61	3.02	3.68	3.41	3.92	3.45	4.93	1.84
Sigma	1.31	1.60	1.75	1.74	1.43	1.69	1.15	1.38	1.63

Comparison of these scores with those reported for Normals reveals that the young male incarcerates tend to score higher than their Normal (non-incarcerated) counterparts, and that scores tend to decline with age, most dramatically with respect to the extent to which the older incarcerates are willing to admit to socially undesirable attitudes. To some unknown extent, this is probably due to the fact that the younger O.C.I. residents tend to be drug addicts while the older O.C.I. residents tend to be incest offenders. That is, in all likelihood, the addicts seem to be more overtly criminalistic, while the incest offenders are more covertly so.

Scores obtained by male inmates judged (by a psychologist expert in offender classifications, working without access to any test data) to be career criminals are presented in Table 27. Only

scores for the young adult group are presented because of the dearth of older "career criminals" processed through the Ontario Correctional Institute.

Table 27: Younger Adult Career Criminal Means for the STFB (Ages 18 - 29)

<u>STFB</u>	F 1	F 2	F 3	F 4	F 5	F 6	Total	Neut.	Undes
MEAN	5.54	6.12	5.37	4.53	5.35	6.46	5.56	6.25	5.13
Sigma	1.92	1.75	2.12	1.98	1.51	1.42	1.40	1.14	2.09

As can be seen from a comparison of these tables, male career criminals tend to score higher on these scales than the rest of the male O.C.I. population who, in turn score higher than their Normal counterparts.

T-scores conversions for the raw scores from the several STFB scales are displayed in Appendix A. The conversions to T-scores are based principally on normal non-college-educated younger and older adult samples -- which represent the "source" group for most offenders better than the college-educated normals. Appendix A also provides, for the convenience of some users, T-score conversion tables for normal adolescents, for college students and for normal college-educated subjects.

For illustrative purposes, Tables 28 through 30 show the T-score means for Normal (non-incarcerated) males, the male O.C.I.

sample (excluding identified Career Criminals) and for (identified) Career Criminals. In these tables, the T-score means which are most relevant for comparison purposes are highlighted. For the most part, the T-scores derived from the normative data merely confirm the age- and education-related progressions apparent in the previously-reported normative data. However, it may be meaningful to note that, in the 18 to 29 age group, college-educated males appear to score slightly higher on the Social Desirability Neutral scale than on the STFB Total or Undesirable scales, while in the 30 to 44 age group, college-educated males appear to score slightly lower on the Social Desirability Neutral scale than on the STFB Total or Undesirable scales. In the 18 to 29 age group, O.C.I. males appear to score slightly lower on Factors 1 and 2 than might have been expected. And the 30 to 44 age group of college-educated males scores slightly higher on Factor 1 than might have been expected.

Table 28: T-Score Means for the Male Groups  
 Based on Norms Developed on Non-College Educated Males.  
 Scales: STFB Total, Neutral and Undesirable

Group	N	Using Norms: Ages 18-29			Using Norms: Ages 30-44		
		Total	Neutral	Undesirable	Total	Neutral	Undesirable
Non-College-Educated Males Ages 18 - 29	55	<b>50.03</b>	<b>50.03</b>	<b>50.00</b>	56.86	51.82	56.68
Non-College-Educated Males Ages 30+	33	44.40	48.23	45.03	<b>50.23</b>	<b>49.99</b>	<b>50.29</b>
College-Educated Males Ages 18-29	28	<b>44.44</b>	<b>45.89</b>	<b>44.93</b>	50.28	47.64	50.16
College-Educated Males Ages 30+	58	36.63	41.60	44.07	<b>42.68</b>	<b>43.31</b>	<b>44.27</b>
OCI Males Ages 18 - 29	293	<b>54.43</b>	<b>56.55</b>	<b>53.50</b>	62.04	58.39	61.20
OCI Males Ages 30 - 44	255	50.03	53.80	50.20	<b>56.85</b>	<b>55.62</b>	<b>56.94</b>
OCI Males Ages 45+	83	44.86	53.09	42.37	50.77	54.90	46.86
Career Criminals Ages 18-29	24	<b>61.60</b>	<b>62.23</b>	<b>58.35</b>	70.48	65.12	67.44
Career Criminals Ages 30 - 44	3	53.87	53.62	52.66	<b>61.38</b>	<b>55.43</b>	<b>60.12</b>

Table 29:T-Score Means for the Male Groups  
Based on Norms Developed on Non-College Educated Males,  
Ages 18 - 29. Scales: Factors 1 through 6

Group	N	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Non-College-Educated Males Ages 18-29	55	<b>50.03</b>	<b>45.58</b>	<b>50.02</b>	<b>55.38</b>	<b>50.00</b>	<b>50.02</b>
Non-College-Educated Males Ages 30-44	33	43.37	40.40	44.76	50.61	44.37	43.33
College-Educated Males Ages 18-29	28	<b>46.87</b>	<b>43.12</b>	<b>47.53</b>	<b>53.12</b>	<b>46.27</b>	<b>45.55</b>
College-Educated Males Ages 30-44	58	41.77	39.15	43.50	49.46	37.15	39.96
OCI Males Ages 18-29	293	<b>52.58</b>	<b>47.56</b>	<b>52.04</b>	<b>57.22</b>	<b>55.11</b>	<b>52.80</b>
OCI Males Ages 30-44	255	48.11	44.09	48.51	54.01	50.45	49.35
OCI Males Ages 45+	83	44.04	40.92	45.29	51.09	45.37	43.92
Career Criminals Ages 18-29	24	<b>60.76</b>	<b>53.92</b>	<b>58.50</b>	<b>63.08</b>	<b>60.13</b>	<b>58.05</b>
Career Criminals Ages 29-44	3	55.94	50.18	54.70	59.63	58.90	49.94

Table 30: T-Score Means for the Male Groups  
Based on Norms Developed on Non-College Educated Males,  
Ages 30 - 44. Scales: Factors 1 through 6

Group	N	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Non-College-Educated Males Ages 18-29	72	56.54	55.46	53.84	49.18	55.51	56.63
Non-College-Educated Males Ages 30-44	60	<b>49.98</b>	<b>49.99</b>	<b>50.00</b>	<b>49.97</b>	<b>50.00</b>	<b>49.99</b>
College-Educated Males Ages 18-29	26	52.99	52.09	50.76	43.37	53.68	52.07
College-Educated Males Ages 30-44	38	<b>50.25</b>	<b>45.03</b>	<b>46.54</b>	<b>43.35</b>	<b>44.58</b>	<b>46.33</b>
OCI Males Ages 18-29	290	58.24	59.08	59.99	54.59	61.61	61.10
OCI Males Ages 30-44	255	<b>54.32</b>	<b>54.12</b>	<b>56.18</b>	<b>53.65</b>	<b>57.38</b>	<b>56.73</b>
OCI Males Ages 45+	80	51.11	48.25	49.96	54.86	53.05	50.34
Career Criminals Ages 18-29	40	66.62	67.84	65.66	63.52	67.68	67.53
Career Criminals Ages 29-44	5	<b>62.22</b>	<b>60.77</b>	<b>62.74</b>	<b>62.77</b>	<b>66.71</b>	<b>62.47</b>

These data seem, at the same time, to offer further support concerning the concurrent validity (i.e., relevance to existing offender status) of the STFB and to provide further refined detail about how the STFB scales behave in various groups under differing conditions. For example, the immediately preceding tables reveal



not only the often noted progression of scores across groups, but also seem to provide some suggestive indications of the amount of variation expected among different groups of offenders.

#### Beyond "Criminal Thinking"

Having concluded the analysis of the STFB's concurrent validity, and before proceeding to examine its predictive validity, it is necessary to introduce another set of investigations and observations which are basic to that next psychometric issue. The evidence presented thus far warrants the conclusion that the Survey of Thoughts, Feelings and Behaviours (STFB) provides a means by which criminality, as it is commonly depicted in the research literature and as it presents itself in ordinary forensic work, may be measured and analyzed. However, the above information goes only part of the way in the task of defining the underlying substance or meaning of the six dimensions (Factors) of criminal thinking identifiable through the STFB. The labelling exercise performed earlier on a tentative basis provided only a general image of the overall contents of the six STFB factors or scales. If the information afforded by the STFB is to be used in clinical work, and if any attempt is to be made to treat the underlying phenomena, it seems desirable to proceed a step further in understanding the six factor-derived scales. That is, in order to attempt to treat in any meaningful way the substrate of criminality measured by the

STFB factors, it would be desirable first to characterize in an understandable way the developmental and psychopathological roots of each factor, and then to reduce the concepts formulated to simple structure.

As a first step in this direction, STFB factor scale scores and MMPI raw item data were obtained for a sample of 340 inmate subjects. MMPI item endorsements were determined for subjects who scored high (T-scores 65 and above) and low (T-scores below 65) on each of the STFB factor scales. Identifying those MMPI items for which there was a disproportionate rate of endorsement among high scorers on each of the six STFB scales, it became possible to enhance greatly the understanding of the dynamics underlying each of the factor scales. The method involved was to assemble together the items from the STFB factors and from the associated MMPI items, to group their contents, and to characterize the resulting array of statements in terms of both the cognitive and reactive mechanisms (STFB items) and the motivational and psychopathological features (MMPI items) common to those scoring high on the factor scales.

#### Dynamics of the STFB Factors

The result obtained from examining together the factor-analysis-grouped items of the STFB and the MMPI items associated with them provided a more complete and understandable picture of each factor than had previously been obtained. It presented the

six factors as representing a series of reactions to perceived life experiences, internal processing of those reactions eventuating in various forms of **angry distress-rejecting attitudes** on the part of offenders.

Factor 1: Rejection of Guilt Feelings. Based on the items, it would appear that the dynamics take the following course:-

(a) Guilt-Tripping -- The phenomena underlying this factor seem to start with the child perceiving a significant other as continually pointing out his wrong-doing in a critical or punitive fashion.

(b) Felt Rejection, Guilt Sensitivity, Guilt Proneness -- The child reacted with a sense of rejection, a sensitivity to guilt and a readiness to feel guilty.

(c) Compulsive Cautiousness and Depression -- The child accepted the felt guilt and felt rejection, and reacted with compulsive caution with depressive over-tones, which led to inhibition of activity.

(d) Resentment, Anger and Paranoidal Feelings of Mistreatment -- The felt rejection, combined with the inhibition of activity and energy use, fostered in the child a build-up of resentment and anger at the perceived injustice of his situation -- feelings which could not be expressed directly.

(e) Affect Inhibition, Boredom, Guilt Intolerance and Acting

Out -- The combination of guilt and anger feelings had a variety of effects, *probably because of the age and developmental level at which these problems originated.*

First, it created strong negative feelings about emotions, with the suppression of emotions leading to boredom. Second, and not necessarily sequentially, the feelings of guilt were

suppressed and/or denied, a condition which we have referred to as "guilt intolerance." Third, the feelings of anger could not be fully suppressed and when evoked, particularly by the periodic elicitation of guilt feelings, were acted out.

(f) Excitement Seeking -- The elicitation of guilt and anger feelings created increased Autonomic Nervous System arousal, and the guilt intolerance or "denial" of guilt tended to override any capacity that guilt had to inhibit action. The result involved a heightened excitability of the person, an increased intensity of anger, and a search for relief in excitement-seeking activities, some of which may appear to others to be appropriately "guilt-evoking."

(g) Anti-Social/Criminal Behaviour -- The excitement-seeking and/or the angry pursuit of what others may think of as guilt-evoking action enhanced the risk of involvement in criminal behaviour.

Factor 2: Rejection of Failure and Inferiority Feelings.

Based on the items, it would appear the dynamics take the following course:-

(a) Attention Deficit Disorder/Hyperactivity/Paroxysmality and Punitive Reinforcement -- It would appear that this factor is a result of inability of parents or teachers to tolerate high energy, active children who present problems of discipline. Indeed, this factor seems to be associated in particular with the consequences of parent/teacher responses to Attention Deficit Disorder, hyper-activity and/or delayed cerebral maturation. The child's inattention, undirected hyperactivity and related "paroxysmal" tantrums elicited from significant others responses which the child perceived as frustrating, critical and punitive.

(b) Failure Experiences and Felt Rejection -- The child perceived that he could not do anything "right", became conscious that he "failed" most of the time, and felt that he was not acceptable to his parents and/or teachers.

(c) Inferiority Feelings, Victim Identity and Depression -- The failure experiences increasingly created in the child a sense of incompetency and inferiority and/or a sense of being victimized or brutalized by others, and both reactions were at least tinged with depression.

(d) Anger and/or Paranoidal Feelings of Mistreatment -- The

sense of inferiority was reacted to with frustration and then anger, and the sense of being victimized transformed into an almost paranoid sense of mistreatment and vengefulness.

(e) Hypomanic Grandiosity, Egocentricity and Attention-Seeking -- The anger and depression in the context of inferiority feelings were difficult for the child to tolerate, and they tended to be reacted to with defensive denial in hypomanic grandiosity, egocentricity and attention-seeking behaviour.

(f) Risk-Taking and Impulsiveness -- The grandiosity and egocentric attention-seeking were apt to result in careless risk-taking which, resulting in harrowing experiences, conditioned a propensity for excitement-seeking risk-taking. Meanwhile, the depressive undertone was apt to increase the risk of impulsiveness, since the depressive tends to feel that "nothing could feel worse than the way I feel right now, so it doesn't matter what I do." That is, depressives are not well regulated by future consequences.

(g) Anti-Social/Criminal Behaviour -- The excitement-seeking/risk-taking, coupled with egocentricity and impulsiveness, together enhanced the probability of anti-social or criminal acts.

Factor 3: Rejection of Insecurity. Based on the items, it appears that the dynamics of this factor take the following

course:-

(a) Impaired Mothering, Autonomic Nervous System Reactivity and Emotional Distress -- Anxiety/stress and/or social/emotional isolation of the mother led to a perception of inadequate mothering, which resulted in heightened ANS reactivity and emotional distress on the part of the child.

(b) Felt Rejection, Closeness Anxiety, Discouragement/Mistrust/Disappointment and Emotional Distancing -- The strongly-felt, arousal-tinged sense of rejection provided the basis for anxiety about close, emotionalized involvements which, in turn, fostered discouragement, disappointment, mistrust and emotional distancing.

(c) Introversive Hostile Fantasies, and Feelings of Guilt and Inferiority -- The felt rejection and mutual isolation felt by the child stimulated the production of hostile, distancing fantasies, which seems to have been reacted to with enhanced feelings of guilt and inferiority, and these reactions were accentuated by the child's labile ANS arousal. All of these arousal-producing trends created an intolerable degree of arousal and distress.

(d) Affect Inhibition and Boredom -- The combination of guilt and anger feelings created strong negative feelings about emotions, resulting in suppression of emotions, and this in turn led to boredom.

(e) Social Withdrawal and Obsessional Defence -- The intolerance of distress and emotional upset, which feelings are maximized in social relations, led to a generalized social withdrawal and to the development of obsessive inhibitive defenses such as over-rationality, emotional coldness and a felt need to control others.

(f) Accumulation and Periodic Expression of Rage -- The inhibitive defenses blocked energy use in activity and allowed rage to built up within. The pent-up rage was apt to be expressed periodically in moodiness or anger, careless or impulsive acts and/or rages or tantrums, all of which implicitly deny the underlying distress.

(g) Anti-Social/Criminal Behaviour -- Periodic acting out may result in potentially harmful offenses, especially given the strong pressure of underlying disturbance and distress. Moreover, the inhibitive quality of the defenses employed suggests that acting out may be fostered by the use of disinhibiting substances.

Factor 4: Rejection of Sensitivity. Based on the items, it would appear that the dynamics take the following course:-

(a) Societal Expectations/Demands and Low Intellect -- It appears that this factor, which is negatively related to I.Q., may result from the child's feelings of inadequacy in response



to his perception of inability to live up to societal demands.

(b) Failure Experiences and Felt Rejection -- The child perceived that he could not do anything "right", became conscious that he "failed" most of the time, and felt that he was not acceptable to its parents and/or teachers.

(c) Inferiority Feelings, Victim Identity and Depression -- The failure experiences increasingly created in the child a sense of incompetency and inferiority and/or a sense of being victimized or brutalized by others, and both reactions were at least tinged with depression.

(d) Anger and/or Paranoidal Feelings of Mistreatment -- The sense of inferiority was reacted to with frustration and then anger, and the sense of being victimized transformed into an almost paranoidal sense of mistreatment.

(e) Affect Inhibition and Boredom -- The combination of inferiority and anger feelings created strong negative feelings about emotions, with a resulting suppression of emotions which, in turn, led to boredom.

(f) Social Withdrawal and Obsessional Defence -- The intolerance of emotions, the anger and sense of inferiority, which feelings are maximized in academic situations, led to an increased social withdrawal and to the development of ruminative, obsessive, inhibitive defenses such as emotional aloofness and fantasies of controlling others.

(g) Dependency/Independency Conflicts and Withdrawal from Academic Interests -- Whether the child acquiesced to the perceived demands of others or rebelled against them, the result was likely to be dependency/independency conflicts and a withdrawal from academic interests.

(h) Accumulation and Periodic Expression of Rage -- To the extent that the inhibitive defenses blocked energy use in activity and allowed rage to built up within, that pent-up rage was apt to be expressed periodically in moodiness or anger, careless or impulsive acts and/or rages or tantrums.

(i) Defensive "Isolation" -- In this type of defence, used by compulsives, the "connectedness" among events is ignored such that each event is almost seen as having its own existence, almost without cause.

(j) Concrete, Simplistic Thinking -- One result of the use of defensive isolation is that thinking becomes relatively simplistic and concrete, being concerned with specific events (failing to notice the forest for the trees). However, the person may still excel in activity-oriented tasks such as sports.

(k) Failure to Learn from Experience -- To the extent that events are isolated or considered separate, it is obviously difficult for the person to learn well from experiences. Both generalization and transfer of training were impeded, and

associations became hard to grasp.

(1) Anti-Social/Criminal Behaviour -- Whether as dependent "follower" or "independent" leader, this factor can lead the rather unthoughtful, simplistic, activity-oriented and socially isolated person into associations with anti-social "misfits", and thus perhaps into involvements in criminal activities.

Factor 5: Rejection of Closeness. Based on the items, it appears that the dynamics of this factor take the following course:-

(a) Routinized, Rationalizing, Rule-Governed Parenting -- Parenting which might be characterized as militarily correct, perhaps with a Law and Order style of morality, seems to underlie this factor.

(b) Emotional Insecurity, Closeness Anxiety, Discouragement and Emotional Distancing -- The child's felt inability to experience warmth from his parents engendered emotional insecurity and a sensitivity to close, emotionalized involvements which, in turn, fostered discouragement, and emotional distancing.

(c) Victim Identity, Mistrust/Disappointment, Introversive Hostile Fantasies and Feelings of Guilt and Inferiority -- The felt rejection stimulated, in the child, feelings of

mistreatment, mistrust and disappointment, and the production of hostile, distancing fantasies which seem to have been reacted to with enhanced feelings of guilt and inferiority.

(d) Distress Intolerance, Affect Inhibition and Boredom -- The combination of emotional insecurity, depression, inferiority, guilt and anger feelings created strong negative feelings about emotions, with the resulting suppression of emotions leading to boredom.

(e) Social Withdrawal and Obsessional Defence -- The intolerance for distress and emotional upset, which feelings are maximized in social relations, led to a generalized social withdrawal and to the development of obsessive inhibitive defenses such as over-rationality, emotional coldness and a felt need to control others.

(f) Rationalized, Rule-Governed, Dichotomous Thinking -- Partly modelled after the parenting, and partly a consequence of the introversive-obsessive cognitive style, thinking became over-rational, rule-governed and characterized by dichotomy or polarization (black-and-white), and mental energy was poured into cautious self-justification for hostile feelings.

(g) Accumulation and Periodic Expression of Rage -- The inhibitive defenses blocked energy use in activity and allowed rage to build up within. Pent-up rage is apt to be expressed periodically in moodiness, anger, and/or rages.

(h) Anti-Social/Criminal Behaviour -- Periodic acting out may result in potentially harmful offenses, especially given that there is a strong alienation from others. Moreover, the inhibitive quality of the defenses suggests that acting out may be fostered by the use of disinhibiting substances.

Factor 6: Rejection of Discipline. Based on the items, it appears that the dynamics of this factor take the following course:-

(a) Lack of Parental Discipline -- Either through absence or neglect, a lack of effective parental control and discipline seems to underlie this factor.

(b) Under-Controlled, Under-Disciplined -- The result was a child who is under-controlled and who could not delay gratifications effectively, who tended to be demanding and to act out to meet momentary needs.

(c) Neglected/Rejected, Depressed/Discouraged and Angry -- Subjectively, the child reacted to the limited discipline by feeling neglected, rejected, depressed and angry. These motivational elements then fuelled his under-disciplined behaviour.

(d) Distress Intolerance, Affect Inhibition and Boredom -- The feelings of neglect, rejection, depression, failure, and guilt, in combination, created strong negative feelings about

emotions, with the resulting suppression of emotions leading to boredom.

(e) Failure Anxiety, Mistrust and Sensitivity to Others' Attempts to Provide Controls -- Feeling rejected, depressed and angry, he became sensitive to his own failings; angry at his parents, he reacted negatively to others, particularly with mistrust at their (now perceived as uncaring) efforts to control him.

(f) Anti-Social/Criminal Behaviour -- It seems likely that the resentful intolerance of rules and regulations, along with the extra pressure of seeking to avoid depression, which is itself coupled with a sense of mistreatment, may result in criminal behaviour which is widespread and invasive.

Is there any validity in these formulations? Some of our speculations about the nature of the parenting received by the child, and some of the inferences drawn about the kinds of criminal involvements to which these factors may predispose offenders are, to be sure, still speculative. However, although ordered to suit a kind of psychological view of development, the various steps in the sequences offered are taken fairly directly from the contents of the items endorsed by offenders who scored in the upper ranges of the factors. Of course, the real question of importance in such formulations lies in their heuristic value in directing the

treatment and prevention of the thinking, feelings and behaviour implied in each of the factors, and in the eventual determination of the effects, if any, of the derived interventions in reducing or extinguishing those criminal behaviours attributable to these factors of criminality.

In effect, we are asking the question, "If there is any validity to these formulations, what could we possibly do about the underlying phenomena?" In fact, there is probably a great deal that could be done about them. If criminal behaviour is indeed motivated, or "driven", by Guilt Intolerance, for example, then that is the problem which should be addressed. If Closeness Intolerance is the issue, then it is anxiety about human closeness which requires treatment. Each factor, if it has been appropriately identified, would need to be addressed in treatment for its essential features in order to modify what has been discovered as underlying criminality. Conversely, if treatment of the psychodynamically formulated "underlying condition" results in a change in factor scores, it would provide strong inferential evidence of the validity of the formulations on which the treatments were based.

### Simple Structure

Accordingly, the next part of the task of determining the validity of the STFB factor scores was that of designing treatments

which might be capable of altering the phenomena underlying each factor, and preferably also capable of demonstrating "differential treatment" effects on the six factor scores. Differential treatment would only be demonstrated if treatments designed to address each factor altered that factor's score, and not the scores of other factors. This task was approached through a succession of steps.

The first step was seen to involve characterizing the essence of the phenomena underlying each factor. This step seemed necessary both to permit the development a direct and relatively simple treatment strategy for each factor, and to extract the redundancies observed in some of the dynamics of the several factors. Direct and simple treatments seemed demanded if treatment was to be less than interminable.

The available inmate subjects served an average of six months at the correctional treatment facility (O.C.I.) in which the treatment would be undertaken, and the design requirements of an adequate treatment evaluation study would demand quite large numbers of inmates to be treated. Indeed, for reasons which are beyond the scope of this Manual, it was intended that the inmates would be treated for a maximum of four-and-a-half hours of treatment time, and in groups as large as 74 inmates at a time. The need to extract redundancies in the dynamics of each factor and to reduce each factor to its essence seemed necessary if there was



to be any hope of demonstrating differential treatment effects, especially in such large groups and in such brief durations of treatment.

The task of reduction to simple structure of the essence of each factor was facilitated by the observation that the factors had in common a kind of rejection of, or intolerance for, some kind of internal or external state, with Factors 1, 3 and 5 appearing to have a strong intolerance for "internal" (intra-personal) controls, and Factors 2, 4 and 6 appearing to have a strong intolerance for "external" (extra-personal) controls. The concept of intolerance adopted was intended to contrast with the "proneness" or acknowledgement of such states commonly recognized in neurotic patients. One aspect of each factors' dynamics, which appeared to be central to the underlying phenomena, was then extracted to yield a single "simple structure" designation for the factor:-

Factor 1: Guilt Intolerance

Factor 2: Inferiority Intolerance

Factor 3: Distress or Disturbance Intolerance

Factor 4: Sensitivity Intolerance

Factor 5: Closeness Intolerance

Factor 6: Restriction or Discipline Intolerance

Next, a treatment model had to be constructed. At this point, the divergence of the STFB findings from conventional views of

criminality and corrections suddenly came into sharp focus. Conventional views of offenders have often noted the absence of guilt feelings, the pretentious over-compensation for inferiority feelings, the projection of a macho image in place of any signs of emotionality or weakness, the inability to learn from experience, the unwillingness to conform with its need to be different, and the intolerance for discipline. However, conventional views have tended to conclude that these characteristics represented a lack of social development, or social inadequacy, on the part of the offender. This view has led correctional personnel to seek to increase remorse or guilt feelings (as in penitentiaries), "realistic" appraisals of self, internal emotionality as a human quality, much repetition of lessons to be learned, thoughtful self-examination as well as accommodations which limit privacy and demand a kind of closeness to and mutual reliance on others, and enforced external discipline.

The analysis of the dynamics of the STFB factors, however, suggested a view which was almost the obverse of the conventional views described above. This analysis suggested that offenders may actually experience these states in particularly poignant ways, such that they can or will no longer tolerate them. If this view is valid, then treatment interventions might best be aimed at reducing the felt intensity of each of these states, the better to reduce the associated intolerances of them. Was it possible that

many correctional programmes have tended to increase criminality by increasing the intolerance and rejection of the very things which the correctional programmes set out to enhance?

Admittedly, the view slowly taking shape represented more than just a minor divergence from conventional justice system wisdom and practice. However, determined to be driven by what the data seemed to justify, it was decided to "go with" the conclusions which appeared to be demanded by findings with the STFB and its factors and, as it might seem to some people, to set out to reduce or decrease guilt, inferiority feelings, ("appropriate") distress, sensitivity, other-centred closeness and discipline.

But how could these needs or feelings be reduced? Should the effort be made to increase the opposite needs or feelings, such as those of innocence, success, insensitivity to distress, empathic sensitivity, psychological "distance" and lack of discipline? To do so would certainly upset the staff in the correctional treatment facility. It might also prove to be tantamount to enhancing the very same defensive (intolerant) behaviour which had already been adopted by the offenders and which had led to their criminality.

Alternatively, it might be possible directly to reduce the offenders' sensitivity to feelings of guilt, inferiority, distress, sensitivity, closeness and discipline. Part of the difficulty involved in doing this would be that offenders do not acknowledge these attributes. A quirk was required to solve this dilemma.

Accordingly, six treatments programmes were designed to reduce each of the six types of feelings differentially, under the following cognitively dissonant titles:-

- Factor 1 Treatment: Enjoying Guilt
- Factor 2 Treatment: Enjoying Failure
- Factor 3 Treatment: Enjoying Distress
- Factor 4 Treatment: Enjoying Sensitivity
- Factor 5 Treatment: Enjoying Conformity<sup>2</sup>
- Factor 6 Treatment: Enjoying Restraint

Since the present work is not intended to serve as a treatment manual, the details of the cognitive-affective-behavioural psychological treatments designed and implemented must be considered to be beyond the scope of this Manual. Suffice it to say that six different types of treatments-for-criminality were designed under the above titles, and that each was administered in single, day-long (about 4 hours attendance in a day), large-group treatment workshops, each attended by up to 74 inmates -- inmates being admitted to each programme strictly according to pre-designed randomized assignment to various experimental groups (control groups inmates did not attend any of these treatments). Up to four

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<sup>2</sup> One previously-unmentioned aspect of this treatment programme involved the desire to utilize a variety of treatment methodologies. Targeting the introversion and obsessive rumination apparent in Factor 5, instead of sensitivity to either closeness or rejection, allowed us to test a variety of cognitive methods which we had not previously deployed. The rationale for this choice is given in Appendix B.

STFBs and a variety of other repeating psychological tests were administered to experimental subjects on several occasions over a period of several months during which this treatment-research programme was conducted.

#### Predictive Validity of the STFB

Scores for all six STFB factors, the Total, Neutral and Undesirable scales were computed for all of the STFB's administered to each inmate. In the main analysis of the resulting data, these nine STFB scores were transformed to their T-score equivalents, to correct for age differences among the workshop participants. The pre-treatment T-scores for each scale for each inmate were then averaged to maximize stability of the measures, and the post-treatment T-scores (if more than one administration of the STFB followed treatment) were averaged for the same reason (although the same results as those reported below were achieved using the raw difference scores, or residual gain scores, for the single most proximal pre- and post-treatment STFB administrations). The pre- to post-treatment differences between these T-score means were then computed, and these served as the dependent measures in this study.

Given the brief time allowed for each treatment programme (just over four hours, minus pre- and post-treatment "monitoring" test time), it was concluded that for any treatment benefit to be possible for an inmate he should have attended a programme for at

least three of the four hour-long segments (i.e., at least 3 hours). Groups were assembled for analysis containing only those inmates who had attended either for at least 3 hours, or for 0 hours of each treatment programme, to serve as the independent variable in this study of treatment effects.

The overall differences from pre- to post-treatment on all nine STFB scale scores were significant beyond the .01 level of confidence. Examination of the relation between change in STFB Total score as a function of total hours attended at criminality treatments found that change (decrease) in criminality was directly related to the total number of hours of treatment received, as shown in Table 31. That is, it can be seen that improvement in the Total criminality score is directly related to the total number of criminality treatment workshop hours received.

Table 31: Change in STFB Total Score  
As A Function of Total Workshop Attendance Hours

Hours Attended	0	1-6	7-12	13-18	19-24
N	68	83	29	6	14
Total Change	1.27	1.27	3.62	4.16	4.77

Next, change (decrease) scores were examined for each STFB factor for each workshop, to see if the treatments chosen

for inclusion in each workshop were appropriately selected or differentially effective. These change scores and/or their levels of significance are shown in the tables which follow. It should be remembered that these comparisons are between those inmate subjects who received all or most of the particular criminality treatment workshop (3-4 hours) and those who received no criminality-related treatment at all.

Of particular interest is the information presented in Table 32 through Table 37. These tables present the results of  $t$ -tests of the effects of each treatment (labelled A to F to represent the treatments for STFB Factors 1 to 6, respectively) on each of the STFB factor scores. The tables present the probabilities of  $t$  for each treatment's effect on each test score. The main issues of interest are in the 6 by 6 arrays (summarized in Table 38) displaying treatments A through F on STFB factors 1 through 6. In order to emphasize the rather arresting pattern of results obtained, significant probabilities are highlighted in the tables.

These treatment results clearly indicate that at least reasonably appropriate treatments were selected *and that, to a considerable extent, "differential treatment" was accomplished.* All six of the treatments modified primarily the STFB factor scores at whose underlying phenomena they were directed. Quite apart from the unusual demonstration of

almost "surgical accuracy" in targeting the intended phenomena, and essentially only the intended phenomena, the results provide information on another issue.

The conclusion of importance to the present task which may be drawn from these data is that all the STFB factor scores are clearly modifiable by carefully designed treatments. These findings add an aspect of predictive validity to the already demonstrated other psychometric properties of the STFB, as reflected in the demonstrated modifiability of offenders' test scores through treatment.

Table 32: 3-to-4 Hours of Treatment A (for Factor 1)  
compared with No-Criminality-Workshop Controls

Treatment A	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	36	0.88	0.43	0.93	0.99	0.31	0.66
Control	68	0.20	0.04	0.29	0.33	0.46	-0.05
Difference		0.68	0.40	0.64	0.67	-0.15	0.72
2-tail Sig		<b>0.05</b>	0.18	0.07	0.11	0.68	<b>0.04</b>



Table 33: 3-to-4 Hours of Treatment B (for Factor 2)  
compared with No-Criminality-Workshop Controls

Treatment B	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	38	0.72	1.12	0.80	0.74	0.81	0.97
Control	68	0.20	0.04	0.29	0.33	0.46	-0.05
Difference		0.52	1.08	0.51	0.41	0.35	1.02
2-tail Sig		0.13	<b>0.00</b>	0.18	0.30	0.28	<b>0.00</b>

Table 34: 3-to-4 Hours of Treatment C (for Factor 3)  
compared with No-Criminality-Workshop Controls

Treatment C	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	38	0.37	0.32	0.84	0.64	0.46	0.46
Control	68	0.20	0.04	0.29	0.33	0.46	-0.05
Difference		0.17	0.28	0.55	0.31	0.00	0.51
2-tail Sig		0.60	0.35	<b>0.10</b>	0.42	1.00	0.13

Table 35: 3-to-4 Hours of Treatment D (for Factor 4)  
compared with No-Criminality-Workshop Controls

Treatment D	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	36	0.50	0.79	0.67	1.02	0.73	0.86
Control	68	0.20	0.04	0.29	0.33	0.46	-0.05
Difference		0.30	0.75	0.37	0.70	0.27	0.91
2-tail Sig		0.34	<b>0.01</b>	0.29	<b>0.07</b>	0.38	<b>0.00</b>

Table 36: 3-to-4 Hours of Treatment E (for Factor 5)  
compared with No-Criminality-Workshop Controls

Treatment E	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	18	0.79	0.60	0.63	0.68	0.78	0.15
Control	68	0.20	0.04	0.29	0.33	0.46	-0.05
Difference		0.59	0.56	0.34	0.35	0.32	0.20
2-tail Sig		0.12	0.09	0.39	0.44	0.42	0.62

Table 37: 3-to-4 Hours of Treatment F (for Factor 6)  
compared with No-Criminality-Workshop Controls

Treatment F	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	26	0.78	0.61	0.62	0.70	0.71	1.14
Control	68	0.20	0.04	0.29	0.33	0.46	-0.05
Difference		0.58	0.58	0.33	0.37	0.25	1.19
2-tail Sig		0.08	0.06	0.36	0.39	0.51	<b>0.00</b>

Table 38: Summary of Probabilities of Effects of Treatments A to F  
(independent variables) on STFB Factors 1 to 6 (dependent variables)

<u>STFB</u> Factor: Tx Workshop	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Treatment A	<b>.05</b>	.18	.07	.11	.68	<b>.04</b>
Treatment B	.13	<b>.00</b>	.18	.30	.28	<b>.00</b>
Treatment C	.60	.35	<b>.10</b>	.42	.99	.13
Treatment D	.34	<b>.01</b>	.29	<b>.07</b>	.38	<b>.00</b>
Treatment E	.12	.09	.39	.44	.42	.62
Treatment F	.08	.06	.36	.39	.51	<b>.00</b>

In the preceding tables, significant differences are

highlighted. Significances at the  $p < 0.10$ , two-tailed (i.e., at  $p < 0.05$ , one-tailed) level of confidence were accepted for the effect of a treatment workshop on its targeted (hypothesized) STFB factor score (i.e., Workshop A on Factor 1, Workshop B on Factor 2, etc.). And significances were accepted at the  $p < 0.05$ , two-tailed level for the effects of all other criminality workshops on other STFB factor scores (i.e., those which were not targeted or hypothesized to be changed in a given direction by the particular workshop, that is, Workshop A on Factors 2 through 6, Workshop B on Factor 1 and Factors 3 through 6, etc.). For the sake of clarity, N's given in each table are for the targeted factor comparison. N's for other comparisons often differed slightly.

As can be seen from these tables, workshops were generally successful in effecting change in their targeted criminality factors, and occasionally effective in changing other criminality factors as well (mainly Factor 6). The only exception to this finding was Treatment E, which does not appear to have managed to affect its targeted STFB factor to any significant degree. As can be seen from the following three tables, however, this failure of Treatment E to effect changes in its targeted STFB factor is more apparent than real.

Table 39: Change in STFB Factor Scores  
as a Function of Criminality Treatments

<u>STFB Fact:</u> Treatments	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Targeted Treatment	N's Vary	0.88	1.12	0.84	1.02	0.78	1.14
2-tail Sig		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>

Table 40: Change in STFB Factor Scores  
as a Function of Relapse Prevention only

<u>STFB Fact:</u> Workshop Rel.Prev.	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Relapse Prevention Only	18	0.60	0.39	-0.22	0.87	0.69	0.12
2-tail Sig		0.18	0.21	0.63	0.17	<b>0.03</b>	0.79

Table 41: Change in STFB Factor Scores  
With No Treatment Workshops At All

<u>STFB Fact:</u> Treatments	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
No Workshop At All	29	0.12	-0.22	0.48	0.31	0.35	-0.47
2-tail Sig		0.73	0.44	0.14	0.38	0.33	0.08

STFB pre- and post-treatment data were available on a sub-group of the No-Treatment-Control subjects from this study who, although they received no criminality-relevant treatment (i.e., zero treatment in workshops A to F), attended a 4-hour Relapse

Prevention workshop between STFB administrations. These subjects' STFB scores were processed as described earlier concerning the experimental groups' STFB's. T-test results are presented in Tables 39 through 41 for the STFB factor scores for subjects receiving:

- three or more hours of criminality treatment (Table 39),
- three or more hours of Relapse Prevention Workshop only (Table 40),
- no treatment workshop at all (Table 41).

These tables show that subjects who participated in three or more hours of each of the specific criminality treatments showed a significant decrease in the STFB factor targeted by that treatment; subjects who participated in three or more hours of the Relapse Prevention workshop (and no other criminality treatment hours) showed a significant decrease in STFB Factor 5, and no change in any of the other STFB factors; and subjects who received no treatment workshop hours at all showed no change in any of the STFB factors at all. That is, Treatment E did effect changes in Factor 5, and the initial apparent failure of Treatment E to affect its targeted STFB factor can be attributed to the fact that Factor 5 was also modified by the Relapse Prevention programme received by some of the no-criminality-treatment controls -- which, of course, blunted the statistical test comparing experimental (affected by

Treatment E) and control (affected by a Relapse Prevention programme) group subjects.

Another interesting side-light on these data is offered by another non-criminality-related programme comprised of another two day-long workshops which were attended by carefully balanced sub-groups of the experimental subjects (but not the control subjects) in the present study. This pair of workshop programmes was presented after all the criminality-related treatments were concluded. These additional and following programmes, which addressed "values", were presented for some of the subjects as a kind of "control" treatment, to see if treatment generally might (also) affect the STFB factors. "Values" programmes were selected because the programmes appeared to be "good" programmes bearing on important aspects of people's daily living and quality of life.

The effects of the "Values" treatment workshops on the STFB factor scores are displayed in Tables 42 and 43. In this case, the comparison is between inmate subjects receiving 3 or 4 hours of each of the "values" workshops and those receiving none of the criminality-related or "values" treatment workshops.

Table 42: 3-to-4 Hours of Treatment G (Values #1)  
with No-Criminality-Workshop Controls

Treatment G	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	26	0.31	0.47	0.52	0.13	0.62	0.60
Control	38	0.10	-0.10	0.53	0.29	0.30	-0.22
Difference		0.21	0.58	-0.01	-0.15	0.32	0.81
2-tail Sig		0.64	0.15	0.98	0.71	0.48	<b>0.03</b>

Table 43: 3-to-4 Hours of Treatment H (Values #2)  
with No-Criminality-Workshop Controls

Treatment H	N	Change: Factor 1	Change: Factor 2	Change: Factor 3	Change: Factor 4	Change: Factor 5	Change: Factor 6
Treatment	11	0.36	0.17	0.52	-0.04	0.37	0.12
Control	42	-0.02	-0.20	0.43	0.16	0.35	-0.16
Difference		0.38	0.37	-0.09	-0.20	-0.02	0.28
2-tail Sig		0.50	0.42	0.86	0.72	0.97	0.55

Tables 42 and 43 show that the treatment effects of these "values" workshops on the STFB factor scores is much less pronounced, is limited to the relatively volatile (see Table 38) STFB Factor 6 (see Table 42), and is probably due to the increased intolerance for control shown by those inmate subjects who did not receive the "values" workshops. The contrast between the results exhibited in Tables 32 to 41 in comparison to those seen in Tables 42 to 43 underscores the idea that, to be effective, treatments selected must be appropriate to the underlying psychological

phenomena (i.e., problems, needs, factors, causes the person exhibits) and not just "therapy" which is (or is not) aimed at something else.

Furthermore, although follow-up of the workshop participants must await their release and subsequent offence or non-offence histories (which will be undertaken in two years time), there is reason to believe that lower STFB scores will be related to lower recidivism rates. This further support for the predictive validity of the STFB was derived as described below. MMPI-STFB scales were constructed composed of MMPI items associated with high scores on the various STFB factor scales (see Beyond "Criminal Thinking" above). These derived (not in fact STFB) scales were scored for a sample of 279 first-incarcerates (who had not received any known criminality-related treatment) on whom one-year post-release follow-up was available, and correlations between these STFB-equivalent MMPI scales and the available outcome statistics were examined. The correlations between the MMPI-STFB-equivalent factor scales and two main follow-up variables are shown in Table 44.



Table 44: Relation Between STFB-equivalent Scales  
from the MMPI and Post-Release Recidivism

	STFB 1	STFB 2	STFB 3	STFB 4	STFB 5	STFB 6	TOTAL
Re-Offend vs Non-Recidiv. During the First Year Post-Release	0.20	0.22	0.15	0.10	0.17	0.23	0.19
Significance	<b>0.001</b>	<b>0.000</b>	<b>0.011</b>	0.111	<b>0.004</b>	<b>0.000</b>	<b>0.002</b>
Number of Convictions During the First Year Post-Release	0.19	0.16	0.11	0.07	0.10	0.20	0.14
Significance	<b>0.002</b>	<b>0.008</b>	0.065	0.279	0.090	<b>0.001</b>	<b>0.018</b>

Table 44 suggests (but does not verify) that STFB scale scores may well predict to future crime. But Table 44 also suggests another reasonable possibility. If the STFB scale scores do predict future crime, then the probability is greatly enhanced that reducing the STFB scale scores as a result of effective treatments (already demonstrated to be possible) may also reduce criminal recidivism, that is, later crime. This prospect is indeed an exciting one. Follow-up of the actual treatment workshop participants will be required to determine whether STFB scores, which have been lowered as a result of treatment, will also result in lowered recidivism rates and seriousness of crime. Of course, that would be expecting a great deal. After all, four hours in one

day isn't very much treatment! In the meantime, the interim effect reported in Table 44 at least provides further presumptive evidence of the predictive validity of the STFB.

### Summary and Conclusions

This manual describes the development of a new test of criminality. First, a test was developed to measure criminal thinking errors based originally on those reported by Yochelson and Samenow (1976). Second, these thinking errors were factor analyzed and the resulting six factors represented by factor scales. Third, data were presented demonstrating the various types of reliability and validity of the Survey of Thoughts, Feelings and Behaviours (STFB) and its factor and "validity" scales. Fourth, personality test items associated with high scores on each of the factor scales were identified. Fifth, examination of the criminal thinking items comprising each of these factor scales, along with their associated personality test items, led the author to postulate a set of psychodynamics underlying each scale and to characterize the essence of each scale's dynamics. Sixth, treatment programmes were devised to address the psychodynamics postulated to underlie each of the factors of criminality. Seventh, analysis of the effects of those treatment programmes on the STFB factor scores found them to be effective in reducing the aspect of criminality being measured by each of the six factor scales. Since the treatments were

designed to address the dynamics which appeared to underlie each aspect's criminality, rather than just criminal thinking, motivation or behaviour itself, the fact that each treatment reduced its targeted aspect of criminality may be taken as presumptive evidence for the validity of this approach to the understanding and treatment of criminality. Eighth, lower scores on STFB-equivalent MMPI scales were found to be associated with a decreased likelihood of re-offending and with a lower number of convictions during the first year post-release in a sample of 279 first-incarcerates. This last observation suggests that the treatment workshops may, on follow-up, be found to result in lower recidivism rates for those inmates who took part in them. Finally, some additional and accessory conclusions from these studies receive comment in Appendix C.

## APPENDIX A

STFB Scale NORMS and STANDARDST-Score Conversion Tables for the STFB ScalesTable 45: T-Score Conversions for STFB Total (all ages)

RAW SCORE	Male 14-15	Female 14-15	Male 16-17	Female 16-17	Male 18-29	Female 18-29	Male 30-44	Female 30-44
100	112	100	99	111	95	110	110	127
99	111	99	98	110	94	109	109	126
98	110	99	97	109	93	108	108	125
97	109	98	96	108	92	107	107	124
96	108	97	95	108	91	106	106	123
95	107	96	94	107	91	105	106	122
94	105	96	94	106	90	104	105	121
93	104	95	93	105	89	103	104	119
92	103	94	92	104	88	102	103	118
91	102	93	91	103	88	101	102	117
90	101	92	90	102	87	101	101	116
89	100	92	89	101	86	100	100	115
88	99	91	88	100	85	99	99	114
87	98	90	87	99	84	98	98	113
86	97	89	87	98	84	97	97	112
85	96	88	86	97	83	96	96	111
84	95	88	85	96	82	95	95	109
83	94	87	84	95	81	94	95	108
82	93	86	83	95	81	93	94	107
81	92	85	82	94	80	92	93	106
80	91	85	81	93	79	91	92	105
79	90	84	80	92	78	90	91	104

78	89	83	80	91	78	89	90	103
77	88	82	79	90	77	88	89	102
76	87	81	78	89	76	87	88	101
75	86	81	77	88	75	86	87	99
74	85	80	76	87	75	85	86	98
73	84	79	75	86	74	84	85	97
72	83	78	74	85	73	83	84	96
71	82	77	73	84	72	83	84	95
70	81	77	73	83	71	82	83	94
69	80	76	72	82	71	81	82	93
68	79	75	71	81	70	80	81	92
67	78	74	70	81	69	79	80	90
66	77	73	69	80	68	78	79	89
65	76	73	68	79	68	77	78	88
64	75	72	67	78	67	76	77	87
63	74	71	66	77	66	75	76	86
62	73	70	66	76	65	74	75	85
61	72	70	65	75	65	73	74	84
60	71	69	64	74	64	72	73	83
59	70	68	63	73	63	71	72	82
58	69	67	62	72	62	70	72	80
57	68	66	61	71	61	69	71	79
56	67	66	60	70	61	68	70	78
55	66	65	59	69	60	67	69	77
54	65	64	59	68	59	66	68	76
53	64	63	58	68	58	65	67	75
52	63	62	57	67	58	64	66	74
51	62	62	56	66	57	64	65	73
50	61	61	55	65	56	63	64	71

49	60	60	54	64	55	62	63	70
48	59	59	53	63	55	61	62	69
47	58	59	52	62	54	60	61	68
46	57	58	52	61	53	59	61	67
45	56	57	51	60	52	58	60	66
44	55	56	50	59	51	57	59	65
43	54	55	49	58	51	56	58	64
42	52	55	48	57	50	55	57	63
41	51	54	47	56	49	54	56	61
40	50	53	46	55	48	53	55	60
39	49	52	45	54	48	52	54	59
38	48	51	45	54	47	51	53	58
37	47	51	44	53	46	50	52	57
36	46	50	43	52	45	49	51	56
35	45	49	42	51	44	48	50	55
34	44	48	41	50	44	47	50	54
33	43	47	40	49	43	46	49	53
32	42	47	39	48	42	46	48	51
31	41	46	38	47	41	45	47	50
30	40	45	38	46	41	44	46	49
29	39	44	37	45	40	43	45	48
28	38	44	36	44	39	42	44	47
27	37	43	35	43	38	41	43	46
26	36	42	34	42	38	40	42	45
25	35	41	33	41	37	39	41	44
24	34	40	32	41	36	38	40	42
23	33	40	31	40	35	37	39	41
22	32	39	31	39	34	36	39	40
21	31	38	30	38	34	35	38	39

20	30	37	29	37	33	34	37	38
19	29	36	28	36	32	33	36	37
18	28	36	27	35	31	32	35	36
17	27	35	26	34	31	31	34	35
16	26	34	25	33	30	30	33	34
15	25	33	24	32	29	29	32	32
14	24	33	24	31	28	28	31	31
13	23	32	23	30	28	27	30	30
12	22	31	22	29	27	27	29	29
11	21	30	21	28	26	26	28	28
10	20	29	20	27	25	25	27	27
9	19	29	19	27	24	24	27	26
8	18	28	18	26	24	23	26	25
7	17	27	17	25	23	22	25	23
6	16	26	17	24	22	21	24	22
5	15	25	16	23	21	20	23	21
4	14	25	15	22	21	19	22	20
3	13	24	14	21	20	18	21	19
2	12	23	13	20	19	17	20	18
1	11	22	12	19	18	16	19	17

Table 46: T-Score Conversions for STFB Total  
(College Students and College Graduates)

RAW SCORE	Male College Students	Female College Students	Male College Grads	Female College Grads
100	110	121	119	128
99	109	120	118	127
98	108	119	117	126
97	107	118	116	125
96	106	117	115	124
95	105	116	114	123
94	104	115	113	122
93	103	114	112	121
92	102	113	111	119
91	101	112	110	118
90	101	111	109	117
89	100	110	108	116
88	99	108	107	115
87	98	107	106	114
86	97	106	105	113
85	96	105	104	112
84	95	104	103	111
83	94	103	102	110
82	93	102	101	109
81	92	101	100	108
80	91	100	99	106
79	90	99	98	105
78	89	98	97	104
77	88	97	96	103



76	87	96	95	102
75	86	95	94	101
74	85	94	93	100
73	84	93	92	99
72	83	92	91	98
71	82	91	90	97
70	81	90	89	96
69	80	89	88	95
68	79	88	87	94
67	78	87	86	92
66	77	86	85	91
65	76	85	84	90
64	75	84	83	89
63	74	83	82	88
62	73	82	81	87
61	72	81	80	86
60	71	79	79	85
59	70	78	78	84
58	69	77	77	83
57	68	76	76	82
56	67	75	75	81
55	66	74	74	79
54	65	73	73	78
53	64	72	72	77
52	64	71	71	76
51	63	70	70	75
50	62	69	69	74
49	61	68	68	73
48	60	67	67	72

47	59	66	66	71
46	58	65	65	70
45	57	64	64	69
44	56	63	63	68
43	55	62	62	67
42	54	61	61	65
41	53	60	60	64
40	52	59	59	63
39	51	58	58	62
38	50	57	57	61
37	49	56	56	60
36	48	55	55	59
35	47	54	54	58
34	46	53	53	57
33	45	51	52	56
32	44	50	51	55
31	43	49	50	54
30	42	48	49	52
29	41	47	48	51
28	40	46	47	50
27	39	45	46	49
26	38	44	45	48
25	37	43	44	47
24	36	42	43	46
23	35	41	42	45
22	34	40	41	44
21	33	39	40	43
20	32	38	39	42
19	31	37	38	41

18	30	36	37	40
17	29	35	36	38
16	28	34	35	37
15	27	33	34	36
14	26	32	33	35
13	26	31	32	34
12	25	30	31	33
11	24	29	30	32
10	23	28	29	31
9	22	27	28	30
8	21	26	27	29
7	20	25	26	28
6	19	24	25	27
5	18	22	24	25
4	17	21	23	24
3	16	20	22	23
2	15	19	21	22
1	14	18	20	21

Table 47: T-Score Conversions for Adolescent Males Ages 14 and 15

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		98							
21		94							
20	90	90							
19	87	86							
18	83	82	101		98				
17	80	78	96		93				
16	77	74	91		89		92	93	102
15	74	70	87		85		87	89	98
14	70	66	82		81	81	83	85	95
13	67	62	78		76	77	78	81	91
12	64	58	73		72	73	74	77	87
11	61	54	69		68	69	70	73	84
10	58	50	64		64	65	65	69	80
9	54	46	60		59	61	61	65	77
8	51	42	55	108	55	57	56	62	73
7	48	38	51	98	51	53	52	58	69
6	45	34	46	89	47	49	47	54	66
5	42	30	41	79	42	44	43	50	62
4	38	26	37	70	38	40	38	46	59
3	35	22	32	60	34	36	34	42	55
2	32	18	28	51	30	32	30	38	52
1	29	14	23	41	25	28	25	34	48

Table 48: T-Score Conversions for Adolescent Females Ages 14 and 15

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		82							
21		80							
20	86	77							
19	84	75							
18	81	72	90		93				
17	78	70	87		89				
16	75	67	83		85		89	85	99
15	72	65	80		82		85	82	96
14	69	62	77		78	91	81	79	92
13	66	60	73		74	86	77	76	89
12	63	57	70		71	81	73	73	86
11	61	54	67		67	77	69	70	82
10	58	52	63		63	72	65	67	79
9	55	49	60		59	67	62	64	76
8	52	47	57	101	56	62	58	60	72
7	49	44	53	93	52	57	54	57	69
6	46	42	50	85	48	52	50	54	65
5	43	39	47	77	45	47	46	51	62
4	40	37	43	69	41	43	42	48	59
3	38	34	40	60	37	38	38	45	55
2	35	32	37	52	34	33	34	42	52
1	32	29	33	44	30	28	30	39	49

Table 49: T-Score Conversions for Adolescent Males Ages 16 and 17

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		81							
21		79							
20	81	76							
19	78	73							
18	76	70	91		89				
17	73	68	87		85				
16	70	65	84		81		85	90	102
15	67	62	80		77		81	86	98
14	64	60	76		73	78	77	82	95
13	61	57	72		69	74	72	79	91
12	58	54	68		65	70	68	75	87
11	56	52	64		61	66	64	71	83
10	53	50	60		57	62	60	67	80
9	50	46	56		53	58	55	63	76
8	47	44	53	93	49	54	51	59	72
7	44	41	49	86	45	50	47	55	68
6	41	38	45	78	41	46	43	51	65
5	38	36	41	71	37	42	38	48	61
4	36	33	37	63	33	39	34	44	57
3	33	30	33	56	29	35	30	40	53
2	30	27	29	48	25	31	26	36	50
1	27	25	25	41	21	27	21	32	56

Table 50: T-Score Conversions for Adolescent Females Ages 16 and 17

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		96							
21		93							
20	95	89							
19	92	86							
18	89	82	90		99				
17	86	79	86		95				
16	82	75	83		91		97	96	100
15	79	72	80		87		93	92	97
14	76	69	76		82	87	88	88	93
13	73	65	73		78	83	83	84	90
12	69	62	70		74	78	79	80	86
11	66	58	67		70	74	74	77	83
10	63	55	63		65	69	70	73	79
9	60	51	60		61	64	65	69	76
8	56	48	57	110	57	60	60	65	72
7	53	45	53	101	53	55	56	61	69
6	50	41	50	92	49	51	51	57	65
5	47	38	47	83	44	46	47	54	62
4	43	34	43	74	40	42	42	50	58
3	40	31	40	65	36	37	37	46	54
2	37	27	37	56	32	32	33	42	51
1	34	24	33	47	28	28	28	38	47

Table 51: T-Score Conversions for Adult Males Ages 18 to 29

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		77							
21		75							
20	91	73							
19	88	70							
18	84	68	83		96				
17	81	65	80		92				
16	77	63	77		87		92	82	93
15	74	61	74		83		87	79	90
14	71	58	71		79	78	82	76	87
13	67	56	68		75	74	78	73	84
12	64	53	65		70	70	73	70	81
11	60	51	62		66	66	68	67	78
10	57	49	59		62	62	63	64	75
9	54	46	56		57	58	58	61	72
8	50	44	53	85	53	54	54	58	69
7	47	41	50	79	49	50	49	55	66
6	43	39	47	73	45	46	44	52	63
5	40	37	44	67	40	42	39	49	60
4	37	34	41	60	36	38	34	46	57
3	33	32	38	54	32	34	30	43	54
2	30	29	35	48	28	30	25	40	51
1	26	27	32	42	23	26	20	36	48



Table 52: T-Score Conversions for Adult Females Ages 18 to 29

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		83							
21		81							
20	86	78							
19	83	75							
18	81	73	114		103				
17	78	70	108		99				
16	75	67	103		94		97	91	94
15	73	64	98		90		92	87	91
14	70	62	92		85	86	87	84	88
13	67	59	87		80	81	82	80	85
12	64	56	82		76	77	77	77	82
11	62	54	76		71	72	72	73	78
10	59	51	71		67	67	67	69	75
9	56	48	66		62	63	61	66	72
8	53	45	60	94	58	58	56	62	69
7	51	43	55	87	53	53	51	58	66
6	48	40	50	80	48	48	46	55	63
5	45	37	44	73	44	44	41	51	59
4	43	35	39	67	39	39	36	47	56
3	40	32	34	60	35	34	31	44	53
2	37	29	28	53	30	30	26	40	50
1	34	27	23	46	26	25	21	36	47

Table 53: T-Score Conversions for Adult Males Ages 30 to 44

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		96							
21		92							
20	90	88							
19	87	85							
18	84	81	90		102				
17	82	78	87		98				
16	79	74	84		93		94	98	95
15	76	71	80		89		89	94	91
14	73	67	77		85	91	84	90	88
13	70	64	74		81	87	79	86	84
12	67	60	70		76	82	75	82	81
11	64	57	67		72	77	70	78	77
10	62	53	64		68	72	65	74	74
9	59	50	60		63	68	60	70	70
8	56	46	57	96	59	63	55	66	67
7	53	43	54	88	55	58	51	62	64
6	50	39	50	80	50	53	46	59	60
5	47	35	47	72	46	48	41	55	57
4	44	32	44	64	42	44	36	51	53
3	42	28	40	56	37	39	31	47	50
2	39	25	37	48	33	34	27	43	46
1	36	21	34	40	29	29	22	39	43

Table 54: T-Score Conversions for Adult Females Ages 29 to 44

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		112							
21		108							
20	101	103							
19	97	99							
18	94	94	99		101				
17	90	90	95		97				
16	87	85	91		93		87	117	91
15	83	81	87		89		83	112	88
14	80	76	83		85	99	79	107	85
13	77	72	80		81	93	75	101	81
12	73	67	76		77	87	72	96	78
11	70	63	72		73	81	68	91	75
10	66	58	68		69	76	64	85	72
9	63	54	64		65	70	60	80	69
8	60	49	60	99	61	64	56	75	66
7	56	45	57	91	57	59	53	69	63
6	53	40	53	84	53	53	49	64	60
5	49	36	49	77	48	47	45	58	57
4	46	31	45	70	44	41	41	53	53
3	43	27	41	63	40	36	37	48	50
2	39	22	37	55	36	30	34	42	47
1	36	18	33	48	32	24	30	37	44

Table 55: T-Score Conversions for Male College Students

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		88							
21		85							
20	86	82							
19	83	79							
18	80	76	91		101				
17	77	73	88		97				
16	74	70	84		93		86	91	90
15	71	67	80		88		82	88	87
14	69	63	77		84	95	79	84	84
13	66	60	73		79	89	75	80	81
12	63	57	69		75	84	71	77	78
11	60	54	66		71	78	67	73	75
10	57	51	62		66	73	63	70	72
9	54	48	59		62	67	59	66	70
8	51	45	55	90	57	61	55	62	67
7	48	41	51	84	53	56	51	59	64
6	45	38	48	77	49	50	47	55	61
5	42	35	44	71	44	45	43	52	58
4	39	32	40	64	40	39	39	48	55
3	36	29	37	58	35	34	36	45	52
2	33	26	33	51	31	28	32	41	49
1	31	23	30	45	27	23	28	37	47

Table 56: T-Score Conversions for Female College Students

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		98							
21		95							
20	101	91							
19	97	88							
18	94	84	100		111				
17	90	81	96		106				
16	87	77	92		101		96	102	97
15	84	73	88		96		92	98	93
14	80	70	84		91	93	88	94	90
13	77	66	80		86	88	83	90	86
12	73	63	76		81	83	79	86	83
11	70	59	72		76	78	74	82	79
10	67	56	68		71	73	70	78	76
9	63	52	64		66	68	65	74	73
8	60	48	60	103	61	63	61	70	69
7	56	45	56	95	56	58	56	66	66
6	53	41	52	87	51	53	52	62	62
5	50	38	48	79	46	48	48	58	59
4	46	34	44	71	41	43	43	54	55
3	43	31	40	63	36	38	39	50	52
2	39	27	36	55	31	33	34	46	48
1	36	23	32	47	27	29	30	42	45

Table 57: T-Score Conversions for Male College Graduates

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		96							
21		93							
20	100	90							
19	97	86							
18	93	83	105		103				
17	89	80	101		99				
16	86	76	96		94		99	102	98
15	82	73	92		90		94	98	95
14	78	70	88		86	88	89	94	91
13	74	66	84		82	84	84	90	87
12	71	63	80		78	80	80	86	84
11	67	60	75		74	75	75	82	80
10	63	57	71		70	71	70	78	76
9	60	53	67		66	67	65	74	73
8	56	50	63	107	62	62	61	70	69
7	52	47	59	98	58	58	56	66	65
6	49	43	54	89	54	54	51	62	62
5	45	40	50	81	50	49	46	58	58
4	41	37	46	72	46	45	42	54	54
3	38	33	42	64	42	41	37	50	51
2	34	30	38	55	38	36	32	46	47
1	30	27	33	46	34	32	27	42	44

Table 58: T-Score Conversions for Female College Graduates

RAW SCORE	F1	F2	F3	F4	F5	F6	Neut.	Undes.	Diff. (N-U)
22		100							
21		97							
20	118	93							
19	113	90							
18	109	86	115		106				
17	104	83	110		102				
16	100	80	105		97		112	115	104
15	96	76	100		93		105	110	100
14	91	73	95		89	95	99	105	96
13	87	70	90		85	90	93	101	91
12	82	66	86		80	85	87	96	86
11	78	63	81		76	80	81	91	82
10	73	59	76		72	75	75	87	78
9	69	56	71		68	70	69	82	74
8	65	53	66	116	64	65	63	77	69
7	60	49	61	107	59	60	57	72	65
6	56	46	56	97	55	55	51	68	61
5	51	42	51	87	51	50	45	63	56
4	47	39	46	77	47	45	39	58	52
3	43	36	42	67	42	40	33	53	48
2	38	32	37	57	38	35	27	49	43
1	34	29	32	47	34	30	21	44	39

## APPENDIX B

Internal and External Control Intolerance in the STFB

Data from tests administered at the Ontario Correctional Institute is routinely assembled into computer files for use in research and, at the time of construction of the STFB, there was available a computer file containing the raw MMPI data from 1150 inmate-subjects admitted to the Ontario Correctional Institute for treatment of sexual offenses, alcoholism and drug addiction. When examination of the MMPI items associated with high scores on each of the STFB factor scales revealed that it would be possible to select a group of sixteen MMPI items to represent, in the MMPI, each of the criminality factors measured by the STFB, it was decided to factor these MMPI STFB-equivalent scales, as a group and separately, along with the basic clinical scales and a group of about 80 other MMPI scales which are used routinely at the Ontario Correctional Institute. This analysis was carried out, and the results appear below.

Factor analysis of these new (STFB) MMPI scales along with the basic clinical scales and the Tryon, Stein and Chu scales resulted in a first factor with loadings from those MMPI scales primarily indicative of internal conflict, such as Sc, Pt, the Tryon, Stein and Chu (TSC) Scales VI (Autism), V (Anger), IV (Depression), VII (Anxiety) and III (Distrust), and with the new (STFB) MMPI scales



loading as follows: Scale 5 (0.89), Scale 3 (0.89), Scale 1 (0.83), Scale 2 (0.81), Scale 4 (0.80), and Scale 6 (0.70).

Factor analysis of these new (STFB) MMPI scales along with the other MMPI scales routinely scored at the Ontario Correctional Institute resulted in a second factor with loadings from those MMPI scales primarily indicative of external conflict, such as Wiggins' Hostility, Responsibility - Revised (negative), Wiggins' Authority Conflict, Violence, Conscience (negative) and Self Control (negative), and with the new (STFB) MMPI scales loading as follows: Scale 6 (0.86), Scale 2 (0.81), Scale 1 (0.79), Scale 4 (0.62), Scale 3 (0.59), and Scale 5 (0.54). Scale 5, which was least associated with this "external conflict" factor, actually loaded more heavily (0.67) on a factor defined by lack of Resilience, low Ego Strength, Self-Doubt, Phobias, Health Concerns, and the like.

When the STFB Total (MMPI) scale was included in a factor analysis of all of the MMPI variables, it became the marker variable for the "internal conflict" clustering referred to above, with a communality of 0.97; and when the STFB Total (MMPI) scale was excluded from this analysis, the clustering reflected the "external conflict" grouping referred to above.

One previously-unmentioned aspect of the treatment-research programme from which these criminality studies were drawn involved the desire to utilize a variety of treatment methodologies. This desire, combined with the implication of the analyses reported

above that Scale 5 is less concerned with external conflict than it is with internal conflict (low ego strength and a lack of resilience) persuaded the experimenters<sup>3</sup> to decide to target subjects' "internalization" (e.g., as expressed in introversion, obsessive rumination and the like, in Workshop E for STFB Factor 5), instead of sensitivity to either closeness or rejection. This was done under the title of Enjoying Conformity.

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## APPENDIX C

Accessory Observations Justified by These Studies

In any major series of studies, those involved learn a number of things which may not be specifically germane to the results of the studies themselves. These items of "wisdom" are frequently lost due to the fact that scientific reports are necessarily focused around the specific information they are structured to address. Accordingly, referencing the evidence presented in the text of this Manual, some accessory conclusions, which appear to be justified by the results obtained in these studies, are offered below.

1. Treatment selection for the Factors of Criminality:  
Although each of the treatments performed is a standard part of the psychological treatment repertory (watching the therapists' performances, some might say "repertoire"), the evidence presented seems to show both that the treatments selected, to be effective, need to be relevant to the subject matter they are to address, and that the treatments selected were at least moderately appropriate to the task they were selected to undertake. That is, not only does the information presented indicate that treatment selection can be inappropriate to achieving given therapeutic ends, but also that, using rather conventional psychological wisdom, appropriate treatments can be (and were) selected.

## 2. Validity of the concept of "differential treatment":

Although many psychologists still employ non-specific psychotherapy with their clientele, and although many would still affirm that specifically-directed psychological treatment is neither possible nor appropriate (i.e., it may be seen as "controlling" the client or as "too directive"), it is evident from the foregoing that targeted differential treatment, which modifies one phenomenon and leaves others unchanged, is at least possible. That is, the concept of "differential treatment" is at least a valid one, whether or not it is always appropriate.

## 3. The use of psychometrics to identify "causal" factors:

Granting that it may be appropriate and desirable to modify given psychological/behavioural anomalies or problems, at least in certain clientele, and given the above demonstrations of the possibility of providing "differential treatment", it would seem to be important to be able to identify the underlying phenomena which need to be addressed in treatment. The evidence offered indicates that the STFB is capable of identifying at least some of the "causative" factors underlying criminality and of leading to effective means for treating its identified substrate.

## 4. The need to explore the underlying factors in some depth:

Had those working on the treatment project described above accepted at "face value" the original (labelled "tentative") apparent natures of the STFB factors they would likely have proceeded in

treatment with "the obvious" task of seeking to modify the inmates by (F1) seeking to reduce the conversion to stimulus hunger, perhaps thereby increasing felt guilt, or (F2) seeking to reduce the conversion to hypomania, perhaps thereby increasing inferiority feelings. From the perspective of the foregoing results, it seems likely that, if such treatment initiatives had been used, the results would have failed to address criminality, probably resulting instead in an increase in the intolerance of guilt or inferiority, and thus in increased criminality through enhanced stimulus hunger or hypomania. That is, the findings reported justify considerable caution in interpreting observations too concretely, instead of pursuing the psychological foundations or "dynamics" underlying them before (also) generating simple structure through which to address the issues at stake. Again, one of the lessons learned during this series of studies has been that "things aren't always what they seem", and that, at least in designing treatment, some "depth" of understanding is needed.

##### 5. Interactions of cognitions, motivations and behaviours:

Anything which enhances wisdom can't be all bad. Many psychologists focus almost exclusively on behaviour ("I am a behaviourist"), or on thinking ("I am a cognitive ..."), or on motivations ("I am a dynamic ..."). If there is one thing which seems to underlie most of the findings in these studies, it is that all three elements perpetuate or seed one another (A tip of the hat

to Albert Ellis, who has been saying the same thing for years). Focusing too completely on one element in these studies would likely have led to monolithic non-solutions. For example, focusing on the criminal behaviour alone might have led to pejorative and punitive measures, thus enhancing guilt, inferiority, etc. Focusing on the cognitions alone might well have resulted in the approach employed in the example in the last paragraph. And focusing on motivations alone might well have resulted in psychopathological formulations which, in the case of criminality (e.g., "personality disorder") might well have discouraged any treatment initiatives at all.

6. The structure of criminality as seen through the S.T.F.B.:  
The fact that treatments, which were selected and guided by theory derived from the STFB and the MMPI, worked differentially to effect changes in their targeted criminality factors provides strong evidence that the structure of criminality (at least those aspects of it which are validly estimated by the STFB) is validly represented by the composition, as well as the derived characterization, of the STFB factors. Also, the fact that the Relapse Prevention and Values workshops did not contribute appreciable treatment effects adds even further support to this contention.

7. Large-group, day-long, targeted treatment workshop format:  
The large-group, day-long treatment-workshop approach to treatment

appears from the evidence to be a viable means for treatment and, undertaken in specifiable ways, appears to be capable of both appreciable therapeutic benefit and "differential treatment" application. This perhaps unexpected, even surprising, fact had perviously been demonstrated by the present author and his colleagues in equivalent kinds of treatment for stress management, anger management, conflict management, and relationships and sexuality in an inmate population (Quirk and Reynolds, 1992). This treatment format has now been shown to be effective in the treatment of criminality-related factors.

## APPENDIX D

Standard STFB Test Booklet, Answer Sheet and Templates

The test booklet, answer sheets and scoring templates are subject to copyright restrictions. A sample Test Booklet, 10 sample Answer Sheets, and a set of Scoring Templates are supplied with this Manual. Additional copies of Test Booklets and Answer Sheets can be obtained from the publisher.

The conventions bearing upon access and use of psychological tests apply to this test. That is, purchase, access to and use of the STFB are restricted to those having proper access to psychological tests and their norms. In the usual case, those having proper access to such materials will be psychologists whose licenses to practice psychology are in good standing.

For those not familiar with the conventions for the control of psychological tests, information can be obtained from any local or national psychological association or licensing body. In general, most people will understand the need to reserve information about psychological tests and standards (especially those bearing on the criminal justice process, such as the STFB) when it is pointed out that there is very likely to be considerable bias in any results obtained from administration of the test to an individual possessed of prior knowledge of the test items/materials, methods of scoring and/or normative data.

Information concerning additional research work conducted with



the STFB can be obtained from the author. The author earnestly solicits information from others conducting research with the STFB in order to keep up to date his information about this test. Inquiries and information may be addressed to:<sup>4</sup>

Reg Reynolds, Ph.D.,  
2411 Sovereign Street, Unit 25,  
Oakville, Ontario, CANADA. L6L 1M1

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<sup>4</sup> This address is no longer valid. RMR can be reached through [rmreynolds@cogeco.ca](mailto:rmreynolds@cogeco.ca)

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## APPENDIX A

STFB Scale NORMS and STANDARDST-Score Conversion Tables for the STFB Scales

The T-score conversion tables presented here provide two sets of norms. For T-score conversions for use with most offenders, it is recommended that Tables 45 through 48 be referenced. The T-scores in Tables 45 to 48 are based on normal subjects with less than college-level education. The T-score conversions presented in Tables 49 through 52 are based on normal subjects having at least some college-level education. These latter tables are offered for the convenience of practitioners and researchers not working in the correctional system who may require more advanced norms for their clientele or subjects.

Separate male and female norms are provided, separated into two age groups. It will be recalled that gender, age and educational achievement all affect performance on the STFB.

The T-score conversion tables are employed in the usual manner. The Subject's raw score on each of the STFB scales is located in the body of the appropriate table, and each raw score is converted to its T-score equivalent by reading the T-score, at the same level in the table, as the Subject's new scale score. It will be recalled that T is distributed with a mean of 50 and a standard deviation of 10, and that Mean  $\pm$  1 standard deviation generally includes 68 percent of the measures. Finally, as derived scores,







Table 48: T-Score Conversions for Older Non-College Females (Ages 30+)

T-Scor EQUIV.	<u>STFB</u> Total	<u>STFB</u> <u>Neutl</u>	<u>STFB</u> <u>SUndes</u>	<u>STFB</u> F1	<u>STFB</u> F2	<u>STFB</u> F3	<u>STFB</u> F4	<u>STFB</u> F5	<u>STFB</u> F6
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Table 52: T-Score Conversions for Older College Level Females (Ages 30+)

T-Scor EQUIV.	<u>STFB</u> Total	<u>STFB</u> <u>Neutl</u>	<u>STFB</u> <u>SUndes</u>	<u>STFB</u> F1	<u>STFB</u> F2	<u>STFB</u> F3	<u>STFB</u> F4	<u>STFB</u> F5	<u>STFB</u> F6
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