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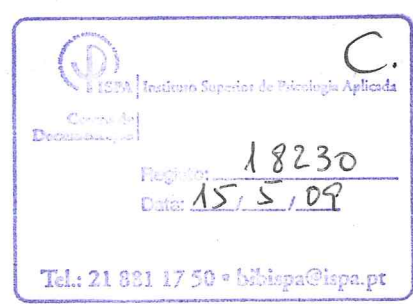
DISORDERS OF EMOTIONAL CONTAINMENT AND THEIR SOMATIC CORRELATES.

THE PROTOMENTAL NATURE OF ADDICTIONS, SELF-HARM AND NON-COMMUNICABLE DISEASES

TES
TORR. 1

Nuno Torres

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Centre for Psychoanalytic Studies
University of Essex**



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Summary

This study is concerned with the emotional nature of determined forms of illness which seem to be largely determined by stressful social conditions rather than as a consequence of primarily biologic and somatic factors, and have been identified with labels such as “diseases of comfort”, “lifestyle related diseases”, “degenerative causes of death”. The models we have for understanding the mechanisms by which human subjects are affected by social environment stresses are still tentative, although some of the diversity of the psychosocial factors is reasonably well established. This thesis is an exploration of the theories of Wilfred Bion, which offer an under-researched approach to the nature and origin of such conditions. I have chosen three of these conditions as the subject of this study – drug and alcohol dependence, self-harming behaviours and a certain set of psychosomatic conditions – to test whether predictions formulated from the hypotheses are supported by a set of empirical measures. The hypotheses are that a determined type of emotional containment mechanism can affect certain types of health outcomes via disturbing the natural expression of primitive emotional systems embedded in the human organism. These primitive emotional systems are known as basic assumptions or valencies and are of 3 main types: dependence, fight-flight and pairing

A mixed research methodology combining qualitative and quantitative methods was used: A total of 377 participants were assessed, 65,5% of whom were suffering clinical conditions: psychosomatic conditions, addiction disorders and suicide attempts, while the rest of the subjects were non-clinical. The qualitative section comprised life-story interviews. In the quantitative section, two self-administered questionnaire instruments were used: 1) the Work-Group-Function Scales-1.02 to measure valencies, and 2) the Toronto Alexithymia Scale-20 to measure a cognitive deficit of emotional containment. Results are compatible with the hypothesis that the disorders under study are associated with similar emotional containment mechanisms, comprising of two main components in response to stressful interpersonal events: 1) A deficit in translating raw affects into words and symbolic elements 2) Oscillation between fragmented and rigid modes of emotional containment.

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*As soon as Tao creates order, it becomes nameable.
When it once has a name, men will know how to rest in it.
Knowing how to rest in it, they will run no risk of harm.*

Lao Tzu



*Our difficulty arises from the fact that
although the organism is a unity
we see it as having psychic and somatic aspects*

Flanders Dunbar, 1935 (xviii-xix)

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1.Introduction.

Between 1948 and 1952 Wilfred Bion published a series of papers that presented the first sketches of a theory about the influence of social dynamics on emotions and health¹.

These considerations proposed that a determined type of social relations mechanisms could affect certain types of health outcomes by disturbing the natural expression of primitive emotional systems that are embedded in the human organism. Bion's initial hypothesis was roughly the following: the *inhibition* of primitive emotional systems by a sophisticated and rational area of the mind, through what he called "emotional suppression", contributed to the disturbance of somatic systems that were part of these primitive emotional systems. He defined these somatic-emotional systems as being *protomental*, in the sense that they would represent physiological events that were the basis for mental experiences (i.e. psycho-physiological events).

During the rest of the 20th century, and independently of these ideas, a series of surveys investigating a wide range of determinants of health outcomes and mortality have consistently uncovered associations between the type of social relationships of individuals, and several causes of mortality and ill-health (see Ryff and Singer, 2001). A new approach, based on the multidisciplinary integration of studies on social relationships and emotional phenomena, is trying to understand the possible links between social relationships and health outcomes via emotional dynamics.

¹ Along with a group of other psychoanalytic oriented colleagues such as Rickman, (1957), Wittkower (1949) and Halliday (1948) and others linked to the so called "Tavistock group" that was dedicated to the development of "Psychological Medicine".

The aim of this thesis is to apply Bion's theories about the psychosocial processing of raw emotional experiences to understand some of the possible links between social phenomena and health, via what he defined as a protomental area between the body and the mind.

This endeavour started when I was doing clinical psychology training with heroin and cocaine drug addicts. The key difficulties these kind of patients faced was sticking to a psychotherapeutic program because they had the deep-seated idea (shared by medical doctors) that their problem was a *physical* addiction, and also that the compulsion to use drugs was determined by social chaos in their lives.

Simultaneously to the training, I was undertaking my undergraduate dissertation about Donald Meltzer (1986) and Wilfred Bion's (1948-1952 [1961]) theories on the functioning of groups. By the end of my research I had formulated the idea that drug addiction was not a purely mental disorder, nor was it a purely *physiological* (medical) disorder, rather, it seemed to lie somewhere in-between these two areas. Furthermore it seemed largely determined by the bad quality of social relationships of the subjects. It became rather clear to me that two important determining factors of the addictive disease were a) the difficulty of being *emotionally dependent* on others (starting with the family) and b) the physiologic repercussions of this emotional deficit on the nervous system's sensitivity to psychoactive chemical substances.

Bion's (1948-1952 [1961]) protomental theory of the socio-emotional basic assumptions (dependence, fight-flight and pairing) provided me with a good model to accommodate this bio-psycho-social complexity. My use of the model could then be translated to the following reasoning:

The addicted person suppresses his needs for emotional dependence, which are in part motivated by family dysfunction and fragmentation, distrust, abuse etc, and this

emotional suppression has physiological consequences that determine a somatic addiction to drugs; the pleasurable feelings and comfort sensations given by the drug seem to be a substitution for the pleasurable feelings and comfort sensations other people take in their family and friendships.

I decided to take the research further in to a PhD, and to systematically formulate hypotheses that included also the other two primitive socio-emotional systems proposed by Bion: *Pairing* and *Fight-flight*.

My starting hypotheses were quite linear: certain social pressures (be it external and/or internalised in the mind) would force individuals to suppress their emotional experience and expression in determined areas (dependence, aggressiveness-fear, and sexuality), and this forceful inhibition would lead to various forms of psychosomatic alterations of the body (which Bion defined as *protomental*) and that would end up in chronic health problems.

However, in the course of an extensive literature review, it became very apparent that the emotional life of many addicted and psychosomatic patients was being described as if there were two opposing poles in the experienced intensity of emotions: extreme *inhibition-suppression* and also extreme *expression in the form of emotional flooding* as it were. It seemed as if emotional suppression was a part of a broader sequence, and a response to the experience of an extreme-overwhelming intensity wherein certain emotions that had to be severely restrained.

In order to understand this apparently non-linear, oscillatory and paradoxical sequence of emotional processes, I was driven to the ideas of emotional/affective deregulation and disorders of affect regulation (Grotstein, 1991a, 1991b, 1991c; Taylor et al, 1997). This is because affective *de*-regulation can manifest contradictorily as both excess *and* a *shortage* of emotional experience and expression. Furthermore, a

psychoanalytic area of research focused on the communicatory styles of psychosomatic patients had been developing the notion of *Alexythimia*, a deficit in the symbolic representation of emotional states that are apparently linked to affective deregulation.

To further complicate things, it became clear to me that the notions of emotional/affective experiences have been viewed in psychoanalysis and psychology as *two different* dimensions, not always explicitly stated by the authors:

- A *quantitative-energetic* dimension (e.g. Freud's notions of psychic energy, quantum of affect and cathexis), linked to a model of discharge, catharsis and abreaction in order to maintain an optimal average level of arousal (e.g. Freud's constancy principle)

- And a *cognitive, informational, and symbolical* dimension, linked to a model of symbolic meaning and verbal labelling of emotional experiences (e.g. Freud's theory of anxiety as an affective *signal* to the ego).

These two dimensions were in my view integrated in Bion's "theory of thinking" with its concepts of beta elements, alpha elements and alpha function. I included these notions in the theoretical model in order to complement Bion's earlier notions of socio-emotional dynamics and emotional suppression.

These two dimensions (quantitative and cognitive) seemed also to correspond to the two great types of *neurosis* described by Freud: *actual neuroses* (determined by an inhibition of quantitative affect discharge – dammed up affects and strangulated affects) and *psychoneurosis* (determined by unconscious cognitive conflicts at the level of symbolical representations of affects).

In the course of the literature review, the notion of *emotional containment* elaborated by Robert Hinshelwood (1987, 1989b, 1994, 2003) from Bion's theory of thinking, seemed to me quite appropriate as an umbrella-construct to unify these

different notions. It included the notion of alternation between two extreme *quantitative* poles of emotional expression: *rigidity* and *fragmentation*, and it articulated the cognitive and energetic dimensions by proposing that cognitive deficits in symbolic and verbal elaboration of emotional states are as a result of the incapacity for adequate quantitative emotional containment.

My hypotheses were then restated in terms of emotional-containment/deregulation, and I conceptualised *emotional suppression* as a part of a process of deficits in healthy emotional containment with *both* energetic-quantitative and cognitive-qualitative components.

I added a conceptual hypothesis, which accounted for the supposed relation between the energetic-quantitative and the cognitive-qualitative components in the theoretical construct of emotional containment, that is: both the excessive intensity and the excessive inhibition of emotional experiences and expression were related to a cognitive deficit in the symbolic translation of emotional states (alexithymia)

My thesis can then be stated in the following parameters:

a) *Conceptual hypothesis*: Deficits in emotional containment manifested as both deregulation in the *quantitative* domain (experienced intensity of emotions) and as deficits in the symbolic representation of emotions in the *cognitive* domain (experienced meaning of the emotional experiences).

b) *Clinical hypotheses*: deficits in containment of the specific different primitive emotional systems proposed by Bion are associated to different categories of physical and mental health problems:

b.1) deficits in containment of the dependence emotional system are associated with drug dependence.

b.2) deficits in containment of the fight-flight emotional system are associated with stress related diseases (also called psychosomatic).

b.3) deficits in containment of the pairing emotional system are associated with self-destructive behaviour (suicidal behaviour).

In order to measure the two components of emotional containment deficits, a) the cognitive deficit and the b) quantitative regulation deficit, I resorted to the theoretical notions and psychometric operational instruments of a) Alexthymia and of b) Valency for basic emotional assumptions.

My initial project at the outset of the PhD research consisted in using quantitative hypothesis testing in the psychometric tradition to compare clinical groups of patients suffering from addiction, psychosomatic diseases and suicidal behaviour with a normal non-clinical group. However, during discussions with my peers and in supervisory boards in the first stages of the doctoral research, I realised that because empirical approaches to Bion's theory of the protomental system and emotional containment were an unexplored area of research it was important to incorporate a more phenomenological and descriptive approach to explore the subjects' own narratives on their emotional experiences in social interaction; in other words a "qualitative research design" in order to provide an in-depth understanding of the clinical conditions under study.

In the end, I combined quantitative and qualitative in a "multiple design" (Robson, 2002), as will be further explained below.

Structure of the thesis

Chapter 1 describes the evolution of psychodynamic notions of deficits in socio-emotional processing and their bodily correlates. It discusses Bion's classification of socio-emotional phenomena in three valencies (emotional basic systems): Dependence, Pairing, Flight/Fight; and his hypothesis that emotional suppression in each of these should be associated with three different types of protomental symptoms. Chapter 2 focuses on the notions of protomental valencies and beta elements as raw emotional states, and on recent developments that expand Bion's original notions. Chapter 3 addresses notions of deficient strategies for dealing with raw emotions a) fragmented and b) rigid, in contrast to the more adaptive *flexible* containing. It addresses in particular the mechanism of *emotional suppression*. Chapter 4 explores the hypotheses that addictions, suicidal behaviour and psychosomatic diseases can be defined as protomental disorders, related to emotional containment deficits in the three different basic socio-emotional systems, or valencies (Dependence, Fight-flight, Pairing).

A mixed research methodology combining qualitative and quantitative methods was used: A total of 377 participants were assessed, 65,5% of whom were suffering from clinical conditions: psychosomatic conditions, addiction disorders and suicidal behaviour, while the rest of the subjects were non-clinical individuals. The qualitative section comprised semi-structured life-story interviews. In the quantitative section, two self-administered questionnaire instruments were used: 1) the WGFS-1.02 to measure the intensity of valencies, and 2) questionnaire of alexithymia TAS-20 to measure a cognitive deficit of emotional containment.

In the rest of this introductory chapter I will describe how psychodynamic notions about emotional phenomena, in particular those of Bion and his followers', and also

very recent neuro-psychoanalytic developments, can contribute to the understanding of the emotional factors involved in the determination of the cluster of health problems in question.

Emotions, social relations and health

According to the World Health Organization (WHO, 2000), the leading cause of illness and mortality in the contemporary industrialised world is a cluster of chronic health problems (including *mental* health) comprising of non-communicable disease (also considered as psychosomatic), substance dependence (both illegal and legal), and injury as result of violence/accidents (including suicide attempts). It is estimated that by 2020, over 70% of the global economic burden of disease will be caused by this cluster of pathologies, for which many of the countries “have neither the resources, personnel, nor the health service infrastructure required to respond adequately”². (WHO, 2000).

Some authors labelled this cluster of health problems as “diseases of comfort” (Choi et al, 2005), “lifestyle related diseases” (Ackland et al; 2003) and “degenerative causes of death” (Olshansky and Ault, 1986)³. Systematic shifts in the patterns for causes of death have shown a substitution for deaths that were previously caused by infectious and parasitic diseases with this cluster of disorders, and have led to the development of the notion of “epidemiological transition” (Salomon and Murray, 2002)⁴.

² According to the WHO, non-communicable diseases “present the biggest challenge to public health in the WHO European Region, now and for the foreseeable future. In 2002, they caused 86% of deaths in the Region and 77% of the disease. Non-communicable diseases also threaten economic and social development. Of all WHO regions, the European Region is the most affected”.

³ Choi et al (2005) Include in the list of “diseases of comfort” and their immediate and underlying causes the following health problems: global chronic disease epidemic of heart diseases, cancers, respiratory diseases, mental disorders, diabetes, musculoskeletal disorders, obesity, imbalanced diet, smoking and excessive alcohol.

⁴ Diseases such as diphtheria, infant diarrhoea, smallpox, and scarlet fever which were among the ten major causes of death in New York city in 1885 had been overstepped by heart disease, apoplexy, deaths by violence and cancer by the early 1930’s (Dunbar, 1935, p. xxxiii).

Although ostensibly unconnected, these health problems are connected by virtue of the fact that they appear to be connected with forms of human behaviour characteristic of modern, industrialised, life-styles. The prevalence of these problems has been linked in various complex ways to socio-economic status and the education levels of families, communities and populations.

However, since the early 20th century it has been proposed that they are influenced by *affective/emotional* states⁵ having complex relations with various areas of modern human social organization and life-course determinants⁶ (e.g. Dunbar, 1935; Halliday, 1948; Bion, 1948; Choi et al, 2005). As already mentioned, in the last twenty years epidemiological studies have accumulated evidence pointing to connections between emotional interaction with significant others and degree of risk for various of these diseases (e.g. Ryff and Singer, 2001).

An intricate bio-psycho-social problem

These complex phenomena call traditional medical and psychological diagnoses and treatments in to question. Even as recently as 1985, an article on the epidemiology of non-infectious diseases stated “if you take a book of medicine [...] you will still find, despite all our aetiological research, that most are still of unknown aetiology” (Rose, 1985, p.34). Today, it is clear that not only are these disorders caused by multiple factors but also that the values of their etiological equations are derived from multiple levels: biological, psychological and social.

⁵ Most authors use the terms *emotion* and *affect* as synonyms; I used it here in a composite manner and in the rest of the text the terms will be used interchangeably.

⁶ Growing evidence was available as to the central role of emotional factors in these non-infectious diseases. This was so much the case that in 1934 the Public Health Relations Committee of the New York Academy of Medicine founded the “Committee on Emotions and Health” (idem, p. xxi). According to Dunbar: “The findings of research workers in many fields have combined to modify fundamentally not only our concept of psyche and soma but also our concept of disease” (Dunbar, 1935, p.xiii)

For instance, in an extensive review it was concluded that drug and alcohol abuse are determined by a variety of intra-personal and contextual factors: cultural norms, economic deprivation, neighbourhood disorganization, peer group rejection, family conflict, impulse control, neuro-chemical functioning and genetic differences (Hawkins et al, 1992). Similar multiple bio-psycho-social determinants such as demographics, lifestyles and attitudes, are consistently reported for chronic non-communicable diseases such as cardiovascular and chronic degenerative diseases (e.g. Crews and Gerber, 1994). The same applies for violent behaviour (e.g. Goldstein, 1994).

This research area has been taking shape slowly, never in a linear and clear evolution, and has depended on advances in several fields of research and on challenging several dominant epistemological assumptions.

1) With Freud's discoveries on hysteria, following the previous work on the psychological determinants of hysterical disorders by Charcot, Janet and others (see Sulloway, 1979), the materialistic assumptions according to which all disease originated in the physical body and that mental disease was a malfunction of the nervous system alone was strongly questioned. Freud developed the idea that mental conflicts could lead to bodily dysfunction.

At the same time, early 20th century advances in physiology by Walter Cannon uncovered the connection between primitive emotional states aroused by interaction with the environment and certain stressful bodily changes. These two areas of research gave rise to the notion of psychosomatic diseases⁷ (Dunbar, 1935).

2) The research programmes on psychosomatic diseases allowed some to conclude two things about chronic psychosomatic changes: 1) the psychoanalytic model

⁷ According to Dunbar (1935), both physiology and psychoanalysis were taking the lead in providing scientific studies of the relationship between organism and environment, or of the "boundary between the ego and the outer world" (p.58).

of psychogenic illness and psychoneurosis is inadequate to explain them 2) The social context is an important determinant.

3) The development of multidisciplinary research on emotions has shown that all emotional states are composed of intricate and combined biological, social and psychological components, and hence it can contribute to understand the link between emotional factors and social determinants in certain somatic alterations and disease.

4) Psychoanalytic work on deficits of emotional awareness and verbalization (i.e. alexithymia) suggested that psychosomatic conditions, addiction and self-harmful violence are associated with similar emotional processing deficits

5) Wilfred Bion's research on groups during the 1940's and 1950's, a development of Trotter, Rickman and other's ideas (see Torres, 2003a), suggested that man is inescapably driven to social relations, and that organized social pressures could harm basic human emotional needs. This notion allowed him to look for an explanation of the effect of social dynamics on psychosomatic diseases.

6) Bion's psychoanalytic work on individual, psychotic patients and the work on deficits of emotional containment have deepened the understanding of the processes for dealing with raw emotional states aroused by group life.

Psychoanalysis and the inadequacy of dualism and reductionism

Following the philosophical dualism and reductionism of the past centuries, the body became the province of physicalist medicine, and the mind a subject suitable for theologians, philosophers and later, psychologists.

In medicine the "biomedical model" was the dominant one during the 20th century; the biomedical model assumes disease to be fully accounted for by deviations

from the norm of measurable biological (somatic) variables⁸ (Engel, 1977). It was supported by the rise of pathoanatomy, cellular pathology, bacteriology and biochemistry⁹.

However, certain somatic health problems associated with *functional* nervous disorders (or *neurosis*) were never explained by mechanistic medicine and suggested psychological and social aetiologies¹⁰ (e.g. Sulloway, 1979). In order to explain these “mysterious” illnesses, researchers had to develop models that acknowledged both a mind in its own right and a *continuum* between body and mind: psychophysical *interactionist* or psychophysical *parallelist* models (Popper, 1977). Freud’s theoretical models of hysteria (Sulloway, 1979), as well as later models of psychosomatic diseases (Wisdom, 1952) were among the most prominent of such *psychophysical* models.

With Freud the theory of “psychogenic” disease was born (Freud, 1910; Martin, 1960; p. 71-72), according to which unsolvable conflicts of ideas can lead to bodily symptoms. This notion had its origin in Freud’s work on hysterical paralysis (Freud, 1893), in which he discovered that these inexplicable paralysees were not caused by any lesion of the nervous tissue of the corresponding region of the cortex. But were solely

⁸ On philosophical grounds, this tendency of thinking belongs to the *materialist* doctrine and according to Karl Popper (1977, p.52) is grounded on the dogmatic assumption that the physical world is self contained or closed; that the physical processes can and must be explained and understood entirely in terms of physical theories. According to Popper, the Cartesian splitting of the world in two substances - mind (*res-cogitans*) and body (*res-extensa*) - led to the traditional opposition of materialism and idealism. After Descartes, and in attempting to overcome the philosophical difficulties of how could two different substances interact, the two types of reductionism have been dominant (Popper, 1977, p.181): 1) for the materialist or physicalist, only biological events have a real existence, and what we call Mind is nothing but epiphenomena of the materialistic processes in the brain. On the contrary, for the *idealist* or *rationalist*, human nature is solely explained by cognitive mental operations and social structures, while biology is completely irrelevant.

⁹ New principles of medicine defined in terms of abnormalities of anatomy started to grow out of the 16th century anatomists’ discoveries that in disease the normal anatomical forms and connections of organs in the body were distorted and damaged (Sternberg, 2001). With the discovery of the role of microorganisms the germ theory of disease was introduced (Cassel, 1964), which strengthened even more the assumption that physical disease has exclusively mechanistic causes.

¹⁰ Such as neuralgias and anaesthesias, contractures and paralysis, epileptoid convulsions, tics, and various forms of disturbance of vision (Freud, 1895, p.4)

the result of a psychological alteration by which certain associative paths of ideas were turned unconscious¹¹.

The notion of *psychogenic* allowed understanding psychoneurotic *functional* symptoms as a symbolic body language “used” as a way of encrypting disturbing ideas and memories that had been defensively turned unconscious. These notions led to a prominent psychoanalytic oriented research program on the so-called *psychosomatic diseases* (e.g. Brown, 2000).

However the idea of psychogenic symptoms did not prove adequate in the long run to explain and treat the *actual organic changes* of chronic non-communicable diseases, which did not show having any symbolic nature or unconscious purpose, and were resilient to psychoanalytical treatment (Fenichel, 1946).

In the field of psychosomatic research this situation led to “disillusionment with psychoanalysis and its failure to unravel the mysteries of mind-body relationships” (Totman, 1979, p.107). I will propose later in this chapter that Freud’s notions of *actual neurosis*, and its “somatic equivalents of anxiety” can shed some light into the psychosomatic problem and chronic non-communicable health symptoms.

The failure of the initial psychoanalytical approach to psychosomatic symptoms contributed to the re-emergence of physicalist biomedical models from the 1960’s onwards. These were fuelled by a new set of compelling discoveries on the biomolecular functioning of nervous, immunological and endocrine systems of the body (Sternberg, 2001). Unfortunately, these reductionist models were adopted at the expense of multi-factor models that included psychological and social factors.

¹¹ This alteration was “an abolition of the associative accessibility of the conception” of the organ or function in question. So instead of being caused by a cut in the nervous material substratum that allows electrical association between the brain and the peripheral tissue, the paralysis actually followed a “cut” in the train of conscious ideational association between the *idea* of the organ and the rest of the ideas of the conscious ego” (idem, pp.170-172).

The advances in the study of emotional phenomena have been redressing this state of affairs: a vast amount of studies have been pointing out the central role of *emotional containment and regulation* deficits such as emotional/affective over inhibition and over arousal, in the causal chain of chronic disorders such as non-communicable diseases, addictions and accidents/self-harm (e.g. Vaillant, 1979, Taylor, 1987, Turp, 2003).

Emotions and emotional regulation

Nowadays it is well established that emotional states are intricate patterns of responses that include three components: a) *physiological*, comprising neuro-chemical responses and associated bodily changes, b) *social/communicative/expressive*, comprising postures, body expressions, tone of voice, that are automatically expressed outwards, and c) *psychological*, comprising internally felt experiences, emotional awareness and meaningful linking with cognitions¹² (e.g. Damasio, 2000).

In the psychodynamic point of view, a new perspective was formed, which is distinct from the *psychogenic* notion. Emotional containment/regulation problems have been distinguished from unconscious neurotic conflicts, in a way that will be addressed further below, and were labelled as “disorders of affect regulation”¹³ (e.g. Taylor 1987,

¹² For instance, fear and anger can be caused by objective external threats as well as by internal ideas, fantasies and dreams, and be part of a unique psychological experience for each person. In addition they are correlated with the release of neurotransmitters and hormones in the bloodstream, which alter bodily states (e.g. Panksepp, 2000; Schmidt and Schulkin, 1999). They also make the head muscles contract in a way that is universally understood to mean recognisable fearful or angry expressions (Ekman, 1992); additionally these expressions can automatically trigger the same emotions on others (Cacioppo et al. 1994), and it is apparently for this reason they can spread quite rapidly in the social field (e.g. Freud, 1921; Bion 1948-52[1961]). Also, the frequency and intensity with which one experiences fear and anger is correlated with one's social status and social support (e.g. Schmidt and Schulkin, 1999; Carter and Keverne; 2002). Finally, the physiological, bodily and behavioural aspects of many emotions are observable in other animal species, which makes it very plausible that are, in part, genetically encoded and have evolved by natural selection (e.g. Panksepp, 1998; De Catanzaro, 1999).

¹³ The intensity and duration of emotional states can be due to the presence/absence of objective external stimuli, but also due to subjective reasons such as an exaggeration/understatement of the appraisal of threats, and even to differences and chronic alteration of the nervous system's physiology during early development (e.g. Schmidt and Schulkin, 1999). In other words, people can experience too much or too less of a determined emotional state than would be adequate for an adaptive functioning, in which case it can be said that there is a problem in the *affective regulation* or *emotional containment*.

Taylor et al, 1997). In Freudian terms, these disorders should be placed in the category of *actual neurosis* and in the context of a *psychic deficit* model, and not in the category of *psychoneurosis* in the context of the *internal conflict model* (e.g. McDougall, 1989; Grotstein, 1991a, 1991b, 1999; Taylor et al, 1997).

Emotional stresses and strains to the body

Since the works of physiologists such as Walter Cannon, Hans Selye, and followers, it has been known that emotional deregulation affect the body directly, and can even lead to death (Cannon, 1942).

Cannon's research in the early 20th century demonstrated that the *automatic emotional reaction* to perceived threats, the so called *fight-flight reaction*, was physiologically the same as the reaction to somatic challenges on bodily *homeostasis*, such as low oxygen or extreme temperatures¹⁴. The disturbances of homeostasis were called *stresses*, and if prolonged they could represent too great a strain and lead to alteration of the *internal milieu*¹⁵ and eventually to collapse (Cannon, 1935).

Disease proneness

The flight or fight response, which is also named "acute stress response", was later recognized by Hans Selye as the first stage of the *general adaptation syndrome*, or "stress syndrome"; Selye observed that people who had various illnesses seemed to share a quality of "sickness" that was highly similar (e.g Sternberg, 2001). This quality has been called "disease proneness" and some have argued that psychosocial factors

¹⁴ The mechanism of *homeostasis* is the process by which the body strives to maintain a stable internal environment (such as glucose concentrations and body temperature) essential to life through the interaction of the sympathetic nervous systems and the adrenal glands (Cannon, 1932).

¹⁵"Internal Milieu is a concept used by the physiologist Claude Bernard, meaning the "blood and tissue fluids, which provided a steady environment for the cells composing the body and made it independent of the vagaries of the external environment. The constancy of the internal milieu was largely maintained through the regulatory functions of the nervous system" Wiener (1973).

play a role in disease proneness to all diseases (e.g. Vaillant, 1979, p.732; Ryff and Singer, 2001)

The general neurochemistry of the stress syndrome or general adaptation syndrome is now well understood: the body's initial reaction to emotional stress is the release of several hormones, including the glucocorticoid hormones: cortisol and cortisone. (Carlson, 1994). Glucocorticoids have potent immunosuppressive¹⁶ properties and increase blood pressure and blood sugar, consequently if the state of stress is prolonged it can precipitate health problems (including mental health) due to the physiological deregulation of several body systems, including the immune system and the nervous systems (Taylor, 1987, p.39).

The pioneering work of the medically trained psychoanalyst W.R. Bion has produced some very important though unexplored ideas on emotional containment in an integrated bio-psycho-social approach. As far as I am aware, Bion's speculation on emotional suppression and the protomental were not systematically researched in the field of health.

I will now present some vicissitudes on the research that exists regarding the link between emotional factors and psychosomatic illness, and after that I will try to show how Bion's ideas can be of use to clarify some aspects of this research.

Vicissitudes of the research on psychosomatic illness

Psychoanalytic research on psychosomatic disease traditionally followed the model of the *psychoneurosis* to the detriment of the model of the *actual neurosis*, and hence focused on the internal mental conflicts of the individual mind and not on

¹⁶ i.e. an agent capable of suppressing the immune system response.

disruptive features of socio-emotional dynamics and its physiological correlates (see Taylor et al, 1997, for an extensive review on this topic).

However, the results of this line of research were disappointing (e.g. Taylor, 1987), and by the time Bion published his ideas about the proto-mental in book format (in 1961) the psychoanalytic inspired psychosomatic research was in steady decline (Brown, 2000).

The recent comprehensive reviews of psychoanalytic research on psychosomatic diseases point out that the early methodological mistakes of this research program were that it followed to precisely the model of psychoneurosis and of psychogenic symptoms and looked for patterns of internal ideational conflict in the minds of the patients (e.g. Nemiah, 1987).

Stressful Life events

The research on *stressful life events* and psychosomatic diseases followed the physiological advances in stress research and the disillusionment with the psychoanalytic program of research and treatment (Taylor, 1987, p.39; Brown, 2000). This research is based on the assumption that psychosomatic disease is a function of the number of events that cause *stress* and by so doing disrupts physiologic homeostasis.

However, life-events research has also been much criticised, both for methodological flaws and conceptual ones (Schroeder and Costa, 1984; Taylor, 1987, p.41). Conceptually, it did not initially take in to account the subjective significance of the life events, and relied on the assumption of a rather linear association between objective threats to the organism, stress, and disease proneness (Totman, 1979, p,133). In other words, the different ways in which people deal with potentially emotionally stressful life-events was not sufficiently taken into account.

In a second stage, the variability among individuals in coping with a stressful life event became a major challenge to this line of research (Satcher, 1999). But for the most part, evidence linking individual characteristics, including personality patterns, with disease was also very disappointing (Totman, 1979 p.134).

The more sophisticated areas of the mind, such as the personality and psychoneurotic defences, did not reveal much about the psychological and emotional factors implicated in psychosomatic diseases. However, it was uncovered that phenomena occurring in the *social* dimension of life and strongly influenced by factors such as adjustment to a new job or social role, social mobility, status incongruity, rapidly changing social environment and disruption of strong social cohesion were highly related with individual differences in disease-proneness¹⁷ (Totman, 1979; Ryff and Singer, 2001).

The more recent literature on life-events is consistent in that individual differences in responding to stress are *mediated and modulated by social support*¹⁸, which means that among people experiencing the same threatening events the ones with lower social support and weaker social networks tend to be the ones more at risk of having poorer health outcomes (e.g. Kivimäki et al, 2002; Murberg, 2004).

My view of these results is that we must look to explain part of the effect of stressful events on health status by understanding the putative ability of the individuals to relate to others in an emotionally supportive way, independently of any measured personality/individual differences in facing stressful events. I will propose below that Bion addressed this social ability in his notion of valency for basic assumptions.

¹⁷ For instance, *Type-A behaviour*, which involves characteristics such as intense striving for social achievement, competitiveness and over commitment to work, initially described by Friedman and Rosenman (1959), was found to be associated with heart disease as well as with lung cancer, rheumatoid arthritis, lupus, and disease-proneness in general (Totman, 1979).

¹⁸ I am using the statistical notions of *mediation* and *modulation* as an indirect influence of a causal variable (threatening life events) *via* a second causal variable (in this case social support) influencing a third one (disease proneness).

Integrating social and psychological factors via emotional containment and regulation

In this way, the most recent developments in life-events research are leading to questions and problems that have been addressed by authors like Bion and Halliday,, which I will address below¹⁹.

In an extensive critical review of several decades of psychosomatic research, Richard Totman (1979, p. 114) proposed that the essential determining factors might be linked with states that render the subject unable to relate to the group in a meaningful way. In this sense Totman approaches the problem via what Bion called the *valency* (or *groupishness* as a synonym), i.e. the primal, basic human tendency to share a group's emotional states.

Deficits in emotional Regulation

As I mentioned before, some authors have proposed that there exist disorders of affective regulation in their own right (Taylor, 1987, 1997; Grotstein, 1991b; Schore, 2003) which are to be explained by mechanisms that are more primary and basic than the psychoneurotic defences or even the personality structure. They seem to spring from deficits both in the quantitative regulation of emotional excitation itself as well as in the capacity of transforming raw emotional experiences into representations.

¹⁹ The high-risk individual was described in different studies as: alienated from society, suffering from status incongruity, role ambiguity, cultural mobility, lacking satisfaction with social contacts, facing unresolved role conflict, needing conform to new expectations with which one is unfamiliar, belonging to incongruous social circles (e.g. discrepancy in status between a person's parents or an individual and his/her spouse). His social environment has been characterized as unpredictable, lacking social cohesion, not providing social support (Totman, 1979).

These recent proposals follow the developments of the last three decades, in which problems of emotional containment and regulation, difficulties in emotional awareness and verbalization, in conjunction with social dynamics, came to the forefront.

During the 1960's and the 1970's psychoanalytic inspired research identified a syndrome known as *alexithymia*, characterised by deficits in emotional awareness, expression and regulation, a syndrome which was very common in patients with chronic psychosomatic, addictive, or post-traumatic conditions.

Alexithymia

The term was introduced by Sifneos in 1967 and has been defined as “A cognitive style and affective disturbance... characterized by poorly differentiated and poorly verbalized affects that do not serve the signal function adequately” (Moore and Fine, 1990, p.11) and as “difficulty in describing or recognising one's own emotions, a limited fantasy life, and general constriction in the affective life” (Edgerton and Campbell, 1994, p.6).

I propose that the concept of alexithymia can be integrated with Bion's ideas of emotional suppression and protomental symptoms, in combination with his later theories of alpha function, failure of alpha function and proliferation of beta elements. I propose also that some of Robert Hinshelwood's elaborations on the flexibility of emotional containment (rigid, flexible or fragmented containment) and his notion of reflective space can also be integrated with the research on alexithymia. I will return to these issues in the next chapters.

Alexithymia and disease

The associations between alexithymia and psychosomatic disorders, addiction to substances, impulsiveness, acting-out, and self-harm, have been fairly well studied and have been generally confirmed by several recent clinical and quantitative studies (e.g. McDougall; 1989; Krystal, 1988; Taylor, 1987; Taylor et al, 1997, etc).

And, just as happened with life-events research, recent research on alexithymia also started to uncover the importance of the quality of close emotional relations and social support and the lack of it in alexithymia and in psychosomatic disease (Lumley et al, 1996; Posse et al, 2002).

I will now describe Bion's initial proposals (1948-1951 [1961]; 1952) on how social relations and emotional states impact on the state of health; these proposals are the basis for the present thesis.

The work of Bion: a biopsychosocial approach to emotions

While the understanding of emotional experiences is at the centre of Bion's concerns, his work as a whole not only brings together social/group dynamics and psychoanalytic theory but also paved the way for integrating physiological and medical data.

He began his research with experiments on group dynamics and progressed to the psychoanalytic examination of the emergence of mental processes. Although Bion proposed substantial and central theoretical links between group dynamics and the functioning of individual mind many times (which will be addressed in more depth in the two following chapters), these two fields of Bion's theorisation have, with some exceptions (e.g. Gould, 1998; Hinshelwood, 1987, 1989b, 1994, 2003), rarely been

linked in a systematic way by later authors, and it is one of the tasks that I propose to attempt in the next two chapters.

Although the social and the psychoanalytic were two separate areas of research, Bion kept focused mainly on *raw emotional experiences*²⁰ and on how the rational mind deals with them. The main questions that he tried to address in his work as a whole can, in my view, be formulated as follows:

- how do groups and individuals deal with raw emotional experiences?
- how are raw emotional experiences related to mental development, consciousness, and rational thinking?
- what are the mental and social consequences of the failure to integrate raw emotional experiences with consciousness and rationality?

I will now present a brief contextual overview of Bion's initial formulations on the effect of social constraints on emotional expression, which seems to me important in order to understand his formulation of the notions of emotional suppression and protomental states.

Social management of Emotional states

Bion (1948) initially focused on how sophisticated social pressures forced excessive affective inhibition and consequent frustration of vital emotional needs. This focus reflected the implicit influence of the Freudian affect-discharge model, and the contemporaneous prominence of social and anthropological psychiatry.

²⁰ Recently, Jaak Panksepp (2005) in a neuro-psychoanalytic perspective elaborated on the experience of *raw emotional states* (i.e. basic emotional impulses) generated by the limbic areas of the subcortex. by contrast with more sophisticated cognitive regulation of affects attained by the cortical areas (see also chapter 3, figure 1).

He showed that in complex social systems the conflict between individual emotional needs and social priorities represented deep-seated difficulties of group co-operation. Using Toynbee's (1935-1961) concept of *dominant oppressive minority*, Bion (1948) proposed that in general man has thus far failed in reconciling the powerful and primitive emotional pressures that are released in social relations with reason, intellectual development and social organisation²¹.

A substantial body of work in the sociological tradition had addressed similar questions, specially the work of authors such as Weber, Durkheim and their followers. According to Prager (1981) "both Weber and Durkheim are theoretically committed to the concern for the free individual and the belief that individuals should participate actively in social life" (p.918). However, due to the limitations of the present thesis, I will not attempt a discussion of these authors' ideas²².

Emotion and reason

In Bion's view, reason and emotion frequently have trouble acknowledging each other; in fact, he argued that the social systems, the political forces, and even the philosophical thinking of which western civilization is constituted have largely been built on the basis of a disavowal of man's most basic emotional needs. These needs have remained, for the most part, unconscious due to a hypertrophy of an operative intellect focused on external reality, tool building, machinery, and technology (Bion, 1948).

He proposed that the rational and emotional areas represent two different paths of human behaviour: on one hand "a kind of simian capacity for acquiring technical skills

²¹ According to Bion (1948), dominant oppressive minorities have become oppressive in order to tame the common people's emotional states and have used the educational and political systems to limit socio-emotional impulses (idem)

²² I will only address some of Durkheim's theories about suicide in chapter 4

[...] and a capacity for full emotional and intellectual development on the other” (Bion, 1948, p.84). I shall deal with recent literature (e.g. Carver and Scheier, 1998; Lane and Garfield, 2005) on this idea of two paths in the next chapter.

Socio-Emotional alienation and its Physiologic consequences

Bion proposed that these two areas (rational organization and emotions) could be harmfully alienated from each other, an idea taken up again at the end of the 20th century by psychoanalytic psychotherapists²³. When Bion published these ideas (late 1940's and early 1950's) it was generally assumed that the rapid social changes and mechanisation characteristic of the industrialised society's life-style was at odds with people's basic emotional needs and that this lead to emotional alienation and noticeably correlated levels of disease (e.g. Dunbar, 1935; Halliday, 1948).

In 1932, the highly influential W. Cannon had allowed himself to consider the existence of a literal “social homeostasis”, and the direct influence of social factors on bodily homeostasis²⁴. These elaborations must have prompted the notion that, via emotional imbalances, social influences could directly impinge on the natural balance of the body²⁵ (e.g. Mead, 1948 [1953], p.371 and p. 385).

A social phenomenon characterised by rise in anxiety-equivalent somatic states, pre-neurotic defences and epidemics of psychosomatic diseases, especially in the younger age groups, became known as the “sick society” (Halliday, 1948).

²³ Similar considerations were later treated independently and extended by psychoanalytic therapists' descriptions of character traits' such as *operator thinking* and the clinical syndrome of *alexithymia*: as addressed above this syndrome denotes a mental functioning in which apparently socially well-adapted people seem to lack both internal awareness and external expression of most of their emotional states, and resort to unemotional and minute descriptions of their life. I will return to this issue later.

²⁴ “Steady states in society as a whole and steady states in its members are closely linked...we are forced to recognise that the homeostasis of the individual human is largely dependent on social homeostasis” (Cannon, 1932).

²⁵ In the late 20th century these ideas were taken up again in the notion that “human relationships play a central role...in the homeostatic regulation of physiological functions” (Nemiah, 1987, p. *xxii*).

Emotional suppression

Bion (1948-1952 [1961]) proposed that the social management of emotions in sophisticated co-operative tasks could assume the form of *suppression* of individual emotional states, and that the resultant prolonged disturbance would affect somatic health.

In a similar way to Freud's idea that an affect or emotion can be *suppressed*²⁶, Bion proposed that the explicit activity of emotional states could be suppressed and prevented from developing into differentiated states of psychological phenomena- or *feelings*²⁷ (1950[1961], pp. 100-104).

However, neither Freud nor Bion clearly and explicitly defined the mechanism of emotional *suppression* and the differences between the notions of *repression of ideas* and *suppression of affects* have become obscure (Laplanche and Pontalis, 1979, p.438).

More recently, researchers have been studying the effects of emotional *inhibition* on physiological alteration and it is now well established that emotional/affective suppression can lead to physical health problems (e.g. Richards and Gross, 1999). In brief, these recent definitions of emotional suppression include the severe inhibition of emotion-expressive behaviour, but not much is discussed about the psycho-social and psychodynamic nature of this process.

I will address this theme in more detail in the next chapters. I will propose a definition of emotional suppression that can clarify psychoanalytic notions and also be inclusive of cognitive psychology and affective neuroscience concepts.

²⁶ i.e. the quantitative factor of the instinctual impulse can be "prevented from developing at all" (Freud, 1915b, p.178)

²⁷ These proposals are congruent with recent neuroscientific working hypotheses on cortical suppression of activity in subcortical areas that generate feeling processes (e.g. Drevets and Raichle, 1998; Mayberg et al, 1999; Panksepp, 2004).

Bion called “protomental disorders” the psychiatric and somatic alterations that are hypothetically associated with the mechanism of emotional suppression; I will now address Bion’s notion of the “protomental”.

The notion of Proto-mental disorders

Bion hypothesised that emotional suppression could provoke certain bodily symptoms. He further stressed that these symptoms were quite peculiar in that they shared psychological and somatic components and that they were neither clearly psychiatric nor purely physical.

Instead of using the term *psycho-somatic*, he proposed that this fuzzy area should be called “protomental” and its disorders should be called *protomental disorders*, avoiding the idea of a linear causal direction from mind to bodily problems (1961, p.101) that is implicit in the term “psycho-somatic”.

I will now put the notion of protomental in the context of other psychoanalytic notions, contrasting it with the notions of psychogenic and psychoneurotic symptoms, and pointing to its similarities with the idea of psychosomatic, and with the syndrome of actual neurosis.

Psychogenic and Protomental.

The difference between the notion of *protomental* symptoms and *psychogenic* symptoms must be made clear from the outset. While the notion of *psychogenic* implies that physical symptoms are brought up by mental conflicts, and thus implies a clear causal direction from mind to body, the notion of *protomental* implies the existence of a border zone between physiologic changes and mental experiences, which if disturbed, can manifest both as physiological symptoms (e.g. tachycardia) and as mental

symptoms (e.g. anxiety) (Bion, 1950[1961], p.103). The importance of this body-mind epistemological issue was discussed in detail by Totman (1979), and I will address it in more in detail in the next chapter.

Another of Bion's refinements on the idea of emotional suppression and the associated protomental symptoms is that they cannot be separated from social dynamics; so much so that he called them "group diseases"(1951[1961], p.102-3; 105-6).

Turning now to the history of psychoanalysis for the sake of clarification, I believe that Freud was struggling with the same phenomena in the notion of *actual neurosis*, and its somatic "equivalents of anxiety".

Proto-mental states and Actual Neurosis

Freud (1895[1894]) identified "anxiety neurosis", a syndrome that could not be integrated in the category of *psychoneurosis*. This was a radically different neurotic affliction in that the symptoms had no psychological-symbolic traceable origin in repressed memories and hence seemed not to be reducible to psychotherapeutic treatment.

The aetiology of anxiety neurosis was put forward in a quantitative dimension as a consequence of un-discharged affective excitation (of sexual/libidinal nature) whose cumulative effect was to overload the nervous system. For this reason Freud called anxiety neurosis an "actual neurosis" meaning 'present-day' neurosis, and differentiated them from the types of neurosis where the cause was to be found in repressed memories of a past events –i.e. the psychoneurosis.

In terms of the theory of neuroses, Freud (1895[1894], p.93) defined anxiety neurosis as 'a quantum of anxiety in a freely floating state'; in other words, it was

emotional excitation that was not originally connected to mental representations such as ideas and memories.

Anxiety neurosis consisted of general irritability, anxious expectation (including hypochondria and moral anxiety), *pavor nocturnus*, vertigo, agoraphobia, and also of certain disturbances of bodily function, which I will focus in the next section.

Somatic equivalents of anxiety

Of special relevance were the associated bodily disturbances, which Freud called “rudimentary anxiety attacks” or “equivalents of anxiety”: disturbances of heart function (palpitation, with arrhythmia or with tachycardia)²⁸, respiratory disturbances (dyspnoea, attacks resembling asthma), sweating, tremors and shivering; ravenous hunger, vomiting and nausea, diarrhoea, *locomotor vertigo*, congestions (including vasomotor neurasthenia), and *paraesthesias*.

When these physical symptoms were more prominent, the *feeling* of anxiety (i.e. the psychological-subjective experience of it) often receded into the background or was alluded to in vague terms such as ‘being unwell’, ‘feeling uncomfortable’ (Freud, 1895[1894], p.94). Several of these bodily symptoms could even completely *take the place* of psychological anxiety attacks.

Furthermore, Freud (1895[1894], p.93-98) noticed that these physical symptoms could also appear in *chronic* form, in which case they were more difficult to recognize as anxiety manifestations

In short, the psychological-subjective experience of affects- libido and anxiety- could be replaced by *somatic equivalents* consisting in real organic changes of the body. Although lacking in neurological data at the time, Freud correctly guessed that affects

²⁸ Which was not always easily differentiated from organic heart affection and may end in serious weakness of the heart.

were initiated in bodily and physiological phenomena before being verbalized, and even before being psychologically experienced (Panksepp, 2005). This idea was taken up by later notions such as *lack of de-somatization* and *resomatization* of affects by Krystal (1988) in addressing psychosomatic disease and traumatic states.

Difficulties with the notion of Actual neurosis

However, Freud (1895[1894], p.97, also 1895, p.261) realized that despite benefiting from therapeutic prophylaxis and advice, the actual neurotic symptoms could not be directly cured by psychoanalysis. Furthermore, in 1926, occurred an important change in Freud's anxiety theory; he started to give more importance to anxiety as a cognitive signal of danger, i.e as "information", rather than as an "energetic" transformation of dammed-up libidinal affect (e.g. Lane, 2005, Panksepp, 2005). As a result, the interest in actual neuroses was relegated to secondary position, and only a minority of analysts wrote about it (e.g. Blau, 1952; Kaplan,1984; Gediman, 1984; Grotstein,1991a)²⁹.

The clarification of the notion of protomentality at the light of actual neurosis requires an additional clarification on the difference between the *experience* of affects in

²⁹ According to these authors the syndrome of actual neurosis does really exist and the phenomenon has not really been overlooked in the main but has been called by many other names since the early days of psychoanalysis, for instance: Fenichel's (1946) 'dammed-up state of accumulated undischarged psychic tensions'. Blau (1984) differentiates several types of anxiety neuroses: a) terror (traumatic neuroses), b) military and operational (combat fatigue), c) childhood behaviour disorders, d) visceral (psychosomatic disorders). Grotstein (1991) believes that panic disorder and many of the symptoms of personality and attention deficit disorders should belong in the category labelled by the generic term of "actual neuroses" (p.5). Hartocollis (2002) believes that the concept of 'actual neurosis' has resurfaced under the label of chronic fatigue syndrome.

Many controversial issues about actual neurosis emerged along the years, following the development of the psychoanalytic method in its diagnostic, terminological, methodological and technical issues, which are discussed at length by Kaplan (1984). According to Gediman (1984), the current psychoanalytic controversy about actual neurosis is no longer centred on whether or not they exist, but rather on what are the best modalities for their treatment. In a short form, all the authors that have dedicated to the problem seem to agree with Freud that the "actual states" are not amenable to psychodynamic interpretations, and deserve a special therapeutic task of managing the mounting tension of the patient by holding, support, and etc.

actual neurosis and in psychoneurosis; i.e., the difference between the energetic-quantitative experience on one hand and the cognitive-signal experience of affects on the other.

Energetic and cognitive components of emotions-affects

As recently addressed by Panksepp (2005), the “cognitive” and “energetic” views of affects must not be seen as exclusive because the cognitive and energetic views seem to reflect different, though not exclusive, functioning of the affective and of the cognitive areas of the brain. In this line of argumentation, Krystal (1988) proposed that the *desomatization of affects* out of the energetic-quantitative domain and the secondary ability to verbalize them are essential for the *cognitive* use of affects as signals. In other words, the deficits in desomatization and the resomatization of affects characteristic of somatic anxiety-equivalents in actual neurosis, preclude their use as cognitive-informative signals that is observed in the psychoneurotic symptoms.

In this sense the physical symptoms of actual neurosis can be properly called “proto-mental”, in Bion’s terms. In light of recent research on emotions, including recent neuro-psychoanalytic research, the idea of *protomentality* means the *physiological basis of affective experiences* (see e.g. Panksepp, 2005). These are phenomena that straddle between what is *neural biochemical activity* and *mental experience*. Furthermore they are prior to the mental-cognitive component of emotions, and a necessary but not sufficient condition without which the mental experience of emotions would not exist (Damasio, 1994, 2000).

The subjective and internal experience of emotional states

As I have addressed above I believe that in order to clarify psychoanalytic notions on emotional experiences it is important to distinguish on the level of the subjective experience of raw emotional states the areas of a) intensity, or quantitative arousal and salience and b) cognitive attribution of meaning. In other words, a) the economic-energetic and b) the cognitive component of emotional states (e.g. Panksepp, 2005).

Intensity oriented and meaning oriented approaches

What has been called in psychoanalysis the “quantitative factor” of affects (Freud, 1895b, p. 138)³⁰, is the domain of intensities of emotional stimuli, or *sum of excitation* in Freud’s terminology. The quantitative mechanisms of emotion regulation are the dynamic processes of seeking equilibrium between excitation and inhibition to maintain the homeostatic *principle of constancy* in the mind.

Since Freud moved his theoretical emphasis from an energetic concept of affect to one of structured information and of affects as signals, and although he never entirely abandoned the energetic-quantitative model, psychoanalysis has been focusing more and more on the verbally conveyed meaning of experiences, i.e. information about the internal ideational conflicts of the patients. In general, it has not been very comfortable with the quantitative-energetic dimension (see Kinston and Cohen, 1986; Grotstein, 1999). The argumentation that the energetic notion of affects is outdated and even erroneous it is quite common (e.g Lane, 2005; Panksepp, 2005).

³⁰ Freud wrote: “whether a neurotic illness occurs at all depends upon a quantitative factor – upon the total load on the nervous system as compared with the latter’s capacity for resistance. Everything which can keep this quantitative factor below a certain threshold value, or can bring it back to that level, has a therapeutic effect, since by doing it keeps the aetiological equation unsatisfied (ibid.)

However, situations of emotional deregulation with no definite psycho-analysable meaning and quantitative considerations on impulses, instincts, affect arousal and *strength* of the ego, have always been present in certain difficult patients, such as the severely traumatised ones (Kinston and Cohen, 1986; Grotstein, 1999).

I consider that one of the main contributes of Bion's legacy in the psychoanalytic field in particular to be the integration of the *quantitative* dimension of emotional intensities' (tolerance to mental pain and containment of excessive anxiety) with the *cognitive-information processing* dimension (mental representations about emotional states and their subjective meaning).

Bion (1962, 1963, 1965, 1967, 1970, 1992) managed to integrate these two dimensions through concepts such as *reverie*, *alpha function* and *container-contained relation*, which I will address in more detail in chapters two and three of the thesis; he argued that raw emotions, initially experienced concretely at a body and perceptive level, are filtered out of excessive excitation or anxiety and then transformed into mental ideograms, or α -elements. These ideograms can then be used as meaningful representations and memories of emotional experiences in the individuals' cognitive functions, i.e. dreams, fantasies, verbal language and even formalised thinking³¹.

Emotional trauma and lack of meaning

The failure of these complex psychosocial processes of emotional transformation would lead to two consequences, one at the quantitative-energetic level and other at the cognitive level: a) anxiety reaching a traumatic state and b) emotional states remaining

³¹ Through the heuristic model of the mother-baby relation, he described how someone else must soothe the pre/verbal baby in emotional distress due to unfulfilled needs. The soothing process reduces anxiety ("removes the excess of emotion" [Bion, 1963, p. 27]) and allows the baby to tolerate the absence of what he needs; the perceptive absence facilitates the emergence of a representation by conjunction with a memory trace of the needed object. In a second phase the baby learns how to give names to his emotions and thoughts by cultural exchange.

at a physiologic and bodily level without a proper cognitive representation. (e.g. “free floating anxiety”[Freud, 1895[1894], p.93] ; “Nameless dread”[Bion, 1967, p.116])

The experience of *excessive* emotional excitation (experienced as mental pain/anxiety) must be resolved in some defensive way to avoid the persistence of a mounting traumatic state; either through impulsive action-discharge, or by mental disavowal through suppression and denial (e.g. McDougall, 1989; Krystal, 1988). The consequences of these defensive processes are that the mental processes either get obliterated by action or divorced from emotional content. In the latter case, thinking and language are used with extreme rigidity as a way of keeping emotional awareness at bay, while in the former language is used as a way of expressing emotion directly, thereby discharging accretions of stimuli (Bion, 1962, p.7; 13; Hinshelwood, 1989a, p.229). Meanwhile, in either case the original emotional states remain at a raw bodily-physiological level, and in a state of cognitive *meaninglessness* (Grotstein, 1999), or in Bion’s terms: remains relegated to a protomental state.

I will now focus on how Bion’s ideas address the link between individual emotional experiences and the social and interpersonal dimension, and how disturbances in this relation might be associated with somatic alteration and health outcomes.

The role of Social interaction

Bion saw both the quantitative-energetic dimension of affect regulation and the cognitive dimension of translation of affective experiences into ideas as being equally grounded in integrated social processes of interpersonal exchange. Hence, Bion conceptualised emotional phenomena, as well as their transformation into meaningful representations, as being *regulated* and *contained* interactively in social exchanges.

These concepts were later expanded by Hinshelwood (e.g. 1987, 1989b, 1994) in terms of the *flexibility dimension* of emotional containment and of *reflective space*. These concepts classify the degree of resilience of mental and social structures when faced with strong anxiety arising in the individuals, and the ways healthy emotional connectedness allows the emergence of emotional awareness, shared meanings and mental growth in a group of people.

Protomental, psychosomatic, and the social domain

The notion of protomental is distinct from the notion of *psycho-somatic* in that it adds to psyche and soma, a third factor: the social. According to Bion, protomental disorders must be studied in the context of socio-emotional dynamics of the groups with which the individual identifies.

In this sense, they are not diseases of the “mind”, they are not *psychogenic* in the sense of being caused by the psyche, i.e. they are not meaningful symbolic productions of the mind that vanish when the internal psychic conflict is solved as the functional psychoneurotic symptoms are. I understand that pointing to the existence of *protomental disorders*, was Bion’s way of stressing that they sprung the primal psychobiological layers of the mind in an *interpersonal* context.

I will now address the idea of an interpersonal context of the protomental states, retaking and building upon the notion of actual neurotic states.

Group Diseases?

Freud tried to demonstrate that social norms strongly influenced the deflection/suppression of sexual affects characteristic of actual neurosis (Freud, 1908 and also 1898a, p.276). He argued that the harmful suppression of the sexual life

through the prevailing morality constituted a main contributing factor of modern civilization to specific forms of nervous illness.

I believe that Bion's (1950[1961], p.102) conception of protomental symptoms as *group diseases* is similar to Freud's formulation since according to Bion's notion group diseases "manifest themselves in the individual but they have characteristics that make it clear that it is the group rather than the individual that is stricken". Inspired in Halliday's (1948) conception of "adverse psychological-communal environment", Bion believed that the so-called psychosomatic diseases were a part of *psychosocial medicine* and *sociodynamics* (idem, p.108). It is noteworthy that, congruently, Blau (1952) saw irresolvable conflicts with the social environment as the causes of actual neurosis, and for Kaplan (1984), actual-neurotic phenomena are issues analogous to sociological phenomena in their resistance to psychoanalysis (p.302).

We have seen previously that the influence of social ties and quality of relationships in the physiological balance of the body is becoming more and more important in the research on chronic diseases (e.g. Ryff and Singer, 2001). This makes Bion's elaborations very interesting and useful in grasping recent discoveries in this area.

Bion's initial ideas (1948-1952[1961]) on emotional dynamics and on *emotional suppression* in particular were very much focused in the social field. In his subsequent psychoanalytic works he focused on the internal mental processes dealing with raw emotional experiences. Integrating these two sets of ideas can clarify a lot on the problems of suppression in the context of *emotional containment*. I will elaborate on this theme in greater depth in chapter three of the thesis.

Basic Emotional systems

The research on the influence of emotional deregulation on illness has been taking emotions in a general sense, i.e. not differentiating qualitatively different emotional systems. In contrast, Bion's ideas allow us to differentiate specific links between the deficits of expression of each set of basic emotional systems and particular disorders. Hence, they can help to clarify the role of emotional containment and regulation deficits in different emotional systems, which have been uncovered with the help of strong evidence from psychoanalytic informed affective neuroscience (Panksepp, 2005).

A classification of socio-emotional phenomena.

Bion (1940-1951[1961]; 1952) proposed a classification of socio-emotional phenomena that integrated three distinct emotional systems. He called them basic assumptions of *Dependence*, *Pairing* and *Flight/Fight*.

Dependence is associated with the affective dependency towards a leader/parental figure to obtain protection, nutrition and guidance.

Flight/fight is associated with activation of aggression and fear, and with dealing with attacks from enemies/predators and the need to flight from danger.

Pairing is associated with reproduction, breeding, and innovation.

Anticipating the anthropological findings on *basic universal emotions* (see Ekman, 1992), Bion proposed that these emotional systems were *basic*, that is, universal and independent from culture. These basic systems are a combination of two types of "instinctual" forces: 1. basic emotional states and 2. motivations for social cohesion, both of which are necessary to the survival of the individual and the group. I have argued elsewhere that Bion's socio-emotional classification is based on Wilfred

Trotter's ideas on instincts and on the biological basis of human societies (Torres, 2003a).

I believe this triune classification of emotional states can bring light to the study of emotional containment and regulation, which even today is hampered by a lack of a theoretically coherent and parsimonious classification of emotions. Furthermore, I will show in chapter three that this theory anticipates recent theories on basic emotional systems as developed by affective neuroscience research.

As illustrated in the next table, Bion's socio-emotional classification is compatible with the psychoanalytic classification of motivational-affective systems proposed by Lichtenberg (1989); at the same time his ideas are also remarkably similar to the biologist Eibl-Eibesfeldt's (1970), who proposed that the factors determining social cohesion are the emotional ties of a) appeal for assistance and infantile appeal, b) sexual bonds, and c) solidarity in combat and bonds because of fear; furthermore, Bion's classification is also similar to the ones later put forward in socio-biology by Wilson (1975) and in evolutionary psychology by Chisholm, (1993). I will retake these correspondences in chapter 3.

| | | | |
|---|--|---|-----------------------------------|
| Nutrition Instinct | TROTTER <i>Sexual Instinct</i> | Self-preservation | Herd Instinct / Gregariousness |
| Dependency (Physical and spiritual nutrition) | BION Pairing (Sex and messianic hope) | Fight-flight (Aggression and fear) | Valency / “groupishness” |
| Attachment-affiliation motivational system | LICHTENBERG (1989) Sensual-sexual motivational system | a) Exploration/ assertion b) Aversive (antagonism/withdrawal) motivational systems | |
| Parental care | WILSON (1975) Sexual selection | Aggression and competition; Dominance systems | Sociality |
| Appeal for assistance and infantile appeal | EIBL-EIBESFELDT (1970) Sexual bonds | a) Solidarity in combat b) Bonds through fear | Biological social cohesion |
| Parenting effort | CHISHOLM (1993) Mating effort | Somatic effort for Survival | Inclusive Fitness |

The concept of Valency

Following Trotter’s ideas, Bion proposed that people have an instinctive-*emotional* pull to *social ties*. He called this socio-emotional pull *valency*, and at an initial stage of his work defined it socio-biologically as the biologic/automatic tendency towards cooperation (1948, p.84). He relied implicitly on an evolutionary biologic perspective to justify his axiom that humans have been compelled to cooperation in order to survive in certain environments: “those members of the community in whom the impulse was not sufficiently strong to compel cooperation would not survive”

(p.87). Nowadays biologists commonly accept that this socio-biological trait in the human species has evolved by natural selection³² (E.g., Wilson, 1979).

Later, Bion (1952 [1961]) tried to explain this primary emotional pull to social cohesion as a defence against primitive anxieties in terms of schizoid-paranoid defences proposed by Melanie Klein. I will address this apparent contradiction in next chapter.

Whichever view is taken it is fairly obvious that this human characteristic, which Bion also called “*groupishness*”³³ (1952 [1961] p. 168), seems to have a primary function of warding off atavistic anxieties of dying due to being alone, and that it draws people to cooperation on raw emotional and pre-verbal levels.

Emotional suppression in different basic socio-emotional systems

Furthermore, Bion postulated that *emotional suppression* in each of the basic emotional systems should be correlated with three different types of proto-mental health problems. So, the suppression of emotional dependence, for instance, would have different consequences from the suppression of fight-flight or pairing. In order to clarify this idea, it is helpful to turn once again to the notion of “anxiety equivalents” and actual neurosis.

Actual neurotic states in different emotional systems

In the notion of anxiety neurosis, Freud had proposed that somatic sexual excitation not transformed in the expression of affect (*psychical libido*) and neither

³² This is an idea that can be traced back to Trotter’s (1918) concept of gregariousness (Torres, 2003a), and has been successfully addressed from the evolutionary biological point of view from the mid 1960’s since W. D. Hamilton published his “The genetical evolution of social behavior”.

³³ “the individual is and always has been, a member of a group [...]The individual is a group animal[...]with those aspects of his personality that constitute his ‘groupishness’(1952[1961], pp 168-169)

worked over psychically nor discharged in motor action (sexual intercourse) manifested as somatic symptoms.

He also noted that these anxiety-equivalent symptoms bore *similarities* with the somatic phenomena of consummated sexuality: accelerated breathing, palpitation, sweating, congestion and so on: “in the corresponding anxiety attacks we have before us the dyspnoea, palpitations etc of copulation in an isolated and exaggerated form [...] And this is confirmed by observation [...] patients often confirm it as an observation that since suffering from anxiety they have felt no sexual desire” (Freud, 1894, p.193).

A similar idea was taken further in Bion’s (1948-1952[1961]) concept of “protomental symptoms”, as I shall address below. However, he included also other instincts and affects besides sexuality: Fight-flight and Dependency, and postulated that these could also manifest symptomatically as somatic equivalents of suppressed emotional states, or in his words, in protomental symptoms.

Beyond the sexual affect

There are strong arguments to extend the idea of “actual neurotic states” and somatic equivalents of affect to other motivational and emotional/affective states beyond sexual excitation. First of all, it was Freud himself who proposed, “anxiety might be employed for accumulated physical tension in general” (1894, p.194-193). According to several authors (Fenichel, 1946; Gediman, 1984; Blau, 1952) the problem of accumulation of excitation that is neither discharged nor enters the psychic path should not be limited to the domain of endogenous excitation of a sexual nature but to endogenous excitation in general³⁴.

³⁴ According to Fenichel (1945) the omission of instinctual actions in general interferes with the natural chemistry of the process of excitation and gratification, and hence with the hormonal state, which then may have a “toxic” influence. For Gediman (1984) and Blau (1952), all the states of traumatic over-excitability linked with difficulties in psychological-symbolic elaboration are to be included in the

Emotional Suppression of different basic emotions

Bion (1950[1961], pp.93-114) hypothesised that 1) the suppression of each type of socio-emotional valency would be associated with a different type of protomental symptoms, that 2) these symptoms would manifest in a physical form but would also have some residual psychological affiliations with the suppressed emotions and that 3) these symptoms would fluctuate according to group dynamics.

Although Bion did not explicitly acknowledge that fact, this idea can be seen as analogous with Freud's proposal that the suppression of sexuality, that in its turn fluctuated according to sexual morality of the family and society at large (Freud, 1908) would cause somatic equivalents in the form of the actual neurosis' characteristic symptoms.

In fact, Bion's elaborations on the protomental system were explicitly inspired³⁵ by Halliday's (1948) work, which pointed out that anxiety neurosis and corresponding somatic ailments, appeared to on the rise at a social level since the beginning of the century.

Protomental Dependence

Bion's (1950[1961] pp 106-108) first illustrative use of the protomental model was not based on sexuality (i.e. *pairing* valency) but on the basic emotional system of *dependence*. In a study of tuberculosis patients' life histories his colleague Wittkower (1949) had observed that almost all of them manifested serious problems with *interpersonal dependence*; the patients tried to ward off the awareness of those

definition of "actual neurotic states", and comprise a dimension of experience related to intensity, quantity and threshold for excitation in general.

³⁵ see Bion (1950[1961]), page 108.

problems by suppressing emotional dependence needs and by trying to become independent and self-driven.

Bion noted that the treatment of tuberculosis required a nursing diet very similar to the baby's one; he concluded that the suppressed emotional dependence manifested in a baby-like state of *physical* dependence towards caretakers; he interpreted this as a mental counterpart of the protomental expression of the dependence valency (1950[1961], p.106).

Bion tried to schematise these ideas using a formal model of hypothesis. With the help of diagram he used the initials *baF*, *baD* *baP* to designate the emotional basic assumptions when experienced at a psychological and social level, and *pm* to designate the protomental stage of the basic assumptions, to which he called "matrix of the disease".

He proposed that, if it turned out that the prevalent basic assumption in the group at periods of increase of tuberculosis was, for instance, *baF*, then the *baF* could be seen as a "psychosocial cause" of the disease; the diagram of the disease would hence be:

- 1) Psychological Cause *baF*
- 2) Affiliation *baD*
- 3) Matrix *pmD* and *pmP*

This diagram reflects the ideas that

- 1) the prevalence of *baF* (e.g. dominant feelings of aggressiveness or fear experienced by the individuals in a given group) is considered the "psychosocial cause" of the emotional suppression of the other basic

assumptions (baD and baP) and of their relegation into a protomental state,

- 2) that this protomental state of pmD and pmP is considered to be the matrix of the disease, and
- 3) that the physical disease has a psychological affiliation with dependence: i.e. the patients becomes physically fragile and completely dependent on caretakers.

In other words, the suppressed dependency basic assumption manifested protomentally in that the patient had become *physically* over dependent: the prolonged care, nursing and diet demanded by the disease.

A biopsychosocial model of hypothesis about protomental diseases

The recent growing interest in the study of emotional suppression and their role in actual somatic changes such as cardiovascular, immunological and hormonal alterations (e.g. Gross, 1998; Petrie et al, 1998; Jackson et al, 2000; Harris. 2001) confer a new pertinence to Bion's propositions. Actually, as I have addressed above in this chapter, some of the leading causes of illness in modern industrialised societies are health problems of which the aetiology has been conceptualised as being influenced by a complex interaction of emotional disorders and social factors. The interaction of social context and emotional disorders has been identified by some authors as being an important factor in substance addictions, psychosomatic symptoms, and suicidal tendencies (see chapter 4 for a review of this issue); these were the disorders that I studied previously to this thesis at the light of Bion's theories (Torres, 1995; 1999), and that I am proposing to be considered as possible paradigms of protomental symptoms related to the three different basic emotional systems.

In the next section I will describe how I have used this formal scheme to depict my research on drug-addicted patients, and then how I tried to expand the model to include psychosomatic symptoms and suicide attempts. This serves only to illustrate the general rationale I initially used in trying to put forward a series of systematic theoretical hypothesis based on the protomental model. In chapter four I will describe in more detail the literature revision I have used during the present research to justify the formulation of these hypothesis.

Addictions

In my previous research with drug addicts' families (Torres, 1995), I verified the presence of remarkable similarities between Wittkower's description of tuberculosis patients' stories and the patterns of emotional interaction of drug addiction patients' with their families: there were strong similarities in both the patients' interpersonal patterns such as arrogance, ruleless life, and incapability of taking care of themselves masked by pseudo-independence, and there were also similar conflicts between dependency needs and aggressiveness in the family.

I found helpful the idea that the *physical dependence* of drugs could be seen as a protomental manifestation of the suppressed emotional dependence; on one hand there was a lack of emotional interdependence in the family (and an excess of Fight-flight events), and on the other, there was a concrete-somatic dependence on drugs on the part of one or more children (and many times also the father's dependence on alcohol, and the mother's dependence on calming pills). In this sense, the symptom of *drug dependence* had a clear "psychological affiliation" with the suppressed emotional dependence; using Bion's diagram, the matrix for this disease would be:

Psychological Cause *baF* and/or *baP*

Affiliation *baD*

Matrix *pmD*

Suicide attempts³⁶

In previous research with families of para-suicidal teenagers, my colleagues and I verified the existence of evident problems in the containment of the pairing basic assumption: there was a great predominance of emotions of *Despair/hopelessness* (Torres, 1999). I found helpful the idea that self-harm/para-suicidal behaviour could be seen as a protomental manifestation of pairing. In the first place, I was lead to identify suicidal behaviour as a protomental symptom because suicidal behaviour is a way of expressing emotions in a concrete-bodily form (“where physical and mental are undifferentiated” according to Bion), instead of a symbolical form of expressing emotions.

Secondly, some authors (Garma, 1940; Friedlander, 1940; Abadi, 1959; Adam, 1990) noted that that many suicidal patients expressed fantasies of merging with a love object, and suggested the importance of erotic or libidinal aspects in suicidal acts such as phantasies of reunion with a lost or impossible libidinal object. The importance of the loss of libidinal objects and the phantasies of being reunited with them is also referred to in the field of anthropology (Stengel, 1964, p.56).

The former ideas lead me to think that suicidal acts could be interpreted as having psychological affiliations with Pairing, 1) death and serious self-harm can be sexually

³⁶ *Para-suicide* is a term that has been used to describe failed suicide attempts (Kreitman et al, 1969); I will use this term in the rest of the thesis.

charged and 2) suicidal behaviour is associated with libidinal aspects and with hopes for messianic salvation.

Finally, I noted that collective suicides are typical of messianic sects when confronted with its failure in materializing the high expectations and in bringing salvation and happiness, that is, when the feelings of messianic hope and euphoria are replaced by its opposites: hopelessness and desperation³⁷.

The hypothesised matrix for this disease would be:

Psychological Cause *baF* and/or *baD*

Affiliation *baP*

Matrix *pmP*.

Psychosomatic symptoms

Research with students (Torres, 1999, Barbosa, 1999) showed that the self report of medical symptoms that could be considered psychosomatic, such as allergies, were correlated with the inhibition of fight-flight valency (I will present these results in chapter 4).

Other authors had suggested that the personality factors associated with asthma, ulcers and skin diseases in children, have in common the repression of aggressiveness and of independence and autonomy (e.g. Grunspun, 1996). Furthermore the occurrence of a physical disease has clear “psychological affiliations” with *baF* (the body is ‘attacked’, to ‘attack’ the disease, ‘escape’ from risk factors, etc).

³⁷ I have addressed in depth this theme in a recent presentation entitled “Suicide as a group disease: messianic hope and epidemics of voluntary death” (Torres, 2005)

Furthermore, the *stress syndrome*, which is nowadays consensually accepted to be a very important factor in the onset and exacerbation of psychosomatic diseases (e.g. Panconesi, 1984; Leonard and Miller, 1995) was, as I have previously pointed out, first discovered as the physiological *fight or flight reaction* by Walter Cannon.

These initial considerations led me to hypothesise that the diagram for some psychosomatic diseases might be

Psychological Cause *baP* and/or *baD*

Affiliation *baF*

Matrix *pmF*

Further developments on the protomental hypotheses

As Bion acknowledged (1959[1961], p.106-9), the protomental theoretical model was left at an embryonic stage. Indeed, there were lacking i) a clarification of what he meant by “protomental system” and what were its relations with both the mind and the body, ii) the precise nature of the mechanism of emotional suppression, iii) and how these problems linked group phenomena with the individual.

In the following chapters, I will argue that presently there is some evidence to support Bion’s categorisation of three basic socio-emotional systems, and his idea of protomental states of emotional events. I believe there is also work by other authors that can shed a new light on his speculating that the emotional suppression in each of the basic emotional systems can be linked with different categories of protomental

symptoms. I will review some of the psychoanalytic literature that in my view can be compatible with these hypotheses.

Chapter 2. Proto-mentality

In the previous chapter I have argued that one of the central themes running through Bion's work was the translation of *raw emotional experiences*¹ into meaning and thinking. The focus on the inescapable *social context* of raw emotional experiences and on the process of meaning construction is also a central issue in Bion's work, both in a psychoanalytic perspective as well as in his group theories (e.g. see Hinshelwood, 2003).

In this chapter I will focus on the notion of raw emotional experiences defined as protomental states. I will do this by setting Bion's elaborations in the context of other psychoanalytic notions and introducing recent developments in cognitive psychology and affective neuroscience.

I will expand in greater detail the idea that in Bion's group theory, the awareness of emotional states i.e. the psychological experience of emotional states², is preceded by protomental states that are comprised mainly by bodily components. I will also address his later psychoanalytical theories, in which the process of thinking (in other words the mental processing³ of thoughts according to psychological laws) is seen as arising too from certain capacities of protomental structures, such as the *innate preconceptions*, to organize raw perceptual sensory information, making it possible to impart significance and meaning to these sense impressions⁴ (Imbasciati, 1989, 1998, 2006).

I will then present recent developments in psychoanalysis, neuroscience and neuro-psychoanalysis that seem to allow for an expansion of Bion's intuition about the protomental system.

¹ Or more precisely, the sensory and somatic correlates of it.

² Some authors use the name of *feelings* to denote this psychological experienced component of emotional states (e.g. Damasio, 2000).

³ Bion's often uses the metaphor of *digestion* when referring to the thinking process.

⁴ These sense data are to be taken as coming from external reality as well as from inside the body itself.

Finally I will expand on the similarities of the two sets of concepts with which, in different periods of his work, Bion addressed raw emotionality: a) protomental system, valency and basic assumptions in group psychology, and b) beta elements and beta screen in psychoanalysis.

The protomental system past and present

According to Bion, the idea of *protomental* was postulated to explain some properties of emotional states in a group context. In the following extracts Bion clearly proposes that emotions/feelings precede basic assumptions, and that *protomental phenomena* are precedents of emotions/feelings psychologically expressed:

Clinically I make a psychological approach, and therefore note phenomena only when they present themselves as psychological manifestations. Nevertheless, it is convenient to me to consider that the emotional state precedes the basic assumption and follows certain protomental phenomena of which it is an expression”(1961[1950a]), p.101)

Only at a [...] level where the events emerge as psychological phenomena, does there appear to be possible a differentiation of the components of each basic assumption, and at this level we can talk about feelings...”(Ibid.)

And, continuing, he proposes the existence of a protomental matrix where physical and mental are undifferentiated, where its disturbances can be either physical or psychological:

The protomental system I visualise as one in which physical and psychological are undifferentiated. It is a matrix from which spring the phenomena which at first appear - on a psychological level and in the light of psychological investigation -to be discrete feelings ...It is from this matrix that emotions proper to the basic assumptions flow to reinforce, pervade, and on occasion, to dominate the mental life of the group...when distress from this source manifests itself it can manifest itself just as well on physical forms as in psychological”(idem, p.102)

The concept of the protomental system raises two main problems that must be clarified before proceeding: a) the body/mind relations, and b) the individual/group dichotomy. I will deal first with the body-mind issue, and then with the group issue.

The Body-Mind problem. The id and the protomental

I have previously mentioned that Bion's idea of protomental system could be more easily understood in the context of body/mind connection if considered as equivalent to the Freudian concept of Id (Torres, 1999). In my view there are 4 main arguments for comparing both concepts:

1. *Are topographical metaphors for the body-mind interface:* "areas" which make the connection between instincts and the signals of body and the intentional behaviour and/or mental awareness.
2. *Represent soma-psychic undifferentiated processes.* The Id is also commonly seen as representing an *undifferentiated* reservoir of biologically innate psychic energy (Suloway, 1979, p.186)
3. *Lay emphasis on the bio-psychic foundations* of human motivation and affective experiences. As with the protomental system, the Id is not clearly differentiated from "a biological substratum of the instinct" (Laplanche, 1979, p. 198) and Freud laid stress on the continuity between biological needs and the Id (idem).
4. *philosophically* represent the same proposal: a non-dualistic and non-reductionistic proposal for the body-mind problem.

Notwithstanding these equivalences, Bion's idea seems to focus more on gregariousness as part of the biological instincts than Freud's (Torres, 1999). I consider that the three main differences between Freud's concept of the Id and Bion's concept of

the protomental are that Bion acknowledged 1) the primary social significance, and intrinsic social/gregarious role, of instinctual/emotional states, and, 2) its phylogenetic origins, as shaped by evolutionary processes⁷; and furthermore, 3) Bion proposed a triad of instinctual categories, dependence, fight-flight and pairing, which differs from Freud's dichotomised approach (in an initial stage *ego instincts* versus *libido*, and from "Beyond the Pleasure Principle" onwards the dichotomy of *life instinct* versus *death instinct*).

While the *Fight-Flight* valency can be taken as an aggressive drive, the *Pairing* valency can be compared with a libidinal drive (Bion, 1948-1952[1961]); these two instinctive forces or drives, i.e. aggressiveness and sexuality, were much the focus of Freudian psychoanalysis.

The focus on the emotional exchanges between mother and baby in the British object-relations tradition inspired the notion of dependence valency. The existence of a primary biologic drive of a non-sexual nature, towards emotional dependence between people was conceptualised thoroughly in Bowlby's concepts of Attachment and Bonding (Bowlby, 1969), and had been proposed earlier by Hadfield as a drive towards "protective love" (Torres, 2003a).

⁷ Although Freud did not have an evolutionary-Darwinian view (Langs, 1996), towards the end of his life he did recommend that "the study of evolution" be included in every prospective psychoanalyst's program of training (1926a, p.252). In his early works, he seems to have adopted from Darwin the idea that the primal value of affects and emotions, as well as their expression, was shaped by evolution: "all these sensations and innervations belong to the field of "expression of emotions", which Darwin[...] has taught us, consists of actions which originally had a meaning and served a purpose" (Freud, 1895.p.181) In later works, affects meant to Freud something archaic and vital "reproductions of very early, perhaps even pre-individual, experiences of vital importance" (1926b, p.133). This notion seems to convey an evolutionary dimension of affects.. The evolutionary and adaptive value of affects was also included as part of Rapaport's (1953) metapsychological assumptions.

Let us now deal with the question of group/individual dichotomy: Bion's notion of the individual (body and mind) totally immersed in a "social-emotional field" integrating individual and social psychology⁸.

A psychosocial framework

In Bion's theories, emotional states are inseparably linked with interpersonal and group experiences. This assumption is congruent with more recent notions on the subject; all expressive components of emotional states (facial expressions, body posture, tone of voice etc) are nowadays consensually considered to have communicational and contagious properties (see the concept of *emotional contagion* [Hatfield et al, 1993]). Also, the capacity to mentally "digest" and verbally label emotional states is consensually seen as heavily dependent on social interaction, on social biofeedback processes, and on culture (Schachter, 1959; Gergely, G. & Watson, 1996; Leff, 1973).

In Bion's view "psychology and psychopathology have focused attention on the individual often to the exclusion of the social field of which he is a part"⁹ (Bion, 1948-1952[1961], p.26). Even Freud seem to have clarified the 'enigma' of hysteria by augmenting the 'field of study'¹⁰ beyond the isolated individual to the relationship with the analyst (i.e. the process of analysing the transference).

Hence, Bion's non-dualist and non-reductionist perspective tried to integrate not only body and mind, but also to integrate the social and personal experience of being

⁸This idea is connected with another one: the notion of "group as a whole", but I will not discuss this in depth length here due to the limitations of space.

⁹Similarly Kurt Lewin stated that it is only possible to perceive the individual alone in its place of 'figure' against the group/social 'ground'. In his opinion, psychologists erroneously neglected the social 'ground' and took the part as the whole, while sociologists did the inverse: neglected the person 'ground' and take the group/social as the 'figure' (Lewin, 1939 [1948]).

¹⁰The notion of 'intelligible field of study' used by Bion in his group experiments was coined by the historian Toynbee to address the necessity of augmenting, temporally and transversally, the scope of study to phenomena related to the studied object, as a way of properly understanding that object. According to Bion, Freud then limited himself to the phenomena of the pair, which prevented a more profound understanding of the group/individual phenomena.

human; in his words, he aimed to develop a “binocular perspective”(e.g. 1948-1952[1961], p.8).

The Political animal and the social defences against anxiety

Bion often stressed that some of man’s basic needs can only be fulfilled through group life, and also that people are always behaving in *function of* groups even when they are alone¹¹. He also proposed that people’s inescapable motivation to social belonging was biologically grounded, and thus was part of the protomental functioning. However, this subject is not totally clear and I must address some apparent contradictions in Bion’s thinking.

On the one hand he considered man a “political animal”, a “herd” animal in the socio-biological sense, on the other hand Bion also tried to explain the tenacity of the social dimension in people using the hermeneutics of *defence against anxiety*¹² (Bion, 1952 [1961] pp. 141-191).

The idea of the “political animal” followed a quite original socio-biologic line of thinking originated in Wilfred Trotter (1916), which entered the mainstream science only in the late second half of 20th century with the discoveries of neo-Darwinism on bio-logic cooperation and “inclusive fitness”¹³ (e.g. Wenseleers, 2004).

Quite late in his life, Bion restated the idea of the biologic grounds for gregariousness integrating a psychoanalytic perspective:

‘Man is a political animal’ means that he has the mental counterpart of the physical characteristics of a herd animal. As psychoanalysts, we are concerned with the mental counterpart of such physical characteristics as can be discerned in the

¹¹ “In fact, no individual, however isolated in time and space, should be regarded as outside a group or lacking in active manifestations of group psychology” (Bion, 1952[1961], p.169).

¹² For a more in depth discussion of this issue see also Hinshelwood (2003) and Sanfuentes (2003).

¹³ Neo-Darwinism is also called the Modern Synthesis (as such, it synthesizes or brings together classical Darwinism and modern genetic theory). These discoveries were rapidly absorbed by evolutionary psychology, but with some exceptions (e.g. Langs, 1996). not by psychoanalysis in general,.

individual when in semi-isolation from his group...Birth, dependence, pairing and warfare – these are the basic situations to which the basic emotional drives correspond (Bion, 1970, p. 66)

However, as Eric Miller puts it

His explanations for it [groupishness] were ambiguous and at times seemingly contradictory. Thus he made references to the instinctiveness of the phenomena, but then shifted to treating them as [...] defences to cope with distressing unconscious phantasies (1998a, p.40)

These shifts in his thinking allow for both biological (innate) and a psychological (acquired) explanations for gregariousness and its associated phenomena, and especially allow us to inquire how both explanations can be integrated in a unique theory, without reducing one to the other.

I will first delineate the context of Bion's psychoanalytic explanation for the gregariousness, 'groupishness', or "social-ism"¹⁴ of man as he also called it, and then I will return to the protomental or socio-biologic explanation.

Psychoanalytic origins of the psychosocial idea

In the psychoanalytic movement, theories that have been clustered around the broad term *object-relations theory* have assumed a conceptualisation of human psychology that is intrinsically social.

The object-relations line of thought conveys the idea that the ego emerges out of the relationship networks with internal and external objects¹⁵. On this viewpoint, the ego turns out to be literally a psychosocial entity; product of the multiple interrelationships of internal and external objects mediated by the subjective

¹⁴ "The human individual is a political animal and cannot find fulfilment outside a group and cannot satisfy any emotional drive without expression of its social component ...social-ism" (1967, p.118)

¹⁵ As Imbasciati clearly demonstrates, there is no way to determine if an internal object is ruled by the "objective" characteristics of external objects, or by the "subjective" projection of the subject (see Imbasciati, 1989).

motivations and needs of each individual in the social field. In fact, in Bion's view the individual can be seen as an arena where the conflict and negotiation of "social-ism and narcissism" takes place (1960[1992], p. 1967, p.118).

These developments seem to have sprung from Freud's (1921 e.g. p.44-45) use of the concept of *identification* to explain the social ties¹⁶.

Identification and Projective Identification

The concept of identification throws some light on why object-relations theories are intimately linked with interpersonal concepts and hence with group-dynamics:

"...Each individual is a component part of numerous groups, he is bound by ties of identification in many directions, and he has build up his ego ideal upon the most various models"(Freud, 1921, p.78).

In 1946 Klein proposed the concept of projective identification: an omnipotent psychic phantasy that entails a "belief in certain aspects of the self being located elsewhere" (Hinshelwood, 1989a, p.179). These phantasies are considered to originate in a pre-verbal stage of development, and can be used interpersonally to try to influence the feelings and behaviours of others (see e.g. Hinshelwood, 1989a, pp. 179-204). Therefore projective identification can be seen as a kind of direct emotional communication of a pre-verbal level.

In his 1952 review of his own and other's group theories, Bion proposed that the individuals establishing contact with the complex emotional states of the group resort to the pre-verbal mechanisms described by Klein, namely projective identification between the leader and the others (1961; pp 141-149). Furthermore he tried to explain the

¹⁶ "...we learn from psycho-analysis that there do exist other mechanisms for emotional ties, the so called identifications, insufficiently known (...)" (Freud, 1921 p.44-45).

existence of the basic assumptions as secondary defences against the anxiety aroused by the phantasies of a primal scene experienced at the level of part-objects (idem, p.164).

The body/mind problem again

However, as I have elaborated in the 1st chapter, the explanation of group cohesion purely in terms of secondary psychological mechanisms makes the hypothesis that actual bodily changes can be brought about by certain psychosocial phenomena untenable. On the contrary, the inclusion of the idea of protomentality allows it, since protomental phenomena are influenced by group phenomena and can manifest both as physical and psychological symptoms. In fact, Bion included both the ideas of protomental system and of valency in his 1952 review, side by side with the Kleinian explanation.

Now, in order to clarify the place of *proto-mentality* in Bion's social psychology, and keep the track of a "binocular perspective", it is useful to compare briefly his ideas with a set of similar ideas, which emerged contemporaneously in social psychology, particularly in Kurt Lewin's *Field Psychology*.

Experimental Social psychology

. The conclusions Bion and Lewin drew from their experiments can be seen as quite similar in many respects¹⁷. Bion was convinced that the membership of his experimental groups exerted "a widespread influence on their mental lives when the

¹⁷Both Lewin and Bion were strongly engaged in resolving contemporary social problems, and dedicated to experiments with groups. Whereas Lewin was keen to have quantitative data, Bion preferred qualitative data. Bion is commonly said to have been influenced by Lewin's group dynamics ideas, (namely in the concept of a gestaltic 'field of forces', that pervade individual behaviour) which makes him, via Lewin, a 'grandson of gestaltism'. (Hinshelwood, 1999). In fact, the influence of Lewin on Bion is obscured because many of their themes in common were shared in various grades by other authors; on the importance of developing better forms of leadership, Trotter in 1916 had already pointed out much of what Bion would later elaborate. The great importance of Trotter's ideas and personality for Bion is addressed elsewhere (Torres, 2003a).

group disperses”¹⁸ (Bion, 1949 [1961], p.86). Lewin claimed to have discovered the same and confirmed experimentally that a decision taken in a group was outstandingly more effective in influencing behaviour than an individual decision¹⁹ - even if that group has only existed for a few minutes (Lewin, 1947, p.38).

Actually, for Lewin (1935) even the rigid separation between individual/person (*P*) and situation/environment (*E*) is artificial and fallacious, because *all behaviour* (*B*) is a function of individual and environment. He formalized this notion in the following model:

$$B = f(PE).$$

In addition he states: “*The dynamics of environmental influences can be investigated only simultaneously with the determination of individual differences and with general psychological laws* (Lewin, 1935, p.73). Though Bion didn’t formalize it in an equation, he seemed to have shared this notion, and proposed that the characteristic behaviour (i.e. “*B*”) of the elements of a specific group is always a function of the conflict between individual’s desires (i.e. “*P*”) and group mentality (i.e. “*E*”). In other words, as he puts it in the “Experiences in Groups”:

What the individual says or does in a group illumines both his own personality and his view of the group; sometimes his contribution illumines one more than the other (Bion, 1948 [1961], p.50)

¹⁸ He continues: *Other manifestations, however, become clear in the report that individuals give of everyday life...and it is possible to show that some their daily conflicts are arising from their attempt to reconcile the demands of everyday thinking and the demands of their membership of the group...I am convinced that patients produce material in steady stream to support the view that their membership...exerts a widespread influence on their mental lives when the group disperses* (Bion, 1961, p.86).

¹⁹ “In the case of group decision the eagerness seems to be relatively independent of personal preference; the individual seems to act mainly as ‘group member’ ...The experiments show...that even decisions concerning individual achievement can be effective which are made in a group setting of persons who do not see each other again” (Lewin, 1947, p.38)

The notion of a *primary* psychosocial dimension of the human, i.e. independent and previous to psychological defences was also conveyed by other contemporaneous non-psychoanalytic oriented social psychologists such as Schachter and Festinger. Schachter (1959, pp2-3), for instance, pointed out that there were three classes of human needs which only group membership satisfies: a) approval, status, and help, b) needs of submersion in a group and “de-individuation”: a state of personal anonymity in which the individual does not feel singled out or identifiable, and c) self-evaluation by social comparison.

The task I will take ahead is to clarify how social co-operation and cohesiveness can, at least in part, be conceptualised as a manifestation of a primary drive, directly linked with a proto-mental area of phenomena that has a biological basis, instead of being a secondary by-product of psychological/mental dynamics.

Protomental Socio-emotional Fields

Kurt Lewin’s *Field* model developed originally in the context of Gestalt psychology during his attempt to apply Faraday and Maxwell’s theory of electromagnetic fields²⁰ to group dynamics (Rugi, 1998). Lewin considered the group as the “complex result of the emergent forces in the field rather than the result of the characteristics of the individual members”²¹ (ibidem)

Bion’s reference to “emotional fields”(e.g. 1948[1961] p. 45 1949 [1961], p. 81) and his conceptualisation of “group phenomena in a field of forces” (Hinshelwood,

²⁰ This theory predicts that the space surrounding electrified and magnetised bodies could be described as a field, and the properties of the field are essential to the description of the phenomena, whereas the diversity of the sources is unimportant. According to this theory, the interactions are transmitted in the core of the disturbed field, and therefore the variations of intensity of the charges (disturbances), their velocity and distance are the ones which determine the complex transformations. The field cannot be observed but only inferred from its effect on the bodies. It can, nevertheless be represented in a formal model, described by the mathematical language of the Maxwell equations, which relate the variations of the magnetic and electric fields in a given point of the space-time (from the Encyclopaedia Britannica).

²¹ Personal translation from the original in Italian

1999a) uses a similar metaphor; despite being concerned with a *quantitative* dimension of emotions, the “powerful emotional forces”, Bion (1948-1952[1961]) refers to various *qualitatively* different kinds of emotional states such as fear, rage, guilt, depression, etc, which can comprise a “group atmosphere”.

Both Lewin and Bion used the metaphor of physical forces in an electromagnetic field to describe psychological/emotional forces in a group: *Valence*²².

*Socio-emotional forces: Valence/Valency*²³

To Bion, *valency* is a primary force that describes the “instantaneous and involuntary combination” of the individual and others in the group, and the way in which they act according to common emotional standards, i.e. the “group basic assumptions” (Bion, 1952 [1961], p.153)²⁴.

The term used by Lewin expresses a very similar same idea:

“The group standard has a social attraction for the individual’s behaviour²⁵. In Lewin’s terms, it has a positive valence. Thus the individual’s behaviour will change largely as a result of change in the group standards, that is, for any change in L^{GR} , there will tend to be a similar change in L^P in order to preserve the value of n ²⁶ (de Board, 1978, p.53)

²² Also spelled Valency, in chemistry, is the property of an element that determines the number of other atoms with which an atom of the element can combine. Introduced in 1868, the term is used to express both the power of combination of an element in general and the numerical value of the power of combination..(from *Britannica Encyclopaedia*)

²³ Valence in psychology and neuro-psychology nowadays is a widespread concept, rarely disputed, referring to the emotional value or the degree of attraction or aversion that an individual feels toward a specific object or event. It generally denotes the 'positive' or 'negative' character of an emotion, or of some aspect of emotion. (Colombetti, 2005).

²⁴ He states: *basic assumption activity [...] depends on the individual's possession of what I call valency - a term I borrow from physicists to express a capacity for instantaneous involuntary combination of one individual with another for sharing and acting on a basic assumption*

²⁵ Note that the concept of “group standard” is here quite similar to the idea of “group mentality” and “basic assumption” of group mentality in Bion.

²⁶ the n is the difference between the group standards and the individual’s behaviour: $L^{gr} - L^P = n$.

The protomental quality of valence

The terms “instantaneous and involuntary combination” used by Bion are not merely metaphoric:

I wish also to use it [valency] to indicate a readiness to combine on levels that can hardly be called mental at all but are characterised by behaviour in human beings that is more analogous to tropism in plants than to purposive behaviour (Bion, 1950[1961], p. 116-117)

I consider this idea equivalent in many aspects to Trotter’s (1916) notion of *herd instinct* (or *gregariousness*). This instinct represented the natural tendency of biological organisms to associate, first in multiple-cell (metazoa) forms and then in gregarious forms such as bee-swarms, herds, hordes and societies (for a more in-depth account of this conceptual equivalences see Torres, 2003a).

Similarly, for Lewin: "These valences [*Aufforderungscharakter*] correspond dynamically much more to a command, a summon, or a request” (Lewin, 1935, p.77)²⁷. Lewin also used the concept of *tropism* as a biologic metaphor of the forceful environmental influence on behaviour, as opposed to the individual’s intention, or even his/her individual ‘mood’²⁸. (Lewin, 1935, p.69).

²⁷“The valence of an object usually derives from the fact that the object is a means to the satisfaction of a need, or has indirectly something to do with the satisfaction of a need”. (Lewin, 1935, p.77). In a translator’s note to Lewin it can be read: “perhaps the most nearly accurate translation for the expression would be “compulsive character” (idem).

²⁸ “In Biology Loeb’s theory of tropism attempted to establish in a scientifically precise way dynamic relations between environmental situations and the behaviour of certain animals” (Lewin, 1935, p.69)

The social component of instinctual drives: Valency and emotions

I propose that the term “valency” denotes what Bion would in a later work call the “social component of emotional drives” (Bion, 1967; p. 118), by which I understand instinctive emotional exchanges between the “internal milieu” and the “social milieu”²⁹.

The term “emotions” seems to bridge the notions of a driving instinctual force from within, and a communicative externalisation, i.e., it can be seen as a direct interface between the internal biologic milieu and the external social milieu. Prominent evolutionary psychologists such as Tooby and Cosmides have recently defended a similar idea (see Gross, 1999).

The somatic, psychological and interpersonal characteristics of valency, as defined by Bion, match up almost perfectly with recent findings about emotional states. Emotional states are nowadays consensually considered to include:

a) Evolutionary origins and survival value (e.g. de Catanzaro, 1999; Langs, 1996; Gross, 1999); b) physiological activation of bodily functions, such as the endocrine and autonomous nervous systems (idem); c) tendencies to behavioural automatisms and discharge (bodily posture, facial expressions and vocal tone), which seem to be universal (e.g. Hatfield et al, 1994; Gross, 1999); d) a role as primary/non-verbal social communication (idem); e) contagious properties at an unconscious and physiological level, through unconscious mimicry and feed-back (Hatfield et al, 1994; Gump and Kulik, 1997; Dimberg et al, 2000); f) linking with socially shared cognitions, to convey

²⁹ To give an example, when a baby cries because his belly hurts (internal milieu), the act of crying per se is directed to his caretakers (social milieu) “asking” for help; the act of crying is the expression of an emotional experience that includes a self-preservation drive, i.e. hunger, *and* the dependence valency (i.e. ‘ask’ for the caretakers’ help). In this context, Eric Miller (1998a, p.45) refers to an *instinctive “groupishness”* as programmed into the embryo’s protomental system, which he believes to be characteristic of social primates. In her paper “Protomental Synchrony” (2000), Kate Proner gives very compelling illustrations of these biologic instinctive exchanges imbued with strong emotional experiences describing a newborn’s relationship with the mother. She states: *Instead of a slow emerging being I found an actively seeking purposeful creature...what instantly struck me was his crawling reflex on my stomach...I felt like a monkey as he attempted to crawl up my marsupial line...once face to face I was enthralled by the intense wide-eye looking that had a seeking quality* (Proner, 2000, p. 56)

and obtain information about the self and environment (e.g. Schachter and Singer, 1962; Gross, 1999).

Melanie Klein's and her followers' (including Bion) notion of *Projective Identification*, in the interpersonal communicative sense, is highly congruent with points d) and e), that is, with the communicative and contagious properties of emotions.

These characteristics of emotions are remarkably congruent with the properties of valency as put forward by Bion. According to him valencies: a) represent phylogenetic characteristics, b) have a physiological or *protomental* activation (in an area where somatic and psychic are indistinct), c) represent tendencies to act automatically d) they represent a form of primitive communication of affective states, or universal emotional communication³⁰ and e) they can be linked with a social cognitive function, in order to solve problems, to which Bion called *work-group-function*.

The ideas of *protomental system* and of *valency* propose hence that precursors of overt (psychologically/experienced) emotional states are present between the biologic functioning of the body and a mental experience. There are then several topics to be clarified: what is the role of protomental states in the dynamics of the organism in interaction with environment? What are the physical components of the protomental phenomena? What exactly is the process of transformation from one to the other?

With the exception of Antonio Imbasciati there has not been a systematic use or clarification of the protomental concept since Bion's speculations. Imbasciati developed his own theory of the protomental, and even though he refines and elucidates much of Bion's idea it does not deal with the central and fundamental *social* aspects.

³⁰ Actually, Bion made implicit references to theories of basic emotional expression, such as universal facial expressions (1961, p. 186): "*Every human group instantaneously understands every other human group, no matter how diverse its culture, language, and tradition, on the level of the basic assumptions*"

Recent developments

Recent developments in psychoanalysis, neuroscience and neuro-psychoanalysis allow for an expansion of Bion's intuition about the protomental system. On the social side, neo-darwinism and socio-biology have made progress too; I will briefly deal first with the later, and then with the mind/brain issue.

Protomental roots of social life

Wilson (1975) addressed socio-biologically the concept of *social field*, focusing on the complexity of multiple social relationships in primates³¹. More recently, the "social brain hypothesis" proposed that since living in groups requires sophisticated cognitive social abilities, higher primates' group life was the selection pressure responsible for the great development of human intelligence, the human mind as we know it (e.g. Dunbar, 1998).

In other words, the distinctive features of human mind are hypothesized to have emerged from the complexities of proto-human group life, as a tool to deal with the complexities involved in surviving and thriving in "social fields".

On the other hand studies in neuroendocrinology have revealed that hormones and neuromodulators facilitate and reinforce social bonds, and allow individuals to overcome anxiety and fear (e.g. Carter, 2005). Furthermore, social experiments using brain imaging indicate that cooperation, teamwork and reciprocated altruism correlate with certain areas and processes of the emotional brain, and result in feelings of pleasure (Rilling et al, 2002). These experiments have strongly suggested that human

³¹ He states: "In addition to monitoring multiple signals, higher primates evaluate the behaviour of many individuals within the society simultaneously. The animal lives in a social field in which it responds to multiple individuals simultaneously, in ways that take different relationships into account and often entail compromise" (1975, p. 253).

cooperation and gregariousness have a biological basis, and conversely that social bonds are correlated with brain functioning that results in feelings of pleasure and well-being.

It is important to note that these findings taken as a whole corroborate the “binocular” (biological and psychosocial) aspects of Bion’s group theories: social systems seem to be in part biologically grounded and can also *be used as* a defence against anxiety.

Protomental roots of the mental experience of affective states

In my view there are three authors who were decisive in clarifying and expanding Bion’s intuition about the protomental system: Antonio Imbasciati in cognitive psychoanalysis, Antonio Damasio in cognitive neuroscience, and Jaak Panksepp in affective neuroscience and neuro-psychoanalysis.

Imbasciati and cognitive psychoanalysis

Antonio Imbasciati has done a lot to clarify the nature of *protomental* operations; he has brought together object-relations theories and the findings of experimental cognitive psychology. (Imbasciati, 1989, 1998, 2006,).

Imbasciati has highlighted that the act of *perception* itself (either of external objects or of internal objects and affects), far from being a passive reception of sensory stimuli, is a very complex and active process which requires the coding/decoding of a stream of *afferent nervous impulses* by the central nervous system and the higher structures of the brain involved in complex *mental* states.

These afferent impulses are literally a continuous stream of raw biological data, e.g. electrochemical impulses in the retina or molecular changes in the internal milieu.

This somatic information coming from all parts of the internal body and the external senses has no psychic meaning *per se*, (see also the concept of *primary meaninglessness*; Grotstein, 1991). It must be coded and decoded before it can be used to create mental representations with any psychic personal meaning (Imbasciati, 1989).

In other words, afferent sensorial data must be translated from the biologic realm to the subjective psychological-experiential realm; into feelings, emotions, ideas, etc. Imbasciati proposed that protomental processes “digest” the stream of raw afferent stimuli, and prepare it for the endowment with subjective-phenomenological value and for the emergence of psychological emotional/affective experiences.

The next phase in the process is the emergence of nascent affective states, which convey phenomenological *value*, or valences in terms of the contemporary neuropsychological theories (e.g. Panksepp, 1998)- representing species-specific values about the *goodness* and *badness* of the afferent sensory information.

Imbasciati (1989) sees the primary divided internal objects (*good object* and *bad object*) as proto-representations of the world and the self; in other words, the sensory data from the inside and outside is “compressed” and qualitatively divided according to a good/bad dichotomy, manifesting in consciousness as feelings of well-being (goodness) or uneasiness/danger (badness).

Since these operations on raw sensory data must be present as a *pre-condition* to a mental experience, they cannot logically be mental: they are instead the prerequisites for the emergence of *mentality*, and are *biological preparations*, and *prototypes* for the mental experience, i.e. they can be considered *proto-mental*.

The neural Proto-self

Recently, Antonio Damasio (2000) proposed the existence of a biological precedent of the *sense* of self, a group of neural structures and functions, which he called the *proto-self*³². This notion fits well with Bion and Imbasciati's notions of protomental system and phenomena. Damasio says the *proto-self* is a

Coherent Collection of neural patterns which map, moment by moment, the state of the physical structure of the organism in its many dimensions [...] intimately involved in the process of regulating the state of the organism (p.154-156)

According to Damasio (2000, p. 192) the *proto-self* is essential in forming a non-verbal image that accounts for how the organism is affected by the processing of an object (either an external object or a mental object [feeling, memory, idea, etc]). The concept is congruent with and clarifies Imbasciati's elaborations on the protomental system as a "translator" of biological sensory data into the psychical-experiential realm.

Proto-Self, emotions and meaning

The qualitative account of the objects (*internal* and *external*) is, according to Damasio, expressed as emotional and affective states (that include biological, motor, expressive and psychological components), which represent the philogenetically grounded survival values of the "events and objects of our autobiographical experience" (idem, p.55).

³² These structures include: *Brain stem nuclei* (which regulate body states and map body signals) *Hypothalamus* (maintaining a current register of the internal milieu, e.g. levels of nutrients [glucose], water, ph, hormones, etc), *insular cortex* (holds an integrated representation of the current internal state of the organism).

Raw emotional states in a neuro-psychoanalytic perspective

Jaak Panksepp's work on affective neuroscience and neuro-psychoanalysis (e.g. 1998, 2004, 2005) tries to understand how affective states and raw emotional feelings - "being angry, happy, lusty, fearful, sad, or full of desire" (2005, p.41)- emerge from neurological brain activities. I will argue that Panksepp's propositions can integrate Imbasciati's and Damasio's, and, due to the focus on *raw affects*, serve as a direct bridge to Bion's notion.

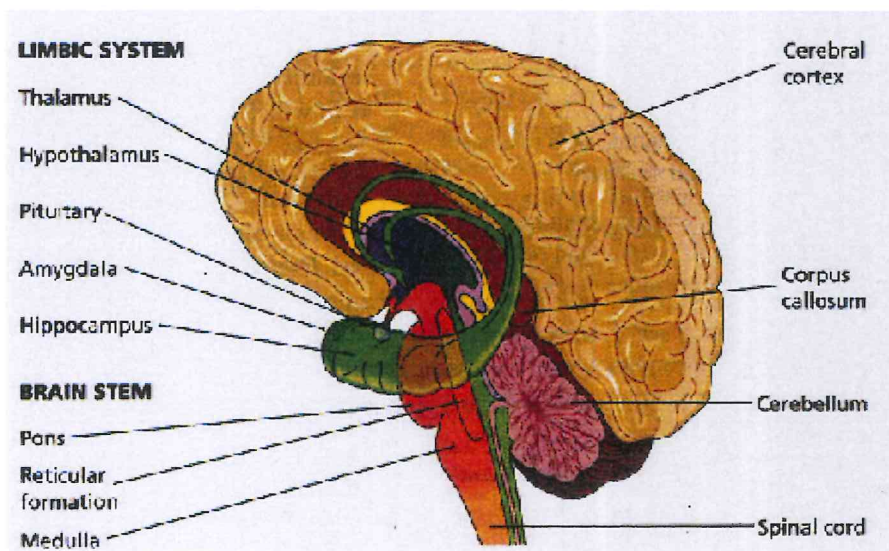
Again an alternative to "dualism" and "reductionism"

In a similar way to Imbasciati, Jaak Panksepp strongly advocates reconsidering the dichotomy of mental/non-mental, which he considers to be based on the fallacious interpretation of the differences in the brain morphology of a) *neocortical* structures (associated with thinking and self-consciousness) and b) *subneocortical* structures (associated with raw emotional states and regulation of the body). See figure below.

He argues that most of the *instinctual* activity, which is generated in *subneocortical* areas, and which cognitive neuroscientists in general consider robotically or biologically (i.e. non-mentally) is in fact a form of "primary-process mentality". In this sense he is proposing a form of proto-mentality, a category between biological activity and mental consciousness, congruent with the Freudian Id and the Bionian protomental system.

Like Damasio, Panksepp sees the emergence of affective feelings as arising from the convergence and interactions of a) brainstem representations of the body and b) biological value-coding systems, or emotional circuits of the limbic system (see figure 1 below).

Figure 1. Brain diagram³³



Panksepp (1998) comes close to defining something akin to a *protomental system* in particular brain regions³⁴. He believes that in those neural circuits is instantiated a *primal SELF* or *core SELF*³⁵ (in many ways comparable to Damasio's *proto-self*).

An evolutionary approach to proto-mentality and basic emotions

Panksepp envisions raw affects to be part and parcel of the genetically in-built emotional-instinctual action systems of the old mammalian brain (2005, p. 41). For him, like Damasio and Imbasciati, the basic emotional and motivational feelings are internal value indicators that inform animals of major survival issues, in other words, they

Tell organisms where they stand with respect to environments and actions that will enhance or detract from the likelihood of their own survival as well as of their kind³⁶ (1998, p. 567)

³³ Neocortical structures are represented in light grey by the label "cerebral cortex". The dark colours represent the *sub-neocortical structures*, including the *limbic system* characteristic of mammals, and also evolutionary older structures such as the cerebellum and the brain stem. Image from <http://www.math.tu-dresden.de/~belov/brain/brainstruc.html>

³⁴ One key area is the so-called *periaqueductal gray* (PAG) in the limbic system where the above-mentioned convergence/interaction of neurological representations of the body and emotional circuits occur.

³⁵ SELF are the initials for "Simple Ego-type Life Form"

He considers these to be the basis of deeply *valenced feelings*, and expressing prototypical indicators of internal-value, encoding the animal's most important bodily concerns and major survival issues.

This brings us close to Bion's valences and basic assumptions. According to Panksepp, old limbic regions of the brain constitute essential infrastructures for emotions and feelings, or an "essential neural pre-adaptation for the emergence of higher levels of consciousness" (1998, p. 556).

Basic emotional systems

Panksepp stresses the importance of distinguishing fully differentiated *secondary emotions*, sometimes called "socially built emotions" such as compassion, shame, guilt, etc, which are clearly secondary and psychosocially constructed, from the energetic and primary-process aspects of the *basic emotional states* (2006).

He defines various qualitatively different *basic* emotional states, which result in a variety of basic/fundamental "subjectively experienced feeling states" (1998, p.576), which are remarkably similar to those pointed out by Bion in his notions of valences and basic assumptions. In the *Periaqueductal Gray* (PAG) structures of the brain, Panksepp (1998, p.571) lists the presence of circuitry causally related with the emergence of

- *Fear and anger*
- *Sexuality*
- *Pain and separation response*³⁷

³⁶ Note the importance of the group ("their kind") in the definition of basic emotional feelings, in congruence with Bion's social psychology of the protomental..

³⁷ Panksepp proposed that the neural circuitry of physical pain evolved to accommodate forms of social pain or *separation anxiety* in animals that heavily depend on their kin to survive.

It is quite clear that these basic emotional circuits in the PAG are very similar to Bion's categorization of the valences and basic assumptions in a) Fight-flight b) Pairing and c) Dependence.

Correspondences between Bion's group theories and thinking theories

The objective of the next section of this chapter is to deepen the enquiry in to *protomentality* as it is found in Bion's work, by highlighting some of the correspondences between Bion's earlier group theory and his later "theory of thinking" with its concepts of *beta-elements*, *alpha-elements*, and *beta-screen*. I will try to demonstrate that the later, even if largely based in the Kleinian theories of primitive states of mind, is highly relevant to the former Bionian concepts.

Bion proposed several times that the dual relationship could be seen as a particular case, or a restriction, of a wider group-field relation (1961[1952], p. 166; 1963, p.86; 1967, p. 146; 1970, p. 66). For instance:

As psychoanalysts we are concerned with the...individual in semi-isolation from his group, but closely involved in a situation likely to stimulate his 'pair' characteristics (1970, p. 66)

Actually, both sets of theories follow a comparable pattern, trying to trace the steps of an emotional experience from the bodily origins to the mental processing of its meaning. It all starts with social and biological urges of the organism and the group that spring from the biologic condition, i.e. "emotional drives", organised in three categories:

Dependence \Leftrightarrow "need for the breast",

Fight/flight \Leftrightarrow aggressiveness / "fear of dying",

Pairing \Leftrightarrow "sex".

These are raw emotional states, at first indistinct from bodily sensations, and are quasi-automatic action tendencies; they can then be transformed into more sophisticated and organised mental contents and structures which allow for the development of cognitive abilities, when interaction with other humans by special functions (*alpha* and *work-group function*).

Basic assumptions and beta elements

Starting from the body, i.e the biologic: both basic assumptions and beta elements are seen as originating in a matrix where "physical and psychological are undifferentiated" (1961[1950], p. 102; 1963, p.22), hence indistinct from the somatic dimension.

| Basic Assumptions | Beta Elements |
|--|--|
| <p>"Difficulty that attends any attempt at determination of the line that separates psychological from physical phenomena. I propose therefore to leave indeterminate the limits that separate the active basic assumption from those I have relegated to the...protomental system" (1961[1952], p. 154-R)</p> | <p>"This term represents the earliest matrix from which thoughts can be supposed to arise. It partakes of the quality of inanimate object and psychic object without any form of distinction between the two" (1963, p. 22).</p> |
| <p>"Fight/flight could almost be put in terms of the chemistry of adrenaline or glandular relationships; dependence of that of the mouth on the breast and sucking it" (1976, p. 291)</p> | <p>"These feelings are indistinguishable from bodily sensations" (1963, p.40).</p> |

Discharge/disavowal of raw emotions and affects versus transformation into mental elements

In Bion's theory of thinking, the raw emotional experiences (beta elements) demand "discharge of tension". At the same time they are open to be transformed into

mental ideograms– alpha elements - that make the experience storable and recallable in memory, as well as allowing for repression and forgetfulness (Bion, 1959[1992], p.64).

The conceptual root of these ideas is the model of the ‘reflex apparatus’ used by Freud to describe the emergence of the thinking process³⁸ (Bion, 1962, p. 56). Freud (1915c, p.118-122; 1915b, p.188) saw mental processes as a way of delaying the automatic motor discharge characteristic of the reflex arc³⁹, in order to more adequately scan the environment and learn to adapt to different situations. As mentioned earlier in this chapter, this can be seen as the passage from non-mentality to mentality in Imbasciati’s (1989) classification.

Both basic assumption and beta elements represent a primal state of the organism’s response to sensory data. In this primary state, the affect/emotion is experienced as bodily sensations, as ‘accretion’ of stimuli in the psyche and can be dealt with as if it could be evacuated by direct muscular action or by the process of projective identification with other persons; not as much to effect changes in the environment as to “disencumber the personality of accretions of stimuli” (Bion, 1962, p.13). These primary responses prevent the transformation of sensory data and the development of mental processes, in so far as mental processes require the delay of automated discharge.

However, raw emotional experiences are not part of the reflex-arc morphology of the nervous system, instead they are open to be transformed into mental experiences; in this sense they are properly proto-mental (again following Imbasciati’s classification).

³⁸ According to the physiology of the “reflex apparatus” (reflex-arc) a specific sensory stimulus is followed by an immediate and automatic (pre-programmed) motor discharge.

³⁹ In his words: “an inhibition of the tendency of cathected ideas towards discharge” (Freud, 1915b, p.188)

The transformation into symbols and affective verbalization

Bion (1961[1952], p. 185-187) acknowledged that the Kleinian investigation of failure in symbol formation was essential to understand the development of basic assumptions. Hence, the inability to use properly verbal *symbolic* language is another topic where the concepts of basic assumptions and beta-elements clearly overlap. Both concepts represent phenomena that, while untransformed, are not amenable to the use of abstract symbols, and therefore, to the *mental* use of verbal language (Segal, 1957).

If words are used they are used as a mode of direct *action*, a way to unburden the stimuli by discharge, or as vehicles to evoke emotional states in the other.

| B.A. | Beta elements |
|---|--|
| <p>“The more the group corresponds with the basic assumption group the less it makes any rational use of verbal communication. Words serve as a vehicle for the communication of sound” (1961[1952], p. 185)</p> <p>“Melanie Klein (1930) has shown that the inability to form symbols is characteristic of certain individuals, I would extend this to include all individuals in their functions as members of the basic-assumption group” (1961[1952], p. 187)</p> | <p>“...his use of words is much closer to action intended to “unburden the psyche of accretions of stimuli” than to speech” (1962b, p. 24)</p> <p>“...that reverse process of concretisation by which words cease to be abstract signs but become things themselves” (p. 53)</p> <p>“...breakdown of alpha-function with predominance of beta-elements which are remarkable for their concreteness to a point where some patients regard words not as the names of things but as things-in-themselves” (p. 55)</p> |

Verbal language can be used as a form symbolic contact with the internal reality; both concepts in discussion describe an arrest of that translation of the bodily stimuli into psychologically meaningful emotional awareness. Bion proposed that this arrest could represent a defence if the contact with the internal world is experienced as painful, too complex to handle and/or arousing extreme frustrating feelings of doubt and uncertainty. In this case, the distress caused by mental growth is dealt with by terminating the possibilities of growth.

Therefore, both in beta elements and in basic assumption mechanisms, verbal language is used as a way of “unburdening the psyche of accretions of stimuli”; this seems to correspond to what Bion later came to refer to as the “fragmentation of the verbal container by the excess of emotional content”⁴⁰ (Bion, 1970, p. 94), and to which Hinshelwood called *fragmented* containment (1987, 1989).

Non-verbal Emotional communication

I would like to deal with the mechanism of evacuation in some more depth before looking at ways of emotional suppression in the next chapter. It is important to include Bion’s concept of *beta-element-screen* here. The notion of Basic assumptions is very similar to the concept of beta element screen, which is described as purposive having three complementary aims 1) to achieve raw emotional communication to the therapist, 2) to destroy the rational work (in order to get emotional contact and warmth instead of interpretations), 3) to induce certain emotions and responses in the others (projective identification and counter-transference) (Bion, 1962, pp 21-24). It is thus a method for projecting emotional states in to others, derailing intellectual purpose, in favour of obtaining immediate emotional relief to distress.

⁴⁰ Bion states: “The words that should have represented the meaning the man wanted to express were fragmented by the emotional forces to which he wished to give only verbal expression; the verbal formulation could not ‘contain’ his emotions” (1970, p.94)

| B.A. | Beta-element Screen |
|--|---|
| <p>“Complaints...that my remarks are intellectual; that my manner lacks warmth; that I am too abstract” (1961[1949b], p. 84)</p> <p>“Silences in the dependent group are...either expressions of determination to deny to the leader the material he requires for scientific investigation, and thereby prevent... to undermine the illusion of security” (idem)</p> <p>“In group treatment...the most important [interpretations] have to be made on the strength of the analyst’s own emotional reactions...these reactions are dependent on the fact that the analyst...is at the receiving end of...projective identifications.” (1961[1952], p. 149)</p> <p>“The analyst feels he is being manipulated so as to playing a part in...in somebody else’s phantasy” (idem)</p> | <p>“The beta screen is coherent and purposive. An interpretation that the patient was pouring out a stream of material intended to destroy the analyst’s psychoanalytic potency would not seem out of place.” (1962, p 22-23)</p> <p>“Beta-screen has a quality enabling it to evoke the kind of response the patient desires, or, alternatively, a response from the analyst which is heavily charged with counter-transference” (p. 23)</p> <p>“Thanks to the beta screen the psychotic patient has a capacity for evoking emotions in the analyst” (p. 24)</p> <p>“...are less related to his need for psychoanalytic interpretation than to his need to produce an emotional involvement” (p. 24)</p> |

There is an enduring ambiguity about both the concepts of b.a. and beta elements in Bion’s and followers’ work. Sometimes they are seen as primary “raw” emotional entities, and on other occasions they are seen as collusion against mental development and contact with internal reality. That is, either as an immaturity of the mental apparatus (deficit model) which can be a normal, non-defensive component of raw emotional communication or as a defence (a destructive activity)⁴¹.

In fact, Bion describes both basic assumption and beta screen as having also a positive side; basic assumptions can assist the *work-group-function* (1952, p. 235; 1961, p. 188), and by means of the beta screen the patient is trying to get cured (1962, p. 101), in both cases by imparting cooperation and interaction with emotional significance.

Therefore, there is in Bion’s work a consistent tendency to value positively raw emotional communication as the first step to further mental development. This is present in his use of the concept of “normal projective identification” (Bion, 1967,

⁴¹ This point was most clearly made by Joyce McDougall in her works on psychosomatic illness (e.g. 1989). Also Grotstein (1999) differentiated states of raw emotional phenomena either of primary (immature) and secondary (defensive-destructive) types: primary and secondary *nothingness* and *meaninglessness*.

p.102-104); Similarly, the refusal or misunderstanding of raw emotional communication between mother and baby lays the ground for the most severe psychotic states of mind.

In the group vertex is epitomized in the assertion:

the inescapable bestiality of the human animal is the quality from which our cherished and admired characteristics spring (Bion, 1970, p. 66).

According to Bion, the basic assumptions are responsible for a “pleasurable feeling of vitality” in the group members (1961[1952], p. 159) which is an aid and inspiration to hard work and to the persistence necessary to high achievements, without which human cooperation becomes “robotic”.

Rigid containment, ‘Robotization’ and Alexithymia

In alexithymia, the use of language is apparently marked by the opposite of what is portrayed in evacuation of beta elements and in basic assumption states. Alexithymia is characterised instead by an extreme lack of emotional content, by a kind of emotional “dryness”, of “robotization”, of the emotional content (e.g. see Taylor, 1987, p.80-82). This is exactly the opposite of the emotional *evacuation* associated with the “unburdening of accretions of stimuli”.

Therefore, if they are *not* symbolically transformed into alpha elements (i.e. ideograms and symbols) and if words are used as concrete “things”, it is possible to propose that the verbalization of raw affects can manifest in two possible forms”:

a) The use of words as a form of *evacuation and* externalisation of raw affect, characteristic of basic assumptions and beta element.

b) The uses of words emptied of emotional meaning, characteristic of alexithymia, avoiding emotional content, or in a single word *suppression*.

I will now address how the concept of *protomental* as has been used in the psychoanalytic oriented literature.

The protomental system in the post-Bionian literature

The notion of protomental phenomena and disorders was quoted by relatively small number authors, but in many apparently disparate fields⁴². The topics cover subjects such as *group dynamics* (Macnamara and Weekes, 1982; Rouchy, 2002), *perinatal development* (Mancia, 1981; Proner, 2000), *psychosomatic and immunitaire system illness* (Sanders, 1984; Meltzer, 1989), *autism* (Tustin, 1991; Gaddini, 1993; Mitrani, 1994, 1998; Korbivcher, 2005), *panic attacks* (Ferro, 1996), *fertility* (Christie, 1998), and *theory, methodology and technique of psychoanalysis*, (Grotstein, 1995; Lear, 1996; Ponsi, 1999)

The diversity of themes is, in my view, united by a common problem that I have been addressing in this chapter: the emergence of the mind and of higher mental faculties from a body/nervous system/brain; and particularly the deficiencies in this mental emergence and development. The process is looked at developmentally (diachronically) and also occurring at every moment in the *here and now* (synchronically); this dual-track (synchronic and diachronic) is most clearly spelled out in the work of Imbasciati (1989).

In the papers cited, Bion's notion of protomental seems very compelling as a description and explanation of phenomena that are highly resistant to a psychological therapeutic approach: i.e. very primitive states of mind (e.g. autism and panic attacks), rigid social conformism and adhesive imitation, and also psychosomatic disturbances.

⁴² A systematic search made in PEP electronic archives made in February 2006, in which the search engine was asked to find text with the word "protomental" yielded only seventeen results.

In all of these states the flexible, adaptive, creative, communicative and affect-modulatory properties of the human mind seem to be absent or severely impaired.

Deficits in the mental processing of raw affective experiences

In general, the authors who resort to the concept of protomental see the associated disturbances as failures of *transformation* of sensory experiences into symbolic elements, neither physical nor mental *in origin*. When addressing this deficit, they resort to Bion's later notions of *alpha function* and *beta elements*.

Protomental phenomena are associated with the psychophysical basis of symbolic functions of the mind (Gaddini, 1993), with automatic psychochemical reactions to stress (Tustin, 1991), and with *unmentalized* sensory experiences (Mitrani, 1994). Ferro (1996) distinguished two possibilities of disturbances worth the name of *protomental*: *evacuation* of "un-metabolised emotions" (e.g. panic attacks and "characteriopathic behaviour"), and *encapsulation* of primitive mental states in a "claustrum" or "rigid container" (autistic states).

It is important to note that panic attacks have been considered by some analysts as a modern name for *anxiety neurosis*, one of the actual neurosis described by Freud (e.g. Grotstein 1991); in this respect Mitrani (1994) clearly bridges anxiety-equivalent attacks and *unmentalized experiences*, i.e. *protomentality* in Bion's terms.

Autistic contiguous Position

Kumin (1998) considers protomental phenomena to be pre-representational states at the same level as the primitive phenomena described by Ogden's *autistic-contiguous position*, i.e., *prior* to the Kleinian developmental positions and states of mind. According to Ogden (1992), the notion of *autistic-contiguous position* proposes a

way of conceptualising a “realm of experience” more primitive than either the paranoid-schizoid or the depressive position, a sensory-dominated, pre-symbolic mode of generating experience, in which anxiety consists of an unspeakable terror of the dissolution of boundedness⁴³ (Ogden, 1992).

Protomentality precursors in foetal development

According to Mancina, research on prenatal and perinatal life supports the hypothesis that there is no differentiation between somatic and psychic functions at the beginning of life (1981, p.351). He proposes that the REM sleep of the foetus from the 28-30th week is a protomentality framework “within which the sensory experiences [...] are transformed by the foetus into internal representations” (idem). Maiello (2001) expanded this idea and proposed that the auditory experience of the mother's voice normally stimulates foetal protomentality activity; According to him in autistic states there is a psychophysical retreat from the auditory experience of the mother's voice.

Mentalization

Peter Fonagy and colleagues (e.g. Fonagy et al, 2002) have developed a theory of *mentalization*, somewhat similar to (and deriving from) some of Bion's later ideas such as *alpha function* and *reverie*. Due to the limitations of the present work I will not discuss this in depth, but only point out the basic divergences between their position and the one developed in the present thesis.

⁴³ Ogden's description of this type of anxiety as “unspeakable terror” is reminiscent of Bion's concept of “Nameless Dread”, linked to the failure in transformation sensory data into alpha elements, and of course of panic attacks and anxiety equivalents (bodily symptoms already described by Freud in the actual neurosis). However, there has been much controversy and disagreement about the concept of autistic-contiguous position (e.g. Ryle,1996), maybe because the philosophical models of body and mind are not made sufficiently clear.

They do not posit the existence of a protomental dimension of *socio-emotional* experience, and do not focus on Bion's earlier theories of group behaviour. Also, their conceptualisation does not admit the primary nature of social linking, i.e. protomental origins of social co-operation (Gergely, 2004, personal communication). Their theory posits that mentalization is secondary to secure interpersonal *attachment patterns*, and hence focused on what in Bion's model would be called the *dependence valency*. In contrast, the argument I am building requires the process of "mentalization" emerging in the entire spectrum of emotional interpersonal experiences, which in this model comprises not one, but three socio-emotional systems (Dependence, Fight-flight and Pairing).

In this chapter have tried to clarify the notion of protomental in Bion, and argued that this notion reflects the properties of *raw affective states*. I have addressed two main problems that are posed by Bion's notion of protomental: the body/mind problem and the group/individual problem, and tried to clarify the broader philosophical and scientific context in which his ideas must be understood.

I have also tried to integrate Bion's two perspectives on raw affects: the group theories and the psychoanalytical theories, in order to obtain a "binocular perspective" on Bion's notion of protomental. In the next chapter I will focus on the mental and social processes to deal with raw emotional experiences, building upon the notion of *emotional containment*.

Chapter 3. Emotional containment of raw affects

I will now address a theoretical framework about the strategies for dealing with emotions at a raw and pre-verbal stage; when an emotional experience at the bodily level becomes an inchoate mental experience, and when there are yet neither representations nor words available to express and signify the emotions. These states seem to be characteristic of the early stages of mental life, as well as of the adult when facing overwhelming emotional states that challenge his capacity to master them, give them meaning and communicate them to others using words.

I will propose following Bion and Hinshelwood that - using a metaphorical model of *contents in a container* (sensory contents in a psychic container) - the modes of dealing with these states can be divided in to three fundamental types a) *flexible*, b) *fragmented* or c) *rigid*.

As I understand this model, the main components are the following:

- 1) The sensory “contents” of an emotional experience, i.e. the signals from the *internal milieu*, have a dimension of *quantity* (excitation/arousal/salience),
- 2) the psychic “container” has a dimension of *quality* (goodness/badness originated from an *a priori* structure of survival-fitness values);
- 3) the integration of the sensory stimuli with the psychic-container results in psychological-experiential feelings and imagery: “ideograms” (Bion, 1959[1992], p.64), “dream-like visual images” (Bion, 1962, p.7), “visual

imagery” (Wisdom, 1959, p. 137-138) or “imaged accounts”¹ (Damasio; 2000, p. 192).

- 4) These ideograms are initially simply “good” or “bad” objects (Imbasciati, 1989), and they structure the *mental* experiences and growth of the individual in context of his social field.
- 5) However, the sensory contents can be overwhelming, and the psychic container may be unable to accommodate them. This would lead to the *fragmented* and *rigid* types of emotional containment.

In this chapter I will incorporate the notions of *flexible*, *rigid* and *fragmented* modes of emotional containment with support from empirical research of other later and independent authors, from psychoanalytic, cognitive and psychometric schools of thought (Horowitz et al, 1979; Sundin and Horowitz, 2002; Pennebaker, 1990; Pennebaker et al, 1990; Schumacher et al, 1999)

I will argue that these three types of emotional containing can be seen at the same time wide enough in their generality and specific enough in their classification to describe the principal features of most of the ways of dealing with raw emotional states.

I will also argue that *rigid* and *fragmented* modes are both *deficient* forms of containing and regulating raw emotions that do not allow for the emergence of psychological and symbolic capacities. Hence, they fail to bring about mental adaptation and psychological learning from experiences, and the positive general state of health, which seems to be correlated with mental growth (e.g. Taylor, 1987; Vaillant, 1979)

¹ Damasio states: “the imaged account is...generated from structures capable of receiving signals from maps which represent...the proto-self” (2000, p.192)

I will then focus in more detail on *rigid* forms of containment, addressing in particular the mechanism of emotional *suppression*

Modes of dealing with pre-verbal emotional states

In trying to sum up the vast amount of theory and research available in this area (which includes great part of the work of authors such as Klein, Bolwby, Winnicott, Bion, Fairbairn, Balint, Stern, Spitz, Main, Ainsworth Lichtenberg, Tronick and Gianino, and many others), it can be argued that the general pre-verbal patterns of emotional interaction can be described in the following meta-narrative:

- a) The individual, normally a child or someone in a vulnerable position, is distressed by overwhelming psycho-physiological sensory stimuli (hunger, fear, pain, irritation, excitement, etc), but is helpless to deal with the excitation.
- b) He/she expresses distress by non-verbal somatic and emotionally charged signals, that have an experiential quality of “badness”
- c) The other/caretaker receives the signals and gets emotionally aroused, and interprets them according to a priori survival-fitness values (hunger, fear, anger, lust, loneliness, etc) and assigns meaning to the pre-verbal emotional communication of the individual and
- d) 1. Acts in order to solve the distress by fulfilling the needs of and/or soothing the distressed person,
2. Or tries instead to avoid the distress by some form of avoidance, alienation or abuse.

Finally

- e) The vulnerable individual internalises and assimilates the strategies for dealing with the emotional distress, and by doing so “learns” to use them autonomously. The outcomes of these containing/regulatory processes establish themselves as functions of the personality of the developing individual.

- f) If the internalised strategies are successful ones, the individual is capable of reproducing the adequate response to emotional distress more autonomously, if they are unsuccessful and/or if the internalisation process is “faulty”, there will be a sort of chronic incapacity of solving the distress and the need for a caretaker or of alternative ways of getting rid of emotional distress.

Note that although some of these processes are quasi-automatic and common to other mammals (namely a), b) and arguably c); see e.g. Panksepp, 2000), others seem to be highly influenced by cultural norms and beliefs about education, child rearing, values of the group, and other social elements and structures (Gergely and Watson, 1996; Leff, 1973).

Containment of the mounting excitation/distress and emotional rest, can be brought about by a) the fulfilment of needs and restoration of the internal milieu and homeostasis, i.e. solace and soothing, or b) by the capacity to plan actions to fulfil needs, thereby achieving a sense of agency, mastery and control over the internal and external world (Lichtenberg, 1989; pp136-143). These two areas of emotional containment seem to correspond to different neural substrates: roughly speaking the sub-cortical emotional structures (such as the limbic system) and the neocortical action-planning and conscious awareness structures (e.g. Lane and Garfield, 2005).

The vital importance of interactive emotional containing/regulation

I am focusing now mainly on a quantitative factor of affects, as indicated in the first chapter. The capacity for emotional containment and regulation that I am more interested in this work is the capacity to prevent emotional states reaching overwhelming levels, i.e. traumatic states and correlative somatic disruption. The idea

of an *overwhelming level* of emotional states is to be placed in the context of Freud's original notions of *thresholds of stimulation* (e.g. Freud, 1895b, p. 138; Gediman, 1984) and *traumatic states*; and also of Cannon and Selye notions of *stress* (both addressed in the first chapter), as well as of later complementary elaborations such as Krystal (1988) and Van der Kolk (1996) ones, that integrate psychodynamic and physiologic notions of traumatic stress.

In the first chapter we saw, particularly as demonstrated in Walter Cannon's work on psychological shock, that containment/regulation of excessive emotional excitation is vital for actual physical survival. It seems that the lack of cortical mechanisms to inhibit emotional excitation leads to a cascade of autonomic reactions that totally exhausts various systems of the organism (Cannon, 1942; see also Sachar et al, 1970).

It is quite well established that the process of containing emotions requires consistent emotional bonds and patterns of interaction with emotionally involved caretakers, and that interactive emotional regulation contributes greatly to the internal milieu's homeostasis and to the general state of health (e.g. Spitz, 1946; Taylor, 1987; Schmidt and Schulkin, 1999).

In the following sections I will briefly describe the concept of emotional containment in the Bionian context, and take up again his notion of *alpha function*. I will compare it with some conceptions of *emotional regulation* and propose that the psychosocial processes described in the later can be included in the notion of *emotional containment*.

I will also review some independent studies that provide some empirical support to the containment notion and the three categories of containing modes (rigid, fragmented, flexible) at both the individual and interpersonal level.

The notion of containing

The Post-Kleinian derived notion of “containing” (Hinshelwood, 1989a, p.246-253) denotes the process by which emotional states, experienced as “parts” of the person and as internal “things” that are felt as unbearable or “bad”² are fantasised as being projected into an “object” in order to reduce the emotion’s distressing power to the individual³.

Bion proposed that these states are initially not experienced as mental “images” symbolically represented, but instead are experienced as sensations, as *things in themselves*, as concrete things that can be rid of (e.g. Bion, 1962, p.6). He described alpha function as a *mental* function with quantitative (i.e. energetic) and qualitative (i.e. cognitive) components: reduce anxiety (“detoxify” emotional experience) and attributing meaning to ideograms, or dream-like images.

Alpha function and failure of alpha function

The concept of alpha function proposes the idea that the person serving as a psychic container, if able to experience the elicited emotional state at a psychologically meaningful level, can identify the *feelings* that have been aroused, and in this way the emotional state emerges as psychosocial meaning out of the somatic-perceptive realm.

From this stage it becomes possible to deal with the material in a *mental*, non automatic way, through 1) intentional changes in the environment to solve the problem/need that had caused the emotional state in the first place and 2) by representing it *symbolizing* it and making available to storage and recall from memory.

² See previous chapter for the physiological and perceptive grounds for the phenomenological experience of “badness” according to Imbasciati (1989, 1998, 2006).

³ As already mentioned in the meta-narrative above, the target-container of these “projected parts” is emotionally aroused by them and must then deal with an emotional state now “in its hands”.

Alternatively, the “projected” parts, remaining at a raw state of what Bion calls “beta” elements: quasi-automatic discharge action tendencies⁴ and somatic alterations⁵, can gain a distressful effect in the person serving as a container, and eventually spread to the larger interpersonal fields by further projection and evacuation (Hinshelwood, 1989b, p 75-78).

Internalization and assimilation into the personality structure

The Bionian model of containment also proposes that at the end of the containing process there is an assimilation and learning of the “process” of containment itself, as elaborated by the mechanism of *introjection* and *introjective identification* (Hinshelwood, 1989a). It becomes internalised as a function of the personality’s structure, and will be active as privileged way of dealing with distress and emotions:

Something of mother’s mental ability has been introjected (mentally taken in) by the baby who can then use the understanding for himself. Mother has in effect re-projected back into baby a modified form of what he projected into mother and which he then introjected with a resulting modification of his personality (Hinshelwood, 1987, pp.230)

An attempt at Formalization

Bion (1962, p.90-96) tried to develop a general abstract formal theory of the container-contained relations in the individual mind and the group⁶. In short, and for what interest us most in this discussion, the sense impressions correlated with raw emotional experiences must be made coherent by being grouped (contained) into

⁴ See also the concept of “fixed action patterns” (Gross; 1999)

⁵ Or in other words, they remain “indwelled in soma” (Winnicott, 1960)

⁶ “I shall abstract for use as a model the idea of a container into which an object is projected...the later I shall designate by the term contained...container and contained are susceptible of conjunction and permeation by emotion. Thus conjoined or permeated or both they change in a manner usually described as growth. When disjoined or denuded of emotion they diminish in vitality, that is, approximate to inanimate objects” (1962, p.90-96)

categories (containers); in other words, these sense impressions can be seen as efferent impulses from the internal milieu (Imbasciati, 1989, 2003, 2006), that must then be categorised according to *a priori* intrinsic values of the organism and of its social field (Damasio, 2000; Panksepp, 1998, 2005, 2006; Edelman, 1992) so that they have a meaning (i.e. goodness, badness, hunger, fear, pain, anger, etc).

According to Bion, the ideational awareness of emotions can only develop when sense impressions, which are initially experienced as incoherent⁷ (1962, p.92), are *contained* by *pre-conceptions*. Preconceptions represent *a priori* innate states of expectation at first “relatively simple undifferentiated preconceptions probably related to basic regulation of the organism (feeding, breathing and excretion)” [1962, p.93].

In other words, meaningful mental contents properly arise from the mating of very basic innate protomental structures (preconceptions) with sensorial data, which result in an internal “image-feeling” (Damasio, 2000). This is the basis to the *alpha function* and of an *apparatus for learning by experience* through thinking processes (Bion, 1962, p. 91).

Bion argued that the container-contained relations are seen as homologous intra and extra psychically, i.e. in the individual, the pair and in the group (e.g. Bion, 1970, p.16). This idea is clearly formulated in the following quote:

The activity that I have here described as shared by two individuals becomes introjected by the infant so that the [container-contained] apparatus becomes installed in the infant as part of the apparatus of alpha function [...] (Bion, 1962; p.91)

⁷ According to Bion, initially incoherent sense impressions are experienced as in the schizoid paranoid position, but without the feeling of being persecuted (idem).

Conceptions and words

The result of the mating of container and contained is a *conception*, an initial abstraction (idea), which can include the formation of words⁸. In the previous chapter I have already addressed the use of symbolic words to communicate and to modulate emotional states. I stressed the importance of words as containers of meaning, instead of being at the service of action-discharge by sound, or of rigid alienation of emotional awareness (action discharge and rigid alienation both at a beta element state). Bion is particularly clear on words and containing in the following passage

These words I write are supposed to “contain” a meaning. The verbal expression can be so formalized, so rigid, so filled with already existing ideas that the idea I want to express can have all life squeezed out of it. On the other hand, the meaning I wish to express may have such a force and vitality...that it destroys the verbal container. The result is not a compact communication but an incoherence (1967, p. 141).

Fragmentation, Flexibility and Rigidity

In his formal-abstract conceptualisation of the containing process, Bion placed emphasis on *flexibility* (non-rigid integration, or resilience of the *container*) as the way for the new sensorial data to be integrated with previous knowledge and allow mental adaptation, i.e. *learning by experience*.

This is the foundation of the state of mind of the individual who can retain his knowledge and experience and yet be prepared to reconstruct past experiences in a manner that enables him to be receptive to a new idea. (Bion, 1962, p.93)

⁸ For Bion, conceptions and words represents hypothesis about the world; the process “abstracts successively more complex hypothesis and finally whole systems of hypothesis which are known as scientific deductive systems” (1962, p.94).

As discussed in the previous chapter, these are the characteristics of the *mind* and of emotionally meaningful information processing, or as Robert Langs (1996) called it “emotion-processing mind”.

Hinshelwood (1987, 1999b, 1999c) tried to define the process of emotional containment in the interpersonal field using three dimensions: Cohesiveness (of the container), Disturbance (of the emotional contents) and Flexibility (of the containment process). He defined three main possible outcomes: Rigidity, Fragmentation or Flexibility.

- a) “In the first variety, the container reacts to the intrusions by becoming rigid and refusing to respond to what has arrived in it, with the result that the contents, the contained, lose form or meaning.” (Hinshelwood, 1999c)
- b) The second would be a “flexible relationship, one in which the contained enters the container and has an impact on it, whilst the container and its shape and function also modify the contained.” (idem)
- c) “The third type is rather the opposite of the first, in which the contained is so powerful that it overwhelms the container which bursts or in some way loses all its own form and functions. A mother's mind can literally go to pieces, and she panics or even breaks down.” (idem)

Intra-personal or inter-personal emotional containment?

A pertinent question refers to the problem of *where* the containment occurs. This problem can be addressed in two separate dimensions: the *individual-or-group* level, and the *contents-or-container* level. With regards the fragmented containment, where does the fragmentation occur; in the contained, in the contents, or in the system as a whole?

At the level of the individual, the containment process and consequently the containment deficits, can be seen as taking place in the individual's own psychic

apparatus. However, in the larger picture of the individual as a social being, it can be suggested that an inter-personal containment system must be implicated in the containment deficits.

At the level of contents versus container, the problems in emotional containment can be associated with a) defects of the container (rigidity-fragility), b) excessive intensity and impact of the sensory contents (excessive arousal), or c) both factors at the same time.

Self and interactive regulation

I will suggest now that the main ideas and concepts described under the broad term of *emotional regulation* can be included in this general theoretical scheme of *emotional containment*, so that much of the literature about emotional regulation can be contextualized in the light of the above proposed emotional containment types (rigid, fragmented, flexible). This is in my view important because there is very little empirical research on the emotional containing paradigm in comparison with the amount done on the emotional regulation paradigm

According to James Grotstein,

“Self-regulation, or modulation, is a term which has recently re-emerged from the infant development literature [...] to indicate that the newborn infant [...] requires its mother attuned intervention (interactional regulation to modulate until such time as these external interventions have been internalised as part of the self)”.

(Grotstein, 1991b, p. 12).

These processes are seen also as vitally important for the survival of the individual. The baby must, from birth to two months, be able to form basic homeostatic cycles and rhythms of sleep/wakefulness, feeding/elimination, activity/passivity,

quiescence and crying⁹ (Chatoor et al., 1984; Lichtenberg, 1989). Note the equivalence of these basic homeostatic functions with the initial “preconceptions”, described above as proposed by Bion. The accomplishment of these biologic homeostasis cycles is followed by the ability to mobilize and engage in increasing complex forms of interaction, which must be also regulated, but now at the level of psychologically experienced feelings (Lichtenberg, 1989).

The Mutual Regulation Model (MRM) stresses the interactivity of child and mother in the process of emotional regulation; when the mother accurately reads the message conveyed by the infant’s behaviours and responds appropriately, she enables the infant to self-regulate (Tronick and Gianino, 1989). Also here, the caregiver is seen as relying on his own interpretation of the sense data relative to the emotions aroused by the child’s needs¹⁰. For instance, Mary Ainsworth’s definition of *sensitivity* involved (a) noting that a signal had occurred, (b) interpreting it accurately, (c) responding promptly and (d) appropriately (Hesse and Main, 1999). Then, the caretaker can impose a regulatory response with more or less flexibility.

There is also the assumption of a process of “internalisation” of some sort, be that of a successful or of impaired regulation interactions. This internalised representation will be used as a non-conscious implicit guide to one’s interactions with other partners (e.g. Tronick and Gianino, 1989, p.65)¹¹

⁹ “In facilitating the establishment of homeostasis in these infants, the caregiver plays a critical role. She must be able to provide both a physical and emotional environment in which the infant can balance and regulate both internal and external stimuli.” (Chatoor et al, 1984.)

¹⁰ ...If she does not respond, his regulatory efforts may fall, and he become disorganized...The interaction has been characterised as a dyadic system in which the infant and the mother attempt to achieve the culturally valued goal of a shared positive emotional state (Idibem)

¹¹ “The infant will develop a representation of his interaction with his mother as generally well regulated and repairable. [...] he will then apply this representation of other and self to guide his interactions with other partners, because it will in part structure his performance and emotional state with them” (Tronick and Gianino, 1989, p.65)

Complementary of containment and regulation

I will suggest now that the concepts of containment and of emotional regulation can, in their basic principles, be seen as describing equivalent phenomena; they differ in their models for interpreting what is happening.

Regulation of homeostasis by feed-back

The idea of emotional regulation as described above seems to be grounded in the cybernetic ideas of homeostasis' regulation by feedback processes, of which one of the simplest examples is the regulation of temperature by feedback in a thermostat (Carver and Scheier, 1998; p. 13-14, 26-27). This makes the model quite appropriate to describe the experience and regulation of emotional intensities and of biological cycles in relation to an optimal balanced state, directly linked with the realm of biological regulation of somatic states.

Spatial-imagistic experience

On the other hand, the concept of containment seems to be metaphorically grounded in the geometric mechanism of *projection*. In this sense it is directly linked with the experience of the human body in the spatial environment and of its own body parts in space and in relation one to another, and to other objects. This seems to be more appropriate to describe the emergence of phantasies and dream-like imagery, in other words, representations of emotional states as "things" and objects, the borders between inside and outside, and the different experienced-imagined regions of the body and the "self".

Complementarities

Although I am unable to treat this subject in depth here I would, however, like to suggest that both models could be seen as complementary in the sense that they represent different vertexes of observation on the same phenomena¹². Finally, the introjection of faulty, deficient and disturbing interpersonal processes in the form of what Kleinian tradition metaphorically called the *bad breast* (Bion, 1962, p. 34-35, 97) has also a clear parallel in the assimilation, into the child's *core affective representation*, of a dismissive relation with the caretakers (Tronick and Gianino, 1989).

The deficit types of containing and regulating emotions

In this section I will argue for the validity of the classification of containment in the three categories of *fragmented*, *rigid* and *flexible*. I will also expand on the idea that *fragmented* and *rigid* can be seen as complementary forms of containment-regulation *deficits*. The notion of *complementary deficits* implies that they would tend to oscillate, one giving place to the emergence of the other, but without leading to the emergence of a structure of psychical meanings that can be reflected upon and verbally communicated.

There are some data supporting the theory that there are two apparently opposed poles of reactions to overwhelming emotional arousal and traumatic states; these opposed states represent forms of mental *rigidity* and of mental *fragmentation*, and there

¹² Marans and Adelman (1997), for instance, explicitly used both notions when proposed that *regulation* of affective states and *containment* of anxiety and terrors are among the factors included in the sense of "psychological safety". An example that might clarify these complementarities could be the containing and regulatory functions of nursery rhymes or lullabies used to sooth and regulate sleep and anxiety states in infants.

are also some data suggesting that they are correlated with an array of somatic disturbances and health impairments.

Bion's and Hinshelwood's hints

An oscillatory dynamic of mental rigidity and mental fragmentation was suggested at early in Bion's work when he stated the following in one of his group papers:

“Fear of the basic assumption, which cannot be satisfactorily dealt with by structure and organization, therefore expresses itself in the suppression of emotion, emotion being an essential part of the basic assumption. The tension thus produced appears to the individual as an intensification of emotion; the lack of structure promotes the obtrusion of the basic assumption...”(1952 [1961], pp. 174-5)

Also Hinshelwood (1987, p.232-235) described how the intensification of the *rigidity* dimension of emotional containment, through bureaucracy, excessive regulations and impermeable borders in a community can be interpreted as a protection against the feeling of emotional fragmentation, by use of what he calls ‘numbing’ and ‘ossification’; the *rigid* containment strategies can be viewed as ways of reducing the emotional arousal and excitation levels and the associated high intensity of distress characteristic of the experience of emotional *fragmentation*.

Reaction to Traumatic emotional states: Intrusion and Avoidance

Mardi Horowitz and colleagues observed that the most commonly reported responses to traumatic stressors, in terms of experienced subjective impact, fell into two major response sets: *intrusion* and *avoidance* (Horowitz, et al, 1979), which can be seen as corresponding to the experiences of fragmented and rigid types of emotional containment.

Intrusion involved ‘unbidden thoughts and images, troubled dreams, strong pangs or waves of feelings, and repetitive behaviour’. *Avoidance* involved ‘ideational constriction, denial of meanings and consequences of the event, blunted sensation, behavioural inhibition or counter phobic activity, and awareness of emotional numbness’ (Horowitz *et al*, 1979).

Also, according to Horowitz intrusions and avoidances tend to oscillate during the same time period:

Avoidant behaviour often results from the operation of unconscious control processes, and function to restore emotional equilibrium, prevent emotional flooding and reduce conceptual disorganisation. These defensive efforts are disrupted by intrusive experiences. Such dreaded states sharply contrast with a desired state of equilibrium. To restore stability, people react with heightened defensive control (Sundin and Horowitz, 2002).

Horowitz’ questionnaire and these two dialectical dimensions of uncontained emotional rawness (secondary to trauma), have been validated in several cultures.

Cognition and levels of emotional thinking

In the cognitive psychology literature on strategies for dealing with emotional states, several authors also reached a classification similar to the one implied in Bion’s and Hinshelwood’s work. Greenberg and Safran (1987) have proposed that emotional-cognitive processing has two poles that must be balanced: suppression/avoidance and overreaction/intrusion; emotional upheaval signals alarm when imbalances between the poles occur.

Independent studies by cognitive experimentalists focusing on non-clinical subjects have presented results that seem to me to be compatible with the emotional containment model proposed in this work.

James Pennebaker devised several experiments with a “stream of consciousness” technique similar to free association transposed to a writing sample ¹³. He and colleagues classified, with good degrees of reliability and validity, the individual differences of writing style in a “continuum” reflecting the degree of emotional content of the texts (Pennebaker et al, 1990; Pennebaker, 1990). *High level* was characterized by emotional awareness and broadness in scope, while *low-level* was the relative absence of these attributes and characterized by superficiality (e.g. absence of accounts about close relationships). He also added a third intermediate level, which he called *flexible*. People with a flexible level tended to be stable in their thinking style, while the rest tended to “bounce around between high and low thinking styles” (Pennebaker, 1990; p.61).

Furthermore, strong evidence was proposed to support the idea that both extremes were correlated with somatic ailments of various kinds:

those people who were chronic low-level thinkers and high-level thinkers had more health problems and consumed more alcohol and aspirin than any other group. In other words, flexible thinking styles were associated with better health and less stress-related behaviours than rigid low or high levels of thought (Pennebaker, 1997, pag. 63)

I will now return to Bion’s ideas and try to assemble a more explanatory theory on types of containing.

Fragmentation – disintegration

Bion (1962, 1970) elaborated at length the cases where the container-contained relation failed in such a way that the sense impressions correlated with emotional experiences did not cohere into a container, a mental structure (a preconception, a

¹³ The person is asked to write continuously on a blank piece of paper for ten minutes about whatever is in their minds (Pennebaker et al, 1990, p.61)

conception or words). This corresponds to experiences without psychic meaning (Grotstein, 1999; Hinshelwood, 2003)

This model was used by Bion to understand the disorganization of thinking and perception characteristic of psychotic states (Bion, 1962, 1967). However, it is important to distinguish clearly the psychotic state of mind, and some pre-psychotic features of the *fragmented* state of mind.

Difference between fragmentation-trauma and psychosis-defence

Many years previously, in *Studies in Hysteria*, Josef Breuer (*in* Freud, 1895, p.203) tried to explain the psychotic phenomenon of hallucination as a passing over of cerebral excitation to the peripheral organs of perception. This was to be subsequently elaborated by Bion (e.g. 1962, p.84; 1967, p.41) as *evacuation* of accretions of excitation to expel disturbing particles by discharge in action, projective identification and hallucinatory mechanisms.

In psychosis we could say the subject loses the ability to distinguish between exteroceptive and interoceptive sensorial data, i.e., what stimuli come from the internal milieu and what come from the external world, and hence loses contact with a socially shared common sense¹⁴ (1962, p. 50-51). However, in psychotic hallucinatory-delusional states, the internal emotional reality is perceived everywhere, everything in the external world is imbued with personal-emotional meanings (albeit very primitive and idiosyncratic)

However, to completely equate the experience of a) psychic fragmentation and trauma with b) psychotic states can be misleading. According to later authors, psychotic pathology can be interpreted as a defensive solution itself, secondary to the experience of emotional fragmentation associated with the traumatic state (e.g. McDougall, 1989,

¹⁴ See also the notion of *Social construction of reality* (Berger and Luckmann, 1966).

p.42-43; Cohen and Kinston, 1984, p.419; Grotstein, 1991, 1999), and represents a form of psychological defensive organization of sense impressions data through delusions and hallucination (Sachar et al, 1970).

Delusional and hallucinatory systems can thus be seen as psychological defences with some psychological meaning (normally of a persecutory nature, or fear of dying, but also depressive-melancholic); in other words, the defences used massively in psychosis such as projective identification and other schizoid omnipotent phantasies (Hinshelwood, 1989a), can still be seen as cognitive-mental constructions that allow for a control of the mounting anxiety through mental operations of imagination and phantasy.

Psychotic states correlated with somatic regulation

In fact, in a very original and thorough psycho-endocrinological study of psychosis, Sachar and colleagues (1970) described how a state of panic and ego disintegration, previous to the establishment of a psychosis, was associated with serious somatic disruption (very great elevations in corticosteroid and adrenaline). However,

As the patients went on to enter the phase of psychotic equilibrium – that is, the phase of...organized psychotic system – emotional distress decreased and corticosteroid and epinephrine [adrenaline] diminished towards normal levels (1970, p. 1067).

Subsequently,

in therapy, as these patients began to give up their psychotic delusions and to grapple once more with painful reality issues they moved through a transient phase...in which corticosteroid excretion once more increased, presumably as part of the stress response...corticoid excretion during periods of organized psychosis and recovery were similar (p. 1067-1068).

More recently, Muller et al (2000) verified that the clinical severity of psychosis is positively correlated with *activation* of the immune system, that is, with the production of cells that combat infections and cancer, which confirms that the full-blown psychotic state as a positive function for the somatic body regulation.

Finally, Taylor stated that there is a reciprocal relationship between the effectiveness of psychological defences and the level of activation of stress hormone systems (Taylor, 1987, p.268), which have deleterious effects on physical health, has I have already pointed out in previous chapters.

Fragmentation proper

Some people suffer severe psychological trauma without suffering a psychotic episode, or even without developing other full-blown psychological disorders such as major depression (e.g. Heim et al, 2001). Hence, I believe that it is useful to reserve the construct of mental *fragmentation*, or psychic disintegration, to denote states previous to any psychical organization of defences, denoting only the overwhelming mounting of excitation in the psyche (“accretions of stimuli in the psyche”; Bion, 1962, p.7) characteristic of the traumatic state in itself, which W. Cannon (1942) had called psychological shock and which can itself lead to death by somatic exhaustion.

Among a handful of phenomenological terms for describing the extremes of the traumatic states Bion (1967, p.116) referred to “nameless dread” as a state of terror without a definite psychical representation, and Grotstein (1991a, 1991b, 1999) made reference to the “black hole experience” and to meaninglessness. According to Grotstein, these are states where the mind is dominated by quantitative pre-symbolic aspects (1991b, p.268). As we have already pointed, Freud elaborated this topic in

anxiety attacks and agoraphobia, and in the somatic equivalents of anxiety in actual neurosis (Freud, 1895; 1895b).

The disorganization of the mind in acute traumatic states is also addressed for instance, in Horowitz's (1986) "acute catastrophic stress reaction" characterized by panic, cognitive disorientation, dissociation, severe insomnia and agitation.

Sachar et al (1970) described a pre-psychotic "severe ego-disintegration" state, with the following cardinal features: 1) breakthrough of painful conflicts into consciousness 2) massive breakdown of repression, 3) severe annihilation anxiety, 4) fluid ideas of reference 5) bizarre bodily sensations 6) hypersensitivity to stimulation of all types 7) cognitive confusion 8) primary process thinking 9) loss of a sense of identity. As we have seen above, this state is correlated with severe somatic stress, measured in very high levels of cortisol and adrenaline (exactly as in the psychological shock described by Walter Cannon).

I would like to include all these states in the construct of *psychic fragmentation* (Hinshelwood, 1987, 1989).

Rigid emotional containment

Bion (1962,1967) spoke of *another* way of dealing with overwhelming emotional distress; one that opposes fragmentation but is not accompanied by the destruction of the sense of reality as is psychosis. This form of dealing with traumatic states is based precisely on the strengthening of a special form of "sense of reality" that disavows the awareness of emotional distress.

I will argue that Bion's notion of a rigid way of dealing with raw emotions was elaborated in various periods of his work, and that the concepts of *work-group-function*,

attacks on emotional links and the notion of “deflection of emotional awareness” are all parts of his ideas on rigid emotional containment

Attacks on emotional linking

Bion (1967, p.93-109) proposed the concept of *attacks on emotional linking*, to explain the attempts to preserve contact with external reality in some severely disturbed patients. These attempts were characterized by denial of phantasies, using of language to prevent emotional bonds, hatred of emotion and the need to avoid awareness of it (pp. 97-99). The mechanism of projective identification itself was attacked, because it represented a method of emotional communication (see previous chapter).

Bion associated these states to an early mother-baby relation characterized by dutifully/unemotional responsiveness of the mother to the baby’s emotional displays, representing the mother’s dominant “denial of ingress” of the dread feelings of the baby (1967, p.104). The patient’s style of thinking was in sum characterized by a concern with concrete objects, hatred of all emotions including hate itself, a severe and destructive super-ego, and personality links “which appear to be logical, almost mathematical, but never emotionally reasonable” (idem, p.109).

Deflection of emotional awareness

Bion (1962) also elaborated on a very similar topic, which could be called “deflection of emotional awareness”:

The infant receives...creature comforts from the breast; also love, understanding, solace. Suppose his initiative is obstructed by fear of aggression...if the emotion is *strong enough* it inhibits the infant’s impulse to obtain sustenance...fear of death through starvation of essentials compels resumption of sucking. A split between material and psychical satisfaction develops...steps are taken to destroy awareness of all feelings...if a *sense of reality too great to be swamped by emotions* forces the

infant to resume feeding, intolerance of envy and hate in a situation which stimulates love and gratitude leads to *a splitting that differs from the splitting carried out to prevent depression...* in that its object and effect is to enable the infant to obtain what latter in life would be called material comforts without acknowledging the existence of a live object on which these benefits depend...*the need for love, understanding and mental development is now deflected*, since it cannot be satisfied, into search for material comforts...the craving for love remains unsatisfied and turns into overwhelming and misdirected greed...*the patient uses an equipment suited for contact with the inanimate to establish contact with himself* (1962, p. 10-12).

He proposed that these states are also based on untransformed, protomental beta elements.

I will argue now, using the work of other psychoanalytic authors that have addressed traumatic experiences, that there seem to be mechanisms of the psyche which can be used to deal with the threat of traumatic fragmentation without compromising the sense of reality: the contact with a social commonsense and the distinction between internal and external sensory stimuli.

This is I believe a similar mechanism to what Bion is describing above, and it is also compatible with Hinshelwood's idea of rigidity of emotional containing: "the container reacts to the intrusions by becoming rigid and refusing to respond to what has arrived in it" (see above).

Several other psychoanalytic authors addressing traumatic experiences have also referred to a particular state of extreme rigidity and avoidance of emotional awareness.

In this respect, Fenichel (1945) had already elaborated on a "blocking of emotional awareness", in which specific physical expressions of any given affect may occur without the corresponding specific mental experiences, that is, without the person being aware of their affective significance. For Fenichel this was the *simplest form of*

defence against affects. Once more, it is related to Freud collated ‘anxiety equivalents’. Fenichel refers to what Freud and Breuer called ‘strangled affects’, and what Landauer collated in the term ‘equivalents of mourning’ (Fenichel, 1945; p. 293).

Sperling (1955) referred to “denial of impulses” that are “split off and barred access to the ego”, and therefore cannot undergo the modifications that the derivatives of the repressed impulses undergo in neurotic symptom formation. To her this was the only way certain patients maintained themselves in an apparent reality-adjusted manner.

Krystal’s (1988) thorough study of psychic trauma pointed out that the first defensive reaction to a traumatic state is one that changes the affective state from mounting anxiety and hyper-alertness to one of blocking emotions and progressive emotional inhibition. He gives examples of survivors of the Nazi persecution, who spent long periods of time in a condition of robotization or “psychic closing off.” (Lifton, 1967) Such a state was often preceded by an attempt to deny the reality and to “numb” one’s emotional responses. In “closing off,” there is a “virtually complete suppression of all affect expression and mental registration”. (Krystal, 1988, p.145).

Lifton (1967) who studied the traumatised survivors of Hiroshima refers to “psychic numbing” (and its more acute form, “psychic closing-off”) as a cessation of feeling undergone by survivors of atrocious catastrophes. He believes that this state operates in everyone who performs some kind of reality-oriented task while confronting fear of death, and considers it a defence against otherwise overwhelming anxiety.

Grotstein (1991b, p. 283) speaks of a state of “shock induced frozenness” of the sensory apparatus, that he called a “blank psychosis” as the patient experiences the traumatic state.

Horowitz, as we have seen, described the similar mechanism of *avoidance* involving ‘ideational constriction, denial of meanings and consequences of the event,

blunted sensation, behavioural inhibition or counter-phobic activity, and awareness of emotional numbness' (Horowitz et al, 1979).

A possibly similar state has been also described by other authors using concepts such as “mechanical life” (Marty, cit. in Aisenstein, 1993), ‘hypercathexis of reality’ (Aisenstein, 1993), and “robot-like co-operation” Bruch (1969)

Sense of Reality, work-group-function and suppression of emotional states

In the previous quote, Bion (1962, p.10-12) proposed that a strong sense of reality could be associated with blunting the awareness of excessive emotional arousal-distress (also implied in Lifton’s “closing off” to perform tasks under emotional distress). This is also a recurrent motif in Bion’s previous ideas on the *work-group-function*. The Work-group function has the function of contact with reality (1948-1952[1961], p. 127, 135, 157) analogous to the function of the Ego in the individual (idem, p.143). On the other hand, Bion (1950[1961] p. 100-104) proposed that the work-group-function itself was able to *suppress* the emotional manifestations of basic assumptions.

Consequently, my proposal is that, when resorting to the work-group function, and because of emotional *suppression*, which I will define more clearly below, the person does not go mad when facing an overwhelming emotional intensity; instead he/she loses or destroys contact with part of the emotional life; he/she enters in a rigid emotional containment state.

This kind of mental insufficiency¹⁵ is not socially maladaptive and exuberant as psychosis and psychic fragmentation are, and hence it can be confounded with “normality”, when in fact it represents “pseudo-normality” (e.g. Wisdom, 1966).

¹⁵ Bion addressed this as “a kind of simian capacity for acquiring technical skills” which contrasted with “a capacity for full emotional and intellectual development” (Bion, 1948, p.84).

The psychotic mechanisms have, according to Bion's elaborations, the aim of destroying contact with a commonsensical and socially shared *exteroceptive* reality. I will argue that, in contrast, *emotional suppression* can be seen as a mechanism that would work by strengthening the contact with *external* reality and at same time by stripping-off the psychological awareness and the meaning of emotional *interoceptive* disturbance.

Emotional Suppression

Bion was never totally clear about the details of the mechanism of *suppression*; one possibility is that he was implicitly relying on Freud's references to *suppression*. It is thus pertinent to compare the Freudian notion of suppression with the notion of *repression*, and to articulate the intertwining role of the two mechanisms in the defences against traumatic levels of affect arousal.

Repression

Although unfeasible to do a complete revision of the concept of repression, is central to this work to identify its principal assumptions and theoretical problems. It is necessary because this work is dedicated to pathologies which cannot be explained by *psychoneurotic repression*, i.e. by the defensive forgetting of traumatic memories and construction of symbolic over-determined symptoms to replace them. Instead they must be explained by more basic and crude mechanisms, mechanisms moreover, which do not imply the presence of symbolic symptoms.

According to Cohen and Kinston (1984), leading psychoanalysts of all persuasions consider many clinical phenomena of severe conditions such as narcissistic and borderline states, a challenge to commonly held concepts of repression. In defence

of their point of view they quote Freud saying “repression certainly does not arise in cases where the tension produced by lack of satisfaction of an instinctual impulse is raised to an unbearable degree”¹⁶(1915a, p.147, cit in. Cohen and Kinston, 1984, p.411).

The very first definitions of psychic defence and repression were taken from Freud’s clinical practice of encouraging the patients to freely associate in order to recall traumatic memories. The strong mental resistance of the patient in recalling those memories puzzled him. Freud (1895, p.268-269) postulated a defensive psychical force in the patients that was opposed to the pathogenic ideas becoming conscious and being remembered; he called it an “aversion on the part of the ego” and concluded that it was the same type of force that originally succeeded in forcing the ideas out of consciousness and out of the available memory.

The idea of *force* to describe repression is reiterated several times in Freud’s work, but the question of the precise nature of this force remains largely unanswered and obscure still today (Billig, 1999, p.16). According to Sulloway (1979), the problem of the precise mechanisms of pathological repression in neurosis was a major problem for Freud during the initial years of psychoanalysis, and the unfinished and missing last part of the “Project for a Scientific Psychology” was an attempt to solve it. Billig states that about two decades later, in the ‘Introductory Lessons’, Freud conceded that that we only have one piece of information on repression:

‘it emanates from forces in the ego’ and these forces are responsible, at least in part for it. Apart from that ‘we know nothing more at the present’ (Billig, 1999, p.27)

Billig (1999, p.14) sees a rather surprising gap in Freud’s account: “he avoided specifying exactly what his patient was doing in order to repress the hidden thoughts”.

According to Billig the idea of the ego as the repressing agent, to account for both

¹⁶ Freud continues: “the methods of defence which are open to the organism against this situation must be discussed in another connection.” But “it is not clear what ‘other connection’ Freud had in mind” (editor’s note” (Freud, 1915a, p. 147)

conscious and unconscious determinants of repression, postpones the problem, and creates additional problems, which perpetuate the confusion. He suggest that the attempts at clarifying repression should use phenomenological levels of description instead of, or at least before, theoretical meta-psychological jargon¹⁷.

However, there are plenty of hints in Freud's texts, which allow us to reconstruct what he was observing. I propose to try deciphering the Freudian jargon on repression through his reported clinical observations, and from his use of precise scientific knowledge of the time. I will try to clarify and emphasize that the *suppression* of affect expression and of speech and the disavowal of meaningfulness of ideas are the *intentional* components of repression. This task is of central importance to the present work because I will use the notion of emotional *suppression* as a form of containing affects, to explain the protomental pathologies. I will propose that this mechanism of emotional suppression can be used independently of repressing ideas and representations.

Intentional affect suppression and withdrawal of the cathexis

There is an immense difficulty in understanding the process of psychoneurotic amnesia brought about by repression, since according to the theoretical part of studies in hysteria, an idea or memory charged with affect draws all the attention and "only the group of ideas which provoked the affect persists in consciousness, and it does so with extreme intensity (Breuer *in* Freud, 1895, SE, II, p.201). The solution seems to be to deal with the affect itself: making the idea *emotionally unimportant*, by taking out its affective energy and also the meaning out of it: rob the idea's affective power.

¹⁷ The general problem of jargon in psychoanalysis was also pinpointed by Bion, as well as by others (see *introduction* for Talamo et al, 2000).

Actually, Freud stated that *the process of defence* “consisted in turning a strong idea into a weak one, in robbing it of its affect (Freud, 1895, p.280), and that for this reason “the repressed idea would persist as a memory trace that is weak” (idem, p.285). Later, in metapsychological terms, Freud stated that the “mechanisms of repression have at least one thing in common: a withdrawal of the cathexis of energy (or libido)” (Freud, 1915a, p.155).

The process can hence become more plausible: without the “quota of affect” (i.e. without the cathexis) the idea (or psychic representation) would remain as a “dormant” memory trace, as it were an associative link “in the dark”. In this way it could be forgotten as any irrelevant event supposedly is.

The questions now are: What processes can be postulated to carry out this *withdrawal of cathexis*? And how would these processes be related to the functional amnesia, i.e. the patient’s inability to recall the memories by association? It must be stressed that, according to Freud, only the psychical representations (ideas, memories) can be *repressed*, i.e. turned unconscious, and not the affect and the instinct themselves (Freud, 1915b, p.177). That is, while the chain of association composed by ideational or informational representatives of the instincts and affects can be cut (“the psychical trace is lost from view”), the energetic part cannot be removed. This is the reason why the *affect* is channelled in to other ideas and to the symptoms by conversion or displacement.

However, the affect, at least temporarily could be *suppressed*: Freud proposed that one of the vicissitudes of the quantitative factor of the instinctual impulse (i.e. the affect or emotion) can suffer is being *suppressed* “i.e. prevented from developing at all” (Freud, 1915b, p.178).

Freud on suppression

Freud mentioned the term *suppression* since the “Preliminary Communication” of the Studies in Hysteria but, according to Laplanche and Pontalis (1973, p.438), the definition of suppression has not been clearly spelled-out. In Freud’s “Papers on Metapsychology” (Freud, 1915-17: 105–323) *repression* and *suppression* are clearly different concepts, and *suppression* is applied to the instinct-affect in its “energetic” quality.

The very early ideas at the base of the psychoanalytic theory itself can help to clarify some points: In their “Preliminary Communication” Breuer and Freud proposed that the split between conscious and unconscious could be brought about either by a severe *trauma* (as in the case of traumatic neurosis) or by a “*laborious suppression*,” (1895, p.12). In the paper “The Psychological Mechanism of Forgetfulness” Freud explained how an episode of functional amnesia started in a “suppression” (Freud, 1898, SE, III, p.289-297); it is clear that he meant a voluntary inhibition of speech and a change of topic of conversation¹⁸. Furthermore, in the “Unconscious” (1915b) Freud stated

We know, too, that to suppress the development of affect is the true aim of repression and that its work is incomplete if this aim is not achieved” (p.178).

I believe that a *phenomenological* clarification of what Freud meant by *suppression* can be found in his description of the phenomena of *resistance* to recalling traumatic memories.

¹⁸ Freud prevented himself from telling a story about the link between death and sexuality to a travelling companion, and he changed the conversation to the frescoes of Orvieto. He rapidly forgot the episode, but also the name of the artist that painted the frescoes: *Signorelli*. He concluded that he could not intentionally recall the name because part of the word (*signor*) means *Herr* in German, and the word *Herr* was directly associated with the disturbing story on death and sex he did not want to tell.

Resistance and suppression

According to Billig (1999), Freud came to suspect that the denials and silences characteristic of resistance indicated that the patients were trying to *suppress* what had been conjured up (Billig, 1999, p.21). Once more, Freud (1895, pp. 253-306) stressed the *intentionality* of suppression; the obstacle was the patients' will which prevented them from "freeing themselves"; the patients were "put on their guard", they were tense, stiff. Then, when the psychoanalytic technique finally would deliver results, the patient would refrain from telling what came to their minds; As Freud put it "the longer the pause, the more suspicious"; they would keep something back, or they would change topic to something irrelevant (e.g. the tickling of the clock in the consulting room). When the memory was finally recounted, the patient would exert cognitive disavowal by saying it wasn't important or was irrelevant to the subject at hand, or "I couldn't believe it could be that" (idem. p. 279). Freud even advised the reader to be attentive to the facial expressions, so as to distinguish the restful state of mind from emotional tension and misleading verbal disavowal (p.281).

In Freudian theory, the intentional effort at suppression is allowed both by the ego's access to motility and to manifestations of affectivity which are under the control of the conscious system: "this shows that repression results not only in withholding things from consciousness, but also in preventing the development of affect and in the setting-off of muscular activity" (Freud, 1915b, p.179).

A definition of emotional suppression

Based on Freud's clinical accounts, I would like to propose that the mechanism of emotional *suppression* can be defined phenomenologically as composed of three

intentional operations, all of them part and parcel of what is defined metapsychologically as “withdrawal of cathexis”:

- a) suppression of emotional expression (e.g. by muscular rigidity),
- b) suppression of speech, (e.g. focusing on irrelevant unemotional topics),
- c) disavowal and denial of the idea’s meaningfulness.

It is important to note that a considerable body of literature in various fields have used the term *emotional suppression* to denote the intentional avoidance of thinking about and expressing of affects, emotions and feelings (e.g. Giese-Davis and Spiegel, 2001; Gross and Levenson, 1993; Traue, 2001; Richards and Gross, 2005). In this sense they are in complete agreement with Freudian clinical descriptions and with what has been proposed above as a definition of suppression. For instance, Richards and Gross (2005) definition of emotional expressive suppression states that:

One particularly common form of emotion regulation is expressive suppression, which entails hiding overt signs of inner emotional states [...] respondents described situations in which they focused on their face and tone of voice to suppress how they were feeling (p.3).

In this chapter I have addressed containment deficits, and suppression of affects and emotions in general; I focused on containing emotional stimuli, experienced as quantitative emotional excitation in general.

I will now turn to the discussion of protomentality, containment deficits and affect suppression, in each of the three socio-emotional basic systems proposed by Bion: Dependence, Fight-flight and Pairing.

Chapter 4. Psychosomatics, Addictions and Suicidal behaviour as Protomental disorders of emotional containment

In this final theoretical chapter I will address how the ideas about protomental phenomena, raw emotional experiences and difficulties with its symbolic transformation, which were developed in the previous chapters, can apply to the disorders under analysis. I will explore in more depth the idea that addiction, suicidal behaviour and the so called “traditional psychosomatics diseases” (Taylor et al, 1997) can be viewed—from the perspective of the model developed in this thesis—as *protomental disorders*. I will also address at more length the proposal that they can be related to deficits of emotional containment in the three different basic socio-emotional systems, or *valences* (Dependence, Fight-flight, Pairing) proposed by Bion.

The fact that there is not a systematic body of research using the notions of *protomental* and of *emotional containing* to understand this kind of chronic health problems makes the task at hand particularly demanding. However, there is a great amount of literature, both in the psychoanalytic and non-psychoanalytic areas elaborating the psychosocial and psychobiological correlates and determinants of these problems, which can re-interpreted in light of the present proposals.

I have examined some of the most relevant literature and looked for equivalences between other models and theories and Bion's¹, in an effort to find general compatibilities, rather than subtle disagreements. Inevitably, this task is still at an embryonic stage, and requires a more detailed overview of the “bigger picture”. Hence

¹ The procedure for literature revision was as follows 1) search the Psychoanalytic Electronic Publishing (PEP) database for all the papers with “Psychosomatic”, “Addiction” and “Suicide” in the title. 2) Identify the most frequent and relevant cited references in the papers and track them 3) Identify the most frequently cited non-psychoanalytic papers.

this approach runs the risk of lumping together concepts from different areas of research, which by themselves deserve much greater elaboration.

Notwithstanding the remarkable quantity of different concepts and terms addressing similar phenomena, on a deeper and more substantive level it seems to me that the notions of *protomental* and of *deficits in emotional containment* seem to be a reasonable way of grouping together a large proportion of the relevant observations and apparently distinct theories. In order to support this view, I will argue that some of the central features of emotional containment deficits that I have been addressing in the previous chapters, or using Bion's early terms, the characteristics of *protomental symptoms*, can be viewed as common denominators in these three groups of disorders.

I will try to pinpoint the following three general common denominators on addictions, suicidal behaviour and psychosomatic symptoms, which have been described in the literature of diverse areas of research (psychoanalysis, psychotherapy, psychology and sociology):

- *Protomental nature*: all of these symptoms seem to manifest in a mind-body "middle ground" that comprise physical and psychological symptoms in a rather indistinct manner.
- *Fluctuate along group dynamics*: seem to be linked to social and relational dynamics more clearly than be determined by individual-personality and intrapsychic factors.
- *Are accompanied by deficits in the symbolization and in the verbalization of emotional states*, and also by deficits in the *internalisation* of emotional containing capacities

After identifying and addressing these common denominators, I will address some of the available evidence compatible with the hypothesis that addictions, psychosomatic

symptoms and para-suicide can be seen as being related to deficits in emotional containment in three different basic emotional systems: Dependence, Fight/flight and Pairing.

Psychosomatics, Addictions and suicidal behaviour as

Protomental disorders of emotional containment

In a way congruent with the present proposals, Lifton, (1979) proposed that suicide, psychosomatics, and alcoholism are all characterized by outbreaks of intense emotion (p. 407), difficulties in the symbolization process and development of meaning, and are problems of *human connectedness* (see pp. 401-410).

In the field of cognitive psychology, Carver and Scheier's (1998, pp. 346-358) overarching model of self-regulation of behaviour, proposed that drug abuse, illness proneness and suicide are all behaviours of "goal disengagement". In their view, goal disengagement is a consequence of a "giving up tendency" which can reflect an "attempt to obliterate awareness".

Protomental of Psychosomatic symptoms

The literature and research on the so called psychosomatic symptoms is so vast and complex that attempting a valid summary of it would require a whole dissertation dedicated to each of the specific pathologies considered to be "psychosomatic" in some way.

To worsen things, the evolution of the empirical research gave rise to important changes in the concept of what is to be considered "psychosomatic". The advent of sophisticated biological methodologies of research on the various systems of the organic body have revealed a daunting complexity of interactions between the nervous system,

immune system and endocrine system of the body, as well of processes of reaction to internal milieu changes, and reaction to external agents such as bacteria.

The discovery of pathological external agents in the determination of certain diseases that had been erroneously considered for many years to be idiopathic, degenerative and possibly determined only by emotional and psychic factors such as asthma, diabetes mellitus, peptic ulcer, coronary artery disease, rheumatoid arthritis and multiple sclerosis (Levenstein 2002, p. 745) has damaged the reputation of the psychological and psychoanalytical approach in the understanding of these forms of illness.

However, things have proven to be even more complicated and elusive, and it has been impossible to rule out the importance of socio-emotional factors in the development of these symptoms. To quote just one example, relating to gastric disorders, and in particular to peptic ulcers and the infectious agent *Helicobacter pylori*:

Over the past decade stronger evidence has linked psychosocial factors with the incidence of peptic ulcer and with the course of inflammatory bowel disease [...] researchers are beginning to notice that many ulcers occur in the absence of the bacterium, and sporadic reports are showing that eradication with antibiotics can sometimes fail to cure symptoms (Levenstein, 2002 pp. 740.741)

Furthermore:

Recent studies have been remarkably consistent in finding stress to predict ulcer incidence among individuals who had been ulcer-free at baseline or ulcer relapse among patients with a previous episode, whether the stress consists of subjective strain, social alienation, unemployment, family problems, wage dissatisfaction, conflicts with co-workers, or job frustration (idem).

In fact, developments in the research on the interaction between various systems of the body (e.g. *psychoneuroimmunoendocrinology*) have suggested that various emotional states associated with the *stress reaction* had a substantial role in mediating

an extensive range of immune and endocrine processes (for an introductory review see Sternberg, 2001). It seems nowadays that all forms of organic pathology, with or without the presence of external noxious agents, can possibly be mediated by the experience of emotional stress, precisely due to the impact on the autonomous nervous system and the alterations they have on the rest of the body (Ryff and Singer, 2001).

In the present review of psychosomatic symptoms I will address papers that describe socio-emotional, psychological and psychodynamic features in patients of the “classical psychosomatic symptoms”. This is hence a partial point of view based on a restricted and specific method of observing patients—the psychological/psychoanalytical clinical and survey methods—and is dedicated in large part to a handful of the most prominent psychodynamic authors that have published in the field.

However restricted an approach this is, it is hoped that these authors can point out some of the important features in the psychological, emotional and interpersonal functioning of these patients, and hence help establish a valid starting base.

In general we could say that both psychoanalytical and non-psychoanalytical studies of the so called “classical psychosomatics symptoms” commonly pointed out a psychic impoverishment at the level of symbolization and meaning in the affective expression of the patients.

Fenichel (1945) proposed that the psychosomatic changes could not be directly retranslated into the verbal language of wishful thoughts, because they have no definite psychic meaning. Deutsh (1953 cit. in Berliner, 1954) strongly opposed the concept of psychogenic disease as well as that of specificity of personality types (as proposed by Alexander et al, 1968), in the understanding of psychosomatic symptoms; and introduced the idea of *psychophysiological* development and regression.

For Wisdom as well as to Taylor, the psychosomatic disorder is not a psychologically elaborated defence against an emotion but a consequence of an emotion becoming intolerable (Wisdom 1959, p. 142) and is a result of *deficiencies in mental functioning* which cause the direct somatic expression of *unbearable mental states* (Taylor, 1987, cit. in Meyers, 1989, p. 506)

James (1979) considered that a number of psychosomatic alterations² are bodily *affect discharges*, starting to show during the early physiological phase that James Glover (1949 cit in James, 1979) called ‘functional phase’, and later in life they remain dissociated from primary mental content. Joyce McDougall proposed that an *ego defect* develops in which patients are not able to construct “neurotic and psychotic barriers” to mental pain, and instinctual energy cannot be discharged through fantasies and/or affects and instead is discharged somatically³ (McDougall, 1980 p. 419).

Discharge in action and inhibition of action

Psychosomatic symptoms have also been linked with another non-symbolic form of “affect discharge”: acting-out. McDougall (1980), Sperling (1967, 1968), James (1979), Atkins (1968), among others, stressed this association. According to these authors the difference between psychosomatic *illness* and acting-out seems to be that in the later the discharge is made towards the external reality, using organs that are normally under voluntary control, while the former represent a discharge inwards, through organs that are normally outside the voluntary control.

² I.e. asthma, ulcerative colitis, essential hypertension and skin rashes, like sweating, blushing, and acne,

³ She called this defect “archaic hysteria” ‘Archaic Hysteria’ indicates that the conflicts concern early somatic libido or primitive sexual and sadistic exchange in which certain bodily zones and functions are confused with the mother’s body or felt to be under her control (McDougall, 1980, p. 419). For her this state was similar to the “actual neurosis” described by Freud, which she thought was an intermediate phase between psychosomatic and neurotic symptoms

Fenichel (1945) explained the communality between psychosomatic symptoms and acting out by saying that *affects* are “carried out [both] by motor and secretory means’ (p. 292). In a similar stance, Kardiner’s idea of ‘action-syndrome’ (cit. in Wisdom, 1959) proposes that psychosomatic alterations arise from frustrated motor activity of an action that the patient would like to have taken. Providing some support to these notions, a psychoanalytic study revealed a higher incidence of psychosomatic disorders in subjects with antisocial behaviour (Reider, 1949). In line with this study, Atkins (1968) further proposed that some responses to the pain of the physical illness in psychosomatic patients must be categorized as “masked acting-out”(p. 221).

Sperling, (1967, p. 346) and. James (1979) stressed the link between anti-social acting-out and psychosomatic disorders in children. According to Sperling, both are forms of *hyperactivity*; the psychosomatic type of hyperactivity however is expressed via somatic symptoms instead of via action: i.e. through the intestines in diarrhoea and spasms of colitis or ileitis, or through the respiratory system: coughing, wheezing, and bronchial spasms of asthma, or through spasms of the vaso-circulatory system in migraine⁴ (Sperling, 1968, p. 250).

For Wisdom (1959, p.140), the conflicts involved in both psychosomatic symptoms and psychopathic personality-disorder are experienced through tactilely⁵ and kinaesthetically sensations in contrast with psychological disorders where the conflicts

⁴ She interpreted the alternation of psychosomatic and acting-out reactions as transference phenomena, in a particularly clear way in the next quotation:

“Continuation of analysis...threatens the maintenance of the patient’s pre-genital character structure. The patient now unconsciously wishes to free himself from the analytic relationship...this in turn mobilizes intense separation anxiety and creates an insoluble conflict...[the patient] feeling that unless he stops the acting out the analyst will terminate the analysis...the onset of psychosomatic symptoms in the analysis of acting out patients occurs in this dynamic setting and signifies the patient submission to the analyst and the analysis in reality...At this point the patient has established...or has re-established...the psychosomatic type of relationship” (Sperling, 1968, p.251)

⁵ In a similar topic, Taylor refers that the tactile soothing function implied in Gadinni’s concept of “precursor object” is linked to the transitional object, the disturbances of which are in turn linked with the occurrence of psychosomatic illness. (Ghunter, 1989, p. 471)

are experienced in the form of visual imagery, or ideograms (Wisdom, 1945, p. 137-138).

Finally, McDougall categorizes both psychosomatic symptoms and discharge-in-action as *substitutes of psychic work*. i.e. thinking and feeling - along with narcissistic problems, addictive behaviour and second-hand ideas -(1980, p. 420).

In sum, although somatic and acting-out “discharges” are seen by many authors as sharing a non-symbolic nature⁶, the psychosomatic affect-discharge seems to happen in the interior of the body (like an implosion, as it were) and to be linked to an inhibition of muscular action⁷.

“Primary” and “secondary” psychosomatic symptoms

I must briefly mention a debate within the psychoanalytic literature around the polemics of whether psychosomatic symptoms are secondary or primary to psychical conflict, symbolization and phantasies, and whether they can be seen as a psychical *deficit* or a psychical *defence* or can be seen as *both* a deficit and a defence depending on the context of the symptom⁸.

The general argumentation in the literature conveying the idea of psychosomatic symptoms as primary to psychic conflict is that the symptoms have a value of primary pre-verbal communication, devoid of symbolic and complex object-relational meaning, and that this is due to the immaturity in the body-mind differentiation (e.g. Atkins, 1968; Sperling, 1967, McDougall 1980; Bruch, 1969; Taylor et al, 1997).

⁶ Which can be seen as addressed by Bion’s concept of “beta elements”

⁷ In congruence with this idea, Bion (1948-1952[1961]) linked psychosomatic symptoms with the operation of the *work-group-function*, which he considered to inhibit the instinctive discharge in action characteristic of *valency* and of the basic assumption group.

⁸ This problem can be illustrated by the theoretical polemics between Ferenczi and Klein regarding *tics* (Klein, 1925). While Ferenczi assumed that tics are a primary narcissism symptom, Klein argued that they are a secondary symptom aroused by phantasies (*idem*).

On the other hand, the emergence of “secondary” psychosomatic symptoms can be understood when a mature mind in terms of relative acquisition of symbolic function and object-relations fails to contain emotional distress, and suffers a regression to primitive states of mind correlative with the pre-genital phases⁹ (e.g. Klein, 1925, Deutsch and colleagues cit. in Berliner, 1954, Atkins, 1968).

In this case the mind, facing an unbearable amount of emotional distress putting the integrity of the ego at risk would so to speak “give up” its capacity for symbolisation and awareness of feelings: in other words, it is as if the ego would sacrifice a part of its capacities in order to avoid a bigger catastrophe to the mind. As I have elaborated in the previous chapter, this bigger catastrophe would be the collapse of the thinking apparatus as a whole, and with it the collapse of contact with reality¹⁰.

In both cases, primary and secondary, the bulk of the psychoanalytic authors are in agreement that that the mind gets rid of an unbearable emotional distress through what can be considered part of the mechanism of *suppression* as defined in the last chapter: i.e. *split-off* (James, 1979, Sperling, 1955, McDougall, 1980), *denial* (Sperling, 1955, Roose 1960, Wisdom, 1959), *Foreclosure* [McDougall, 1980], *negation-repudiation* (Aisenstein, 1993).

Protomentality of Addictions to substances

The nature of addictions to substances have never been never clearly established as belonging strictly to only one of the medical, psychological or social domains, being instead presented as a *psychobiological* disease partaking of all of these acting and

⁹ In terms of the relational area, the psychosomatic symptoms are linked to a narcissistic pattern instead of an object-relational one. Klein, referring to *tics* says that the original object relations undergo regression to the narcissistic stage (Klein, 1925, p. 121)

¹⁰ The oscillation between psychotic and organic psychosomatic symptoms is referred by Sperling (1955); Segal states that a split off part of the patient’s personality functions at a psychotic level (Wisdom, 1959); and McDougall (1980) argues that the underlying fantasies in psychosomatic symptoms are psychotic rather than neurotic.

reacting one with the other (e.g. Roberts, 1955; Altman *et al*, 1996; Lovell and Tintera, 1952).

Many authors also see the origin of addictions in impairments in the de-somatization, differentiation, regulation and containment of affects, something which leads to a blurring of emotions and their somatic correlates. In the psychoanalysis of addicted patients this blurring manifest as an inability to discriminate between the psychic defences and i) the pharmacological effects of the substances' intake (Rosenfeld, 1960), ii) a tendency to equate the concrete *physical incorporation* of drugs and alcohol with phantasies of internalisation, iii) the displacement of affects into somatic complaints and social accusations (e.g. Wurmser, 1974) and iv) a muddle of feelings of persecution, depression and bodily sensations (Radó, 1933).

Undifferentiated physical symptoms, anxiety and depression

Several authors describe an unbearable emotional state in their patients which can be called "tense depression" that seems to overwhelm the ego with the threat of disintegration, and which is similar to states aroused by intense and persistent suffering due to physical illness, (Radó, 1933; Savitt, 1963; Green *et al*, 1976). It is apparently experienced as an undifferentiated mix of tension/anxiety, depression and bodily distress, and is also described in terms of feelings of being threatened by starvation equivalent to annihilation¹¹ (Savitt, 1963; Wurmser, 1974; Khantzian, 1978; Krystal and Raskin, 1970). Hence what is important for the individual is relief rather than psychic meaning (Radó, 1933; Grotstein, 1999).

¹¹ In fact in a study of addictive personality traits, Nagaraja (1975) found attempts to overcome anxiety and depression also through eating and drinking.

Bion described a similar phenomenological state when elaborating the concept of β -elements

I shall suppose the existence of a mixed state in which the patient is persecuted by feelings of depression and depressed by feelings of persecution. These feelings are indistinguishable from bodily sensations and what might, in the light of later capacity for discrimination, be described as things-in-themselves. In short β -elements are objects compounded of things-in-themselves, feelings of depression-persecution and guilt and therefore aspects of personality linked by a sense of catastrophe (Bion, 1963, p. 39-40)

Indistinctiveness between pharmacology and emotions
 (“*Pharmacothymia*”)

Radó (1928) and Lindesmith (1938) were first to point out that there are neither purely pharmacological (somatic) nor purely psychic causes for the phenomena of habituation and addiction to drugs. On the other hand, the mood (*thymic*) oscillations of the addict seemed to be totally mingled with the pharmacological effects and craving of the substance. Rado coined the term to describe this phenomena *pharmacothymia* (Radó, 1933), and understands it in terms of a state of *regression* where the ego is transformed back into the id, and is apparently reduced to a very simple formula: “desire for intoxication – intoxication- after effects of intoxication,” (Rado, 1928).

Similarly, Savitt (1963) equated the addict’s alternation between hunger for a drug and narcotic stupor with the infant’s alternation between hunger and sleep.

An artificial protection against excessive endogenous stimuli

According to many psychoanalytic authors (Rado, 1928; Wieder and Kaplan, 1969; Khantzian, 1978; Dodes, 1990), drugs and alcohol provide a stimulus barrier

against the flooding of affective painful stimuli, such as helplessness and powerlessness and a physiological mode of self-esteem maintenance¹² (Hoffman, 1964).

Hence, addictive substances are seen as replacing directly the primary function of a screen against painful stimuli in the neuro-physiologic system (e.g. Khantzian, 1978), performing the *protomental* functions of organizing and containing excessive endogenous stimuli (see chapters two and three).

Similarly, Wurmser (1974) and Wieder and Kaplan (1969) pointed out the artificial defence against overwhelming affects provided by the effects of drugs, pharmacologically producing a reduction in distress that the individual cannot achieve by psychic efforts¹³.

Recent psychological research has provided some support for these theories. Steele (2000) states that rather than learn other ways of managing stress survivors of violence are likely to become dependent upon chemicals as a way to reduce tension, and Crimmins *et al.* (2000) verified an association between previously experiencing violence and loss and a tendency for self-medication with drugs.

Protomentality of Suicidal behaviours

When addressing melancholic suicidal acts, Freud (1917, pp. 253) hypothesised the possibility of organic determinants of melancholia, puzzled by what he called “probably a somatic factor...which cannot be explained psychogenically”. Later, in 1920 Freud postulated the existence of the “death instinct”, an idea that was developed by the Kleinian psychoanalytic tradition (Hinshelwood, 1989a).

¹² In fact, many other psychological studies suggested that positive self-appraisal increased with drug use (Newcomb and Earleywine, 1996).

¹³ Rosenfeld (1960) proposed that in the same way as the infant uses his fingers to promote the hallucination of the ideal breast, the drug effect is an artificial aid to produce the hallucination of the ideal object.

More recently, some authors (e.g. Warren, 1976; Maris, 1991) describe suicidal behaviours as not belonging strictly to only one of the biological or psychological domains, and some evolutionary psychology models investigate suicide as a part of our biological make-up¹⁴ (e.g. Brown et al, 1999). Since the idea behind instincts and drives is of a continuum between biological urges and psychic functioning (see chapter two, section on the id and the protomental system), the biological/instinctive significance of suicidal acts makes them suitable to be understood also as protomental, rather than as the result of well developed internal psychic conflicts.

In support of this view, some authors (Jones et al, 1979; Jones and Barraclough, 1978; cit in. Adam, 1990) pointed to striking similarities between the affective state and social situation preceding suicidal acts in humans and those in animal self-injury, suggesting they may be homologous behaviours¹⁵

Impulsivity, acting-out and self-destructive action

Suicidal and serious self-harm behaviours are seen by some as attempts to overcome affective disturbances by impulsive, action-oriented living (e.g. Warren, 1976; Kushner, 1991, p. 193).

Saraiva (1999) verified that the large majority of suicidal acts (70%) in his study were described as essentially impulsive ones, recalled with comments such as “I didn’t have time to think” (p.274). Furthermore, almost all of the subjects in the category of

¹⁴ Actually, Brown et al (1999) give good credits back to Freud’s concept:

“the ‘death instinct’ to explain self-destructive behaviour met with scepticism and denial among analysts and biologists alike as soon as the concept was introduced...the idea that at least some aspects of self-destructive motivation may be part of our evolutionary heritage has received little attention, let alone support, in spite of suggestive evidence...the lone voice in the wilderness belongs to Decatanzaro, whose arguments for the evolution of self-destructive behaviour under well defined circumstances seem plausible. (Pp70)

¹⁵ Animal studies have shown that self-injurious behaviour is a response to a number of biologic and social variables, including stressful life events, interference with sexual bonding, and isolation and confinement (Adam, 1990).

great risk had a psychiatric diagnostic characteristic of personality disorders (p.254), i.e., disorders typically characterized by disorganization of thinking, lack of emotional containment and frequent acting-out and outbursts of impulsive behaviour.

Overwhelming Stimuli

It is important to emphasize that although lighter self-harm and severe suicidal acts might seem different matters, some authors have demonstrated that it is in fact a question of degree of self-destructive behaviour (Warren, 1976; Turp, 2003). In addition, a typical story of a severe suicide attempt has in it several previous self-harm and para-suicidal acts (Saraiva, 1999).

It is increasingly agreed that self-inflicted injuries are ways to deal with overwhelming anxiety and mental pain which cannot be contained by psychological means or by social support (e.g. Turp, 2003; Briere, 1992); Maltzberger has described suicidal patients as individuals who have failed to develop stable emotional self-regulatory structures. (Maltzberger, 1986, in. Adam, 1990, p.78) and Courchet is particularly clear on this point. In his view, suicidal tendencies originate early in development

when oscillations of excitation-inhibition fail to become integrated during the process of language formation. Furthermore, in some cases, these excitable impulses substitute for language. (Courchet, 1955)

Symptoms determined by social and relational dynamics

Bion's theory of group behaviour proposed that the social rules people follow are primarily the result of basic socio-biological tendencies ("instinctual"), goals and motivations which are translated into symbols and negotiated according to socially

shared meanings of actions (“common sense”), and are adopted by the individual as a member of a community, essentially in an unconscious way.

There is some epidemiological evidence that cultural conflict of values and norms within individuals belonging simultaneously to two different cultures (e.g. what Vaillant, 1966, calls “culture disparity”) are associated with increased drug use and abuse¹⁶ (Vaillant, 1966; Anderson, 1995), with the prevalence of psychosomatic symptoms and illness proneness (Cassel, 1964, Totman, 1990; Ryff and Synger, 2001) and with suicide rates (Iga et al, 1978; Watson, 1995; Torres, 2005). The “cultural disparity” could be seen as a particular case of difficulties of the individual to symbolically interpret and fulfil its basic emotional states and to relate to the group in a psychically meaningful way.

In support of this idea there is a study by Malan et al (1976) which verified that group psychotherapy achieved good rates of success among alcoholics and psychosomatics patients (asthmatics), while showing poor results in treatment of neurosis. Bion (1948-1952[1961]) proposed that the phenomena of valency and basic assumption, which represent the gregarious or “social-ist” part of the person, require the presence of the group to be clearly demonstrated. It is compelling to interpret Malan’s et al (1976) results that it should also be required the presence of a group to treat the associated problems, i.e. protomental symptoms, although more evidence is obviously needed to support this idea.

¹⁶ Vaillant (1966) verified that the highest addiction risk in New York occurred among first-generation adults with membership in an established minority immigrant group. Vaillant considers that the immigrants’ children “experience from earliest childhood values and a culture that are at variance with those of his parents”, which can be interpreted as a form of cultural disparity in the psychological development of children.

Psychosomatic diseases

One of the main explicit influences on Bion's idea of *group diseases* was Halliday's epidemiological study of the "Sick Society" that we have addressed already in the introduction¹⁷. Fromm (1950) also made reference to the "sickness of society" as the cause of the rising rate of psychosomatic symptoms: according to him these symptoms may reflect a process of "vital protest" in a society that crushes the individuals' "biophilic impulses" by a mechanical character attached to an *authoritarian conscience* (Biancoli, R, 1992, p 727). On its hand this authoritarian conscience, being introjected, impels man to obey against his own interests and undermines his autonomy through the "fear of being abandoned typical of the symbiotic bond" (idem); this idea is compatible with what we will describe below as the type of *psychosomatic relationship*

In a similar proposal, Posinsky (1958) equated psychosomatic ailments with "diseases of adaptation" to socio-cultural environments, and stated that social conformity and biopsychic adaptation may be inherently antagonistic. Calhoun (1976) also noted that a reasonably well-organized person moving from one culture into another would frequently suffer metabolic and psychosomatic disorders, due to "culture shock"¹⁸.

¹⁷ To Halliday:

"The prevalence [of psychosomatic diseases] is related to changes in the communal environment considered psychologically and socially. The incidence of a psychosomatic affection in a community rises and falls in response to the changes of social environment, that is, to changes of environment regarded in its psychological aspects rather than its physical aspects" (Halliday, 1948, p.48)

¹⁸ This shock had two components: a) lack of communication which isolates the individual from the support and reality testing of social contact, and b) inadequacy of the previous cultural constructions to deal with new social data or situations (Calhoun, 1976).

However, integrative biopsychosocial models of this kind lost prominence in the 1960's and 1970's as we have already pointed out in the introduction until multifactor models of psychosomatic illness started to gain importance¹⁹.

In his thorough and systematic review of psychosomatic research in several areas (psychoanalytic, life events and sociologic), Totman (1979) collected evidence to suggest that the disease prone individual was described in many different studies as: alienated from society, suffering from status incongruity, role ambiguity, cultural mobility, lacking satisfaction with social contacts, facing unresolved role conflict, needing to conform to new expectations which they were unfamiliar with, belonging to incongruous social circles (e.g. discrepancy in status between a person's parents or an individual and his/her spouse) and his or her social environment being characterized as unpredictable, lacking social cohesion, and lacking social support (Totman, 1979). In this sense an approach to understand the problem focusing in what Bion called the *valency* (or *groupishness* as a synonym), i.e. the primal, basic human tendency to share the group's emotional states, can become extremely relevant

James (1979) considered that in his work with children and families the psychosomatic symptoms seemed to be an obvious combination of intra-psychic and environmental factors: the child internalises and absorbs an environment that becomes a part of its way of life (p. 414), and a *psychosomatic split* occurs when a 'premature ego development' is forced on to the child by the need to adapt a difficult environment (James, 1960). Ammon (1974, 1979 cit in Deutsch, L. 1980, p. 694) also pointed to a developmental deficit caused by lack of, or an insufficient and unstable, attention on the part of primary group of the child.

¹⁹ According to Deutsch (1980) "The focus of interest was shifted, so that "psychosocial" factors which involve social and interpersonal reactions have become dominant, replacing the traditional psychological concerns for internal processes and the painstaking search for intra-psychic conflict" (p. 656).

Loss of external objects

Engel and Schmale (1967) have emphasized the role of object loss and the reactive affects of helplessness and hopelessness, and the role of separation – real, symbolic and threatened, in the development of psychosomatic symptoms. Also according to a study by Mushatt the special vulnerability of individuals to loss may precipitate and foster somatic disease (Mushatt 1975, cit. in Deutsch, L. 1980).

The research on *life events* and disease also found higher than average disease proneness among people who recently had lost an important relationship (bereavement) or suffered experiences characterized as traumatic losses, such as change in residence or school, menopause, the advent of a sibling, threat of separation from the mother, infidelity, etc, which were met with feelings of despair (Totman, 1979, p.107-112).

Addictions

A review of the research on addictions allows us to propose that, while there seem to be consistent trends in interpersonal relations, family functioning and society at large, strongly associated with the development of addictions (e.g. Newcomb and Earleywine, 1996; Stanton, 1997; Anderson, 1995), there seem to be no individual personality and intra-psychic characteristics that explain or predict addiction (Glover, E. 1932; McLaughlin and Haines, 1952; Radford *et al.*, 1972; Zinberg, 1975, Taylor, 1997).

This fact suggests the hypothesis that these symptoms might also be understood using the notion of basic gregarious quality, i.e. *valency* and not simply the internal psychic conflicts of the individual.

Macro- social issues

For some psychoanalytic authors in the 1940's, such as Eisendorfer (1942) and Simmel (1948) alcoholism had become a social disease, and a public health problem of the same class as tuberculosis, cancer and syphilis. In the 1960's, Liberman (1959) and Limentani (1968) proposed that the analysis of drug and alcohol addicts revealed an interrelation between unconscious conflicts and social struggles.

Altman et al (1996), in a psychopharmacologic study, concluded that in drug abuse there is an interaction of basic biological mechanism with social, cultural and political pressures. Actually, authors from various fields (psychoanalysis, medicine, psychotherapy, sociology and self-help groups) have been proposing explanatory models that consider drug abuse to be a product of social, environmental and cultural factors (Lennard and Allen, 1973; Bradfer, 1987; Roazzi, 1987; Anderson, 1995; Berstein, 1989; Hopper, 1995).

Some psychoanalytic authors have pointed out an increase in drug addictions and alcoholism rates during war times and/or its aftermath (Simmel, 1948; Sabath, 1967; Zinberg, 1975) or subsequent to other kinds of Fight-flight or counter-dependency macro-social movements, such as rebellion movements against social authority (Limentani, 1968) and even the global socio-political "war on drugs" itself (Krystal, 1974).

Family dysfunction and loss

A great number of authors, from different fields of research (psychoanalysis, psychotherapy and sociology), proposed that the locus of the addictive disease addiction is in the network of family relationships, and specifically in the family's incapacity to provide stability, security, trustworthiness or dependability for the developing children

and/or adolescents (Eisendorfer, 1942; Sabath, 1967; Kolb *et al.*, 1974; Wurmser, 1974; de Forest *et al.*, 1974; Huberty, 1975; Dumont and Vamos, 1975; Glynn, 1982-83; Berstein, 1989; Fasolo, 1989; Stanton, 1997; Dembo, 2000; Anderson, 1995).

Parents of addicts have been depicted as neglectful and/or strongly ambivalent towards their children (Gold, 1957; Savitt, 1963; Huberty, 1975; Prins, 1995; Dembo, 2000), some studies reporting more than 80% of addicts suffered child neglect or abuse from members of the family (Cohen *et al.*, 1982; Bernstein, 2000), sometimes linked with chronic diseases of the parents (Haegglund and Pylkkaenen, 1977, Power, 1984). One study refers a percentage as high as 80% of weak father-son relationship (Aron, 1975) and in other 100% of the addicted girls' fathers had left home (Lidz *et al.*, 1976). Pinheiro *et al.* (2001) found that the fathers of cocaine addicts absent themselves from the paternal function.

Early Loss

Other researchers in the area of drug misuse verified that drug abusers had suffered early separation, loss or emotional absence (Chein *et al.*, 1964, Hartmann, 1969, Brauch *et al.* 1973, Bratter, 1975, Amaral Dias, 1980, Coleman *et al.*, 1986). The death of parents or parental substitutes was extremely frequent (Daniels, 1933; Wieder and Kaplan, 1969; Radford *et al.*, 1972; Schoor and Beach, 1993), and significantly higher than in the rest of the population (Gillie, 1969).

Incongruence of educational and nurturing practices

The research on the antecedents of alcohol and drug addiction provides some evidence of nurturing and educational incongruence between overindulgence/overprotection and severity/hostility (Simmel, 1948; Browne, 1965;

Wieder and Kaplan, 1969; Wurmser, 1974; Lidz *et al*, 1976), or between coldness/indifference and intrusiveness/independence prevention (Stanton, 1997) significantly higher in addicts than in normal controls (Emmelkamp and Heeres, 1988). Sometimes these opposite patterns are divided between the parents: one being over solicitous and overprotecting and other distant and forceful²⁰ (Lander, 1945; Kanzer, 1948; Hartmann, 1969; Lidz *et al*, 1976; Schoor and Beach, 1993). De-Forest *et al*. (1974) observed that mothers can serve as mediators between hostile father and children, and Radford *et al* (1972) refers to impoverishment of parental effectiveness due to maternal inhibited aggression. In a previous study (Torres and Antunes, 1997) we found that failure in achieving abstinence from heroin was related to higher incongruence in the perceived mechanisms of family control.

Some authors pointed out that the deterioration of the super-ego is one of the intrapsychic results of these educational and nurturing incongruence (Simmel, 1948; Zinberg, 1975; Wurmser, 1974), presented as oscillating between ferocity/sadism and indulgence, or between prohibition and encouragement of the same instinctual gratifications. Simmel (1948) refers that the parents of future alcoholics try to *suppress* certain instinctual reactions in their children that they themselves are unable to *repress*.

Treatment issues: The treatment of the gregarious quality

There is a consistent report of systematic failure of individual therapeutics, both medical and psychotherapeutic, in delivering treatment for alcohol and drug addiction (e.g. Lindesmith, 1938; Rosenfeld, 1960, Casriel, 1963; Limentani, A., 1968). On the other hand, group therapy settings, including group psychotherapies, therapeutic

²⁰ It is noteworthy that in the case of addiction to illegal drugs the forceful, hostile and distant role is played by the father, whereas in alcoholism it is normally played by the mother ("all the fathers were passive men [Savitt, 1963]. In the male drug addicts it is usually the struggle between wishes for fusion with and aggression towards mothers while the father plays a role of absence, while in the females it is usually the strong identification with the father.

communities, self-help groups, and family therapy- have revealed some success (e.g. Simmel, 1948; Fort, 1955; Casriel, 1963; Aron, 1975; Malan *et al.*, 1976; Fasolo, 1989, Carr, 2000, Neto and Torres; 2001).

Psychoanalytic therapists have noted that the treatment of the substance addict must comprise social-relational interventions such as the learning of new social skills in a network of associations, the establishment of relationships, involvement in a rewarding social milieu, provision of a suitable emotional-social atmosphere, and a sense of acceptance and community (Aron, 1975; Roberts, 1955; Gillie, 1969; Lennard and Allen, 1973; Sabath, 1967).

Suicidal behaviour

Notwithstanding the evidence that severe depressive states in the individual seem to be strongly associated with suicidal behaviours and ideation, it is also referred in the literature that every personality type seems to be in some degree vulnerable to becoming suicidal (e.g. Garma, 1940; Fergusson, 2000). There is also evidence that the majority of suicide attempts in psychiatric patients are precipitated by stressful experiences not necessarily arising from mental illness; in other words, it is reasonable to propose that the suicidal act alone is not a criterion of an individual mental disorder (Stengel, 1964, p.50, p.80).

Under certain common interpersonal conditions, and given certain predisposing factors (which are similar to the case of addictions and psychosomatics) such as: poor parent-child attachment, child abuse, parental discord, incongruence of nurturing patterns, etc (Vivona, 1997; Brown et al, 1999; Meltzer et al, 2001), every individual structure seems to be potentially at risk of developing suicide ideation and attempting

suicide²¹. These findings suggest the hypothesis that these symptoms might also be understood using the notion of basic gregarious quality, i.e. *valency* and not simply the internal psychic conflicts of the individual

Jackson (1954) had long stated that although psychoanalytic theory can provide an explanation of the dynamics of suicide, the dynamics of suicidal acts are operative in a social setting. Similarly, Adam (1990) thinks that while most psychoanalytic attention has been directed at the delineation of the intrapsychic mechanisms leading to suicide, less attention has been given to the interpersonal aspects of suicidal behaviour and the theoretical implications of the current interpersonal crisis that often precipitates it (p. 78). According to Stengel (1964) “The study of suicide illustrates that human action...is also interaction with other people, and that the individual cannot be understood in isolation from his social matrix” (p. 15)

Adam’s (1990) extensive review on the social and psychodynamic determinants of suicide, highlights the consistent importance of social and environmental factors in predisposing to suicidal ideation, suicide attempts and completed suicide.

Finally, the phenomena of collective suicides and unusually high suicide rates in certain social units (also called suicide epidemics or the “Werther effect” [Marsden, 2001]) suggest also the importance of social determinants. I have elaborated on this elsewhere using Bion’s protomental model (Torres, 2005).

Social Isolation

Beginning with Durkheim’s pioneering studies (see Prager, 1981), there are many demographic and sociologic studies showing an association between social isolation and suicidal acts (Adam, 1990). According to Stengel (1964, p. 23-4) the higher incidence

²¹ Fergusson et al (2000) verified that these interpersonal and family conditions have both indirect (by virtue of producing psychopathology) and *direct* (without mediation of psychopathology) effects in the occurrence of suicide ideation and attempts.

of suicide in *urban communities* has been attributed to the greater risk of social isolation and the anonymity of life in the big cities, compared with the closely-knit village community. Furthermore, according to Adam (1990), areas with high density of single-person households were strongly associated with self-injury.

Individualism

In a nationally representative study Stack has concluded that *individualism* is a master variable responsible for the increase in Finnish suicide (Stack, 1992a). Maris found that the suicidal subjects participated less in social organizations, were often friendless, and showed a progressive deterioration of interpersonal relationships leading to a state of total social isolation (Maris, 1981; cit in Adam, 1990). Stack (1992a, 1992b) also reports evidence of social isolation from extended family life being positively correlated to both male and female suicide.

Emotional Isolation

Brown et al (1999) verified that subjects with lower quality of relationships with parents and with friends were more likely than others to score high on suicide-risk related measures. Adam (1990) reviewed a great number of personality, clinical and life events studies and concluded that intra- and inter-personal factors affecting potentially supportive key relationships were the principal agents mediating between the earlier predisposing events and the later social and life events that so often precipitated suicidal actions. Conflicts with siblings, parents and friends of the opposite sex were repeatedly pointed out as important antecedents of suicidal action, as were family conflicts involving profound rejection, hostility and isolation of the suicidal person (Garfinkel and Golombek, 1983; Sabbath, 1969; Hankoffin 1980, all cit in Adam, 1990).

Finally, a handful of studies compared psychiatric patients exhibiting suicidal behaviour with those not; and the factors identified as determinants of suicidal acts were

also a limited interpersonal network and lack of confident social support (Slater and Depue, 1981; Cochrane and Robertson, 1975, Kosky et al, 1986, all cit in Adam, 1990).

Migration is another cause of social and emotional isolation and has been consistently linked with suicide (Adam, 1990, Stengel, 1964, Kushner, 1991, Iga et al, 1978). According to Kushner

Although all migration creates object loss, those migrants who reconnect with meaningful rituals and social support face a lower risk of suicide than those who cannot do so (p. 164).

The issue of emotional isolation connected with actual loss suggests the importance of addressing the psychoanalytic concepts of object loss and narcissistic loss in the understanding of the dynamics of suicide.

Loss and early loss

Both Freud (1917) and Klein (1935) proposed that melancholy and suicide were linked to a previous loss of important love-objects, and several authors (e.g. Jackson, 1954; Courchet, 1957) have reiterated the same point. After an extensive review of empirical studies, Adam (1990) presented evidence to support the idea that *early parental loss* is strongly and consistently associated with later suicidal behaviour.

However, it is important to note that the hypothetical influence of early loss on suicidal behaviour might be mediated by the capacity to mourn the loss through psychical work and the emotional investment in other objects.

Deficits in the Mourning process

Kushner (1989) developed a biopsychosocial theory that included the psychodynamic significance of loss to explain the differences in suicide rates in different countries:

Freud's analogy between melancholics and mourners provides a link to sociological factors...the Freudian dynamic suggests that many if not all suicides are mourners who have been denied adequate cultural mechanisms for coping with loss (p. 5) [...] all loss...calls forth personal strategies and socially defined rituals. It is the failure of these personal strategies that can eventually lead to suicide (p. 142)

Also Hendin hypothesised that cultural differences lead to a greater sensitivity to loss and abandonment in the suicide-prone countries (Hendin, 1964, 1969; cit in Kushner, 1991, p.80). Maltzberger proposes a theoretical link between loss, incapacity to mourn and suicidal tendencies. He suggests that these subjects remain overly reliant on external objects to comfort them, and, in the face of abandonment, are vulnerable to crises of "aloneness, self-contempt and murderous rage" that can lead to self-harmful actions (Maltzberger, 1986, in. Adam, 1990, p.78).

This elaboration brings us to the very important area of psychological development deficits often referred in the literature about suicidal behaviour, addictions and psychosomatic symptoms: the deficits in individuation, and internalisation of containing, and self-regulating emotional abilities.

Deficits in internalisation and psychological autonomy

It has been consistently argued that there are important deficits in the *internalisation* of autonomous and flexible emotional containing abilities in the three categories of diseases focused on the present work. These problems are depicted in the points e) and f) of the interpersonal containing narrative put forward in chapter three, and seem to be correlated with dysfunctional patterns of interactive emotional

containing/regulation in childhood, and the consequent failure of internalisation of soothing and containing objects²².

An inference of internalisation deficits could arguably be made from cases where there is evidence of problems in achieving a psychologically autonomous state (e.g. addressed by the concept of *separation-individuation*), in the inability to negotiate the *transitional phase* (e.g. Winnicott, 1953), and in a sense of lack of internal control over emotional events and over sources of emotional gratification and *soothing*.

Psychosomatics

A type of relationship that includes a dread of separation and loss of the object, and a failure of separation-individuation, i.e. *symbiotic attachment* (Jackson, M, 1990, p. 39), is often described in the literature; at the same time this so called “symbiotic relation” is described in itself as the source of archaic fears, resulting in a kind of “short circuit” of anxiety which is apparently impossible to contain (Sperling, 1955; Wisdom, 1959; Deutsch, 1980).

Atkins (1968) and James (1979) mentioned a type of relationship in which there is an inordinate mutual narcissistic dependence between child and mother; Atkins described an asthmatic patient who felt connected to the mother like a Siamese twin’s functioning of “mutual drainage” (Atkins, 1968, p. 221).

²² Reiterating the points: e) *The vulnerable individual internalises and assimilates the strategies for dealing with the emotional distress, and by doing so “learns” to use them autonomously. The outcomes of these containing/regulatory processes establish themselves as functions of the personality of the developing individual.* f) *If the internalised strategies are successful ones, the individual is capable of reproducing the adequate response to emotional distress more autonomously, if they are unsuccessful and/or if the internalisation process is “faulty”, there will be a sort of chronic incapacity of solving the distress and the need for a caretaker or of alternative ways of getting rid of emotional distress.*

Ammon adds that a kind of symbiotic clinging is simultaneously combined with an archaic fear of being swallowed up and destroyed, and Garma tries to explain this archaic fear as “an internal persecutory object in the form of a biting mother-imago” (cit in Wisdom, 1959).

Transitional object deficits

Transitional objects have been described in the literature as an intermediate step in the internalisation of containing internal objects; Taylor (1987) identifies the transitional object as a way to maintain optimal stability during mother’s absence, moulding and regulating the infant’s biological or constitutionally determined ‘developmental timetable’ (cit. in Gunther, 1989).

Gaddini proposed that the disorders of transitional objects were linked with early psychosomatics (cit. in James, 1959), and Gunther (1989) points out that transitional-like objects that have a factual-operatory value, far from the pre-symbolic function of the healthy transitional, object are found constantly in psychosomatic patients.

This area of thinking leads us to Bion’s concept of introjection of a “damaged breast” (1962, p.97-98), and the associated emotional containing deficits, which I have already addressed in the previous chapters.

Hence, transitional-object deficits can be seen as an instance of a more general deficit in the *internalisation* of autonomous, self-soothing and flexible emotional containing abilities.

Addictions

A deficit in internalisation/introjection of maternal and paternal objects is also consistently referred to as constituting a predisposition to addiction; several authors

propose that this kind of deficit leaves the patient without internal objects for performing the role of stimulus barrier, tension regulator, drive tamer, value orientation and goal directedness (Savitt, 1963; Sabath, 1967; Kohut, 1971; Wurmser; 1974; Sternberg and Cohen, 1975; Lidz et al, 1976; Khantzian, 1978).

Introjection of disappointing, destructive or irresponsible parental objects is also commonly referred to be found in addicted subjects (Simmel, 1948; Sabath, 1963; Lidz et al, 1976). In a longitudinal study, Shedler and Block (1990) verified that by the age of seven future drug abusers, in contrast to future non-users, were unlikely to identify with adults. Savitt (1963) pointed out that subjects vulnerable to developing addictions seemed unable to experience love and gratification through the usual channels of incorporation and introjection

Several authors consider that the result of these difficulties seems to be an internal lack of meaning, goal directness, or system of value orientation, to transform or mediate impulses (Shedler and Block, 1990), instead this is replaced by the relief and pleasure of the drug (Wurmser; 1974). A substitution of the identification with maternal/paternal functions by physical incorporation of drugs and alcohol was described (Glover, 1932; Simmel, 1948; Rosenfeld, 1960; Savitt; 1963), as a way of self-soothing (Hopper, 1995). For Glover (1932) there is a substitution of psychic symbolic “substances” by the effects of the drug.

Faced with the hollowness of his internal world in respect to good objects, “the addict locates s the sources of all good and pleasure externally” (Nagaraja, 1975). Savitt (1963) pointed out the greediness and insatiability with which the addict faces the future. As quoted before in chapter 3, Bion addressed this theme in the idea of *deflection*, or *suppression* of the “need for love, understanding and mental development” (Bion, 1962, p.10-11)

Suicidal behaviour

In a summary of psychoanalytic views, Maltzberger and Buie (1980), concluded that suicidal behaviour is a phenomena of disturbed internalisation, and represents an attempt to deal with hostile introjections, and cope with the absence of a comforting inner presence necessary for stability and mental quietude

Several authors, using ideas derived from the theories of Margaret Mahler, have also conceptualised the developmental problem in suicidal patients as a failure to negotiate the transition from the symbiotic to the individuation phase of development: there is a tendency to develop relationships where objects are behaved towards as if they were parts of the self. Asch (1980) equates this situation of “symbiotic object choice” with Freud’s concept of “narcissistic object choice” (cit. in Adam. 1990)

Data from other fields of research, when read in conjunction with the social psychology concept of “locus of control”, have revealed the importance of lack of an *internal locus of control* over one’s feelings and one’s life.

It has been suggested by empirical research results that the feeling of an external locus of control is caused by parental inconsistency, indifference and emotional coldness during the child’s development, while flexible and permissive educational practices seem to contribute to an internal locus of control (Saraiva, 1999, p. 39). Several studies have verified a link between suicide potential and external locus of control (Williams and Nickels, 1969, Wenz, 1977, Goldney, 1982; all cit. in Saraiva, 1999, p. 40; Cochrane and Robertson, 1975, cit in Adam, 1990).

Deficits in the symbolic verbalization of emotional states

The focus on the style of communication of psychosomatic patients undergoing psychoanalytic psychotherapy started a new area of research: the deficits of emotional awareness and symbolization, manifested in the lack of verbalization of affective states.

Psychosomatics

The so called “French School of psychosomatics” (see Potamianou, 1990) started to describe “Pensée Operatoire” or “operatory thinking”; these constructs denote a typical form of communication in many of the psychosomatic patients (Marty and de M'Uzan; 1963), indicating the tendency of the individual to concentrate on facts related to external data - rather than to internal processes and fantasies, as well as only very slight interest in the analyst: a sort of inertia noticed during the preliminary interview that persists and results in a stagnant situation (Deutsch, 1980).

Nemiah et al (1976 cit in Deutsch, 1980, p. 693) described a syndrome in which the patients were preoccupied with minute details of external environment, and were unable to emotionally respond, a condition Sifneos (1967) called *Alexithymia*. According to Taylor, this syndrome prevents the organism from “normally” signalling its state of distress (Ghunter, 1980, p. 472).

According to Taylor and colleagues (1997), the notion of alexithymia expresses a set of cognitive-affective deficits characterized by

- (a) difficulty in identifying and describing feelings,
- (b) difficulty in distinguishing between feelings and the bodily sensations associated with emotional arousal,
- (c) restricted imaginative processes (few dreams or fantasies), and

(d) thinking that is concrete and reality based (operator thinking [*penseé opératoire*; Marty and De M'uzan, 1963]).

The clinical manifestations of this syndrome can be seen as compatible with what Bion proposed to be the putative results of failure of alpha function and deficits in containment/regulation: indistinctness between feelings and bodily sensations associated with emotional arousal, as elaborated previously in chapters two and three.

McDougall (1980) argues that one of the few psychic defences against mental pain available to alexithymic patients is a

Total foreclosure from the psyche of incompatible ideas, frightening fantasies and perceptions, conflicting instinctual impulses and painful emotional states" (p. 417)

In her view it appears that the anxieties have never been elaborated mentally, and that they have remained split-off from the rest of the personality, with the result that many nascent thoughts and affective states fail to achieve psychic representation.

Since Taylor and colleagues developed a psychometric scale to assess alexithymia in a practical and reliable way (see Taylor et al, 1997), the research has consistently revealed associations between several types of psychomatic and somatoform disturbance and alexithymia (Taylor et al, 1997).

As I shall describe in the next paragraphs, deficits in emotional awareness have been identified in the other two categories of problems (addictions and suicidal behaviour). Also, the research on the construct of alexithymia in subjects addicted to substances and in subjects showing suicidal tendencies has been expanding also been growing, and drawing similar conclusions.

Addictions

Wurmser (1974) and Merini (1989) refer to a state of *hypo-symbolization* and massive *de-symbolization*, apparently denoting a regression into a preverbal dimension, or a general degradation, contraction or rudimentary development of symbolisation, and an inability to verbally articulate feelings. Khantzian (1978, 1990, 1993, cit. in Taylor, 1997, p.172) concluded that the range of affect regulation problems in substance addicts was brought about by dysfunctional relation patterns in childhood that lead either to an arrest in affect development or to a primitive mode of mental functioning in which emotional states are not fully encoded in words.

Taylor (1997, pp 184-189) provides a comprehensive review of the research on alexithymia and alcohol and drug addiction. He presents strong support from several studies undertaken in several different countries since the late 1980's, for alexithymia being a stable trait in individuals prone to substance abuse.

Suicidal behaviours

Some authors suggested and/or verified an association between alexithymia and suicidal behaviors, the later being considered a form of acting-out deriving from an inability to express, elaborate and contain emotions (McDougall, 1989; Laquatra, 1993; Ferrada-Noli and Asberg, 1996; Taiminen et al, 1996; CMHS, 2000). A handful of studies using Taylor's (1997) *Toronto Alexithymia Scale* in the recent years have also demonstrated a relationship between alexithymia and attempted suicide (Iancu et al, 2001; Hirsch N, et al, 2001; Sakuraba et al, 2005).

Furthermore, in a study using personality psychometric scales, Duberstein, (1995) found that people prone to suicide attempts were characterized by traits which are all congruent with the notion of alexithymia, i.e.: preference for the familiar, practical, and

concrete, diminished affective intensity; closing in, shutting down or constriction of the affective, cognitive and behavioural systems, lower scores on tests of creativity and divergent thinking, using of denial as a major coping strategy , talking superficially in terms of their external physical appearance, internal somatic sensations, and low level actions and behaviours such as concrete tasks.

Containment deficits in specific socio-emotional basic systems

The research and theorisation on the emotional regulation problems connected with the disorders under study do not differentiate clearly between different emotional states and basic emotional systems.

Apart from some preliminary and pilot studies conducted by my colleagues and myself at a graduate student level (Torres, 1995; 1999; Barbosa, 1999; Chagas, 2004), there is to my knowledge no body of research directly focusing on the specific emotional containing processes in the different basic emotional systems.

However, I will now argue that there is enough previous evidence at least to maintain the hypotheses that

- a) psychosomatic symptoms are related to containing deficits on aggressiveness (related to Fight-flight),
- b) addictions are related to the dependence area of emotional experiences and
- c) suicidal behaviours are related to sexual and reproductive problems (related to Pairing).

Psychosomatics and rigid containment of aggressiveness

Early in the history of psychoanalytic research, the inhibition of aggressiveness was identified in many of the so-called classic psychosomatic illnesses (Fenichel, 1945; Meyers, 1989). Indeed, in their dictionary of psychoanalysis, Laplanche and Pontalis (1973) explicitly stated that the *suppression* of aggressiveness is important in the genesis of psychosomatic symptoms. However, the aggressiveness expressed in somatization seems to be often overlooked by the tendency to concentrate on the *pain* suffered by those with psychosomatic illness (Deutsch, 1945, p. 697).

Inappropriately expressed anger (e.g. “bottled up resentment”) was early identified as an important factor in ulcerative colitis and hypertension (Hambling, 1951; Pauley, 1950; Groen and Bastiaans, 1954 all cit. in Wisdom, 1959). Fenichel (1945) identified hypertension as characterized by an extreme tension at the instinctual level in which there is a general readiness to aggressiveness as well as a passive longing to get rid of the aggressiveness.

Studies in psychosomatic dermatological and gastrointestinal patients have also shown the importance of aggressiveness and hostility in the development and exacerbation of these symptoms (Folks and Kinney, 1992a, 1992b; Gupta et al, 1989).

Relational dynamics of aggressiveness suppression

Sperling’s (1955) description of the type of *psychosomatic relationship* between child and mother focuses on a mechanism of *denial* of destructive impulses, and on strong dependence of a mother (or unconscious representatives of her) who need a sick and helplessness person for whom to care²³ (p. 323). It is usual to see the recurrence or

²³ Furthermore, in certain psychosomatic disorders “the patient creates a pressure on the important members of his environment to fall in with his needs; the patient exercises a long-term power of

the exacerbation of symptoms in life-events that are related to potential raise of fear and/or rage and aggressiveness²⁴. According to Sperling (1955) the pathogenic interpersonal conflict in psychosomatic disorders manifested in rejection of the child “when he/she is healthy and evidences a striving towards independence” (p. 322). Sperling’s research also suggested that the superego of these patients demands the stifling of overt manifestations of aggression, rebellion, self-assertion and striving for independence. (Sperling, 1967, p. 344).

James (1979) described a similar relational dynamics in children with both anti-social and psychosomatic symptoms, in which the psychosomatic symptoms were “used” as if to avoid conflict with the parents (James, 1979, p. 415). Grunspun has also noted that the interpersonal personality factors associated with asthma, ulcers and skin diseases in children, are similar in that the sufferers have difficulty in expressing aggressiveness (Grunspun, 1996, p.181).

Lichtenberg (1989) asserts that the child’s striving for independence is function of the explorative-assertive system of motivation, and can be misinterpreted by some parents and educational systems as a threat and be handled as if they were manifestations of aggressiveness.

Addictions and rigid containment of dependency

The drug addict’s incapacity to seek and receive aid from others (in others words, being emotionally dependent) is addressed by several authors (Rado, 1933;

manoeuvring others...he feels a debt is owed to him and feel he has the right to what is done for him. (Wisdom, 1959). Atkins described a mother characterised by a “masochistic need to serve and preserve him [the patient] as helpless, demanding and soiling infant” (Atkins, 1968, p. 221). Atkins described a case where “when he was successful in coercing his environment to participate in his regressive behaviour his asthma was exacerbated (Atkins, 1968, p. 221). A similar type of relationship is also termed “co-dependency” (e.g. O'Brien and Gaborit, 1992) and is described as an important pathogenic factor in the maintenance of addictive disorders.

²⁴ Events such as the start of school, birth of a sibling, adolescence, start of career, marriage, divorce, childbirth, infidelity, etc,

Limentani, 1968; Khantzian, 1978; Shedler and Block, 1990), as well as is a serious deficiency in developing reliable relationships with family, friends, and colleagues, contributing to poor school relationships and antisocial behaviour in the community (Sabath, 1967; Kolb *et al.*, 1974). Furthermore, members of drug abuse families may often present as help-rejecting (de Forest *et al.*, 1974).

In a longitudinal study, characteristics of unhelpfulness and uncooperativeness were already visible at the age of 7 and 11 in future drug users²⁵ (Shedler and Block, 1990); these traits are verified in many other studies as a predictor variable for drug use (see Newcomb and Earleywine, 1996).

By the age of eighteen drug abusers seem to be fortified against the possibility of meaningful personal relationships through their hostility, distrust and emotional withdrawal (Shedler and Block, 1990). Khantzian (1978) points out a *massive* repression of dependency and nurturance needs which make the addicts feel cut off and hollow leaving them vulnerable to the disease.

Relational dynamics of Dependence suppression

I have previously proposed (Torres, 2003b) that the concept of *attachment and bonding* (e.g. Bowlby, 1969) can be seen as representing part of the wider array of emotional experiences Bion weaved together under the rubric of *Dependency*; I have argued that the socio-emotional basic system of Dependence could be seen as comprising various epigenetic layers: placental dependency (see Blomfield, 1987), suckling period, attachment to parents, dependent social relations (e.g. *reciprocal*

²⁵ In contrast, the future *abstainers* were described at the age of 7 and 11 as i) tending to give, lend, share, conventional in thought, fearful and anxious, looking to adults for help and direction, shy and reserved, obedient and compliant, and ii) not liking to compete, not self-assertive, not aggressive, not seeking to be independent and autonomous.

altruism) and spiritual dependence (see Rickman, 1938), since these systems are correlated both at psychosocial and neurological levels; what is more, disruption in all of these levels is found in addicted subjects (Torres, 2003b)

Attachment and bonding

Several studies on the antecedents of substance abuse connect it with a lack of attachment to parents and friends²⁶ (see Walsh, 1995). Walsh considered the use of drugs to be an “alternative method of dulling the pains of anxiety and insecurity that are the sequel of nonattachment”, and that it “may function as chemical ‘balm’ for that insecurity” (Walsh, 1995, pp. 95-96). In a previous study (Torres et al, 2001) we found that chemical dependent patients have significantly higher values in the attachment dimension of “avoidance of close relationships”. Also Schoor and Beach (1993) verified that juvenile drug users tend not to have teenage close relationships.

Sterling *et al* (1997) verified that *Learned helplessness* (which is linked to the caregiver’s constant negative criticism on children and to non-secure attachment) is a stronger predictor of dropout from treatment and failure to abstain from drugs than other sources of distress (such as psychoticism measures)²⁷.

These results support previous psychoanalytic theories relating addictions with insecure and dysfunctional relations with love objects (e.g. Simmel, 1948; Savitt, 1963; Wurmser, 1974; Lidz et al, 1976).

Abstinence from drugs through the establishment of intense dependent relations has also been mentioned in psychoanalytic case-studies (Rosenfeld, 1960; Browne,

²⁶ As we have mentioned above, there are significant occurrences of losses, separations and abandonment in the primary relationships in the previous history of addictive people, events that can be seen as contributing to disruption of the secure attachment process

²⁷ this relation was not explained by the association of learned helplessness with other psychological distress such as depression.

1965). Furthermore, in some cases psychotherapy displaced drugs as a dependency need (Limentani, 1968), particularly when the therapist was perceived to be an idealized narcissistic object, leading to rapid achievement of drug abstinence (Dodes, 1990) via a merger with the idealized object that provided assurance of power and control²⁸.

Suicidal behavior and rigid containment of Pairing

In a previous revision of literature (Torres e Soares, 2002), we addressed in detail a great amount of evidence pointing to the conclusion that phenomena and events that can be seen as disturbances, particularly suppression, of the Pairing valency and basic assumption are strongly related with suicidal behaviour and ideation both in clinical and non-clinical populations.

These events and phenomena include: *marital status* (Stack, 1992a; Moscicki, 1995; Iga et al, 1978; Stengel, 1964; Adam, 1990; Lester, 2000), *mating chances related to socio-economic status and social networks* (Iga, 1978; Stengel, 1964; Adam, 1990) *number of offspring and birth rates* (Meltzer et al, 2001; Iga et al, 1978; Leenaars and Lester, 1999; Lester, 1999, 1994; Brown et al, 1999), *reproductive sterility or fecundity* (Rice, 1985; Stengel, 1964; Brown et al, 1999), *sexual identity* (Ramafedi, 1999; Fergusson et al, 1999), *sexual abuse* (Lifton, 1979; Adam, 1990; Moscicki, 1995; Gonzalez et al, 2001; Bridgeland et al, 2001; Kushner, 1991; Briere, 1992; Zlotnick et al, 1996), *messianic social ideologies and messianic sects*²⁹ (Kushner, 1991; Torres, 2005).

²⁸ Dodes states: "This use of an object, however, is a capacity which is not universally present in addicts, or people in general, ...the presence of such a capacity may distinguish those patients who rapidly abstain from those who do not... some addicts will abstain from drugs but will be unable to internalise the function of the idealized object, therefore requiring its permanent presence" (Dodes, 1990, p. 417).

²⁹ Moreover, Kushner (1989) also suggested that the emergence of messianic-suicidal social movement's leaders are related to the disturbances of the leaders (and followers) sexual-mating life, such as in the case of Jim Jones, described in Kushner, 1989.

There is a strong case for proposing that suicidal behaviour and ideation can be directly related to deficits in containing the pairing valency and basic assumption. Actually, the features in psychiatric patients (depressive and psychotic) that differentiate suicidal from the non-suicidal patients are conflicts or actual losses taking place in the patients' intimate relationships, social isolation and/or absence of offspring (Stengel, 1964; Adam, 1990). Moreover, it has been pointed out by cognitive studies that the best predictor of suicidal acts is an emotional-cognitive state of *hopelessness*; hopelessness has a direct effect on suicidal intention, independent and statistically stronger than depression itself (e.g. Minkoff et al, 1973; Beck et al, 1975). This state of hopelessness can be seen as the reverse of *messianic hope and optimism*, which characterize the Pairing valency and basic assumption.

Relational dynamics of Pairing and suicide

Psychoanalytic thinkers observed that many suicidal patients expressed fantasies of merging with an idealized object, and suggested that the erotic or libidinal aspects in suicidal acts (phantasies of reunion with a lost or impossible libidinal object, and of being saved by loving primary object) were as important as the aggressive aspects of the oral narcissistic regression initially identified by Freud in 1917 (Garma, 1940; Friedlander, 1940; Abadi, 1959; Adam, 1990). The importance of the loss of libidinal objects and the phantasies of being reunited with them is also referenced in the field of anthropology with some ritual suicide, for example, the *Suttee* in India (Stengel, 1964, p.56), with the ritual function of union with the deceased husband.

The role of birth rates and fertility both at the macro-social level and micro-social should preclude a reduction to an intrapsychic explanation only: Adam points out that the presence of children adds to the protective factor of marriage, a fact reported by

Durkheim (see Adam, 1990) and confirmed consistently by other later researchers (*idem*).

In my view the data on the association of fertility status with suicidal acts suggests a more primitive, protomental, importance of biologic reproduction as the basic motive for sexual/libidinal affects, as expressed in Bion's concept of pairing valency/basic assumption, as well as in Freud's early theories of libido and actual neurosis.

Researching the combined role of fertility status and libidinal aspects of self-destructive behaviour, Brown et al (1999) tested a mathematical model created by Decatanzaro (1999) addressing the self-destructive tendencies of social animals; according to this model there should be a tendency to self-destruction when the reproductive potential of the individual is zero or negative. The concept of "individual reproductive potential" is measured by a combination of four items, all congruent with basic aspects of Pairing valency: importance of sex, importance of romantic relationships, satisfaction with partners in romantic relationships and perceived attractiveness to members of the opposite sex.

Using Decatanzaro's theoretical model in the context of Bion's model, the *suppression* of the pairing valency can be interpreted as a reproductive potential below-zero, that is negative experiences with sexuality, romantic relationships, satisfaction with partners and perceived attractiveness to members of opposite sex. In this sense, Decatanzaro's model is, as far as I am aware, the only one directly congruent with the protomental model proposed in the present thesis, according to which self-destructive behaviours are caused by the suppression of Pairing valency

I will now address the preliminary and pilot studies (Torres, 1995; 1999; Barbosa, 1999), directly focusing on the emotional containing processes in the different basic emotional systems (valencies).

Previous studies with valency questionnaires

I started to explore the measurement of individual differences in valency following standard psychometrical procedures (e.g. Cronbach, 1990), with the aim of researching the protomental hypothesis in two pilot studies³⁰. The first study (Torres, 1999) was performed using a questionnaire composed of thirty nine items collected from questions of the MMPI (Minnesota Multiphasic Personality Inventory), and the HSCL (Hopkins Symptom Check List) and some original items written by design, which tried to sample the content of Bion's (1961) descriptions of valency and basic assumptions on face value³¹. A sample of 99 Psychology students answered the questionnaire. After exploratory factorial analysis, three sets (factors) of valency items were identified as theoretically coincident with the basic assumptions Dependence, Fight-flight and Pairing. Confirmatory factorial analysis using structural equations showed the model had a good fit.

In the second study, colleagues and I composed a new questionnaire, which served as blueprint for the one used in the present work. The detailed methodological steps are presented in Barbosa and Torres (1999), however I will briefly explain the process of its construction in chapter 5. The final questionnaire was completed by a sample of 251 subjects, from various clinical and non-clinical groups: psychology

³⁰ As we shall see in the next chapter, there were previous attempts to measure valency through questionnaires, of which I was then unaware.

³¹ Examples: "I am angry with people who make me feel bad" corresponding to *Fight-flight* valency, "I like to flirt" corresponding to *Pairing* and "I admire generous people" corresponding to *Dependence*).

students, general population, prison inmates, inpatient drug addicts, anorexia patients, and parents of psychiatric children³².

Association between valency psychometric scales and somatic symptoms

In order to initially explore specific associations between the measures of different valences and somatic symptoms, I looked for patterns of statistically significant correlations between each of the valency psychometric scales and each of the behavioural and somatic related items in the questionnaire. I found some results in the statistical relation between the valency scales and the questions about a) loss of appetite, b) drug use, and c) allergies, that could be interpreted at the light of Bion's protomental hypothesis.

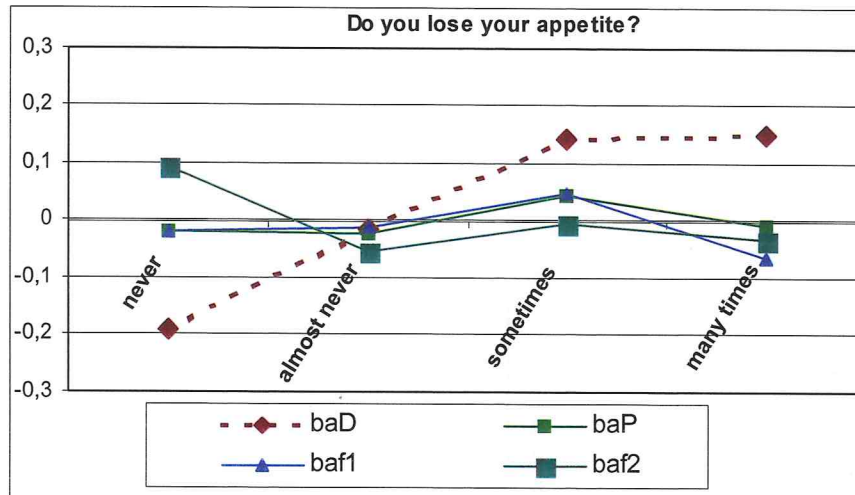
Loss of appetite: as illustrated in Graphic 1. As the average value in the psychometric Dependence scale gets higher, the self-report on the frequency "Loss of Appetite" also gets higher (and vice versa; see dotted line). In a nutshell, these results suggest that subjects with *greater* expressed valency for Dependence have *less* appetite for food than the others.

I interpreted these results at the light of the theoretical model as meaning that the *inhibition/suppression* of emotional Dependence (negative score) is associated with greater appetite for actual food ("I never lose my appetite"); conversely the individuals with higher levels of emotional Dependence (positive score) report losing their appetite "many times", i.e. having lesser appetite for actual food. It is interesting to note that the

³² The composition of the sample was as follows: 58 % female, mean age of 28, and range from 14 to 77 years old. The groups were: 97 psychology students (38.6%), 91 general population (37.4%), 48 prison inmates (19.1%), 4 inpatient drug addicts (1.6%), 4 parents of psychiatric children (1.6%), 4 from families of anorexia nervosa patients(1.6%).

subjects of the sample with higher score of D were precisely the sub-sample of anorexic patients.

Graphic 1³³

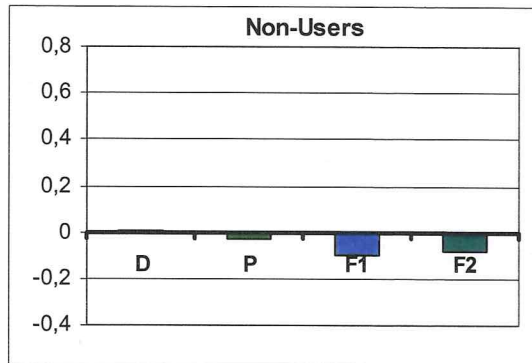


This result can be interpreted in the light of Bion's proposition that the valence for the basic assumption of Dependence manifests as a need to be *nourished materially and spiritually* (Bion, 1952, p.235), that is, at a level of a beta element as material-concrete nourishment through actual food, and at a symbolic level in the form of spiritual-emotional "nourishment" through emotional support and affection. The results are compatible with the idea that deficits in the containment of dependence valency might be related at a protomental, or *beta element*, level with either increased or decreased appetite.

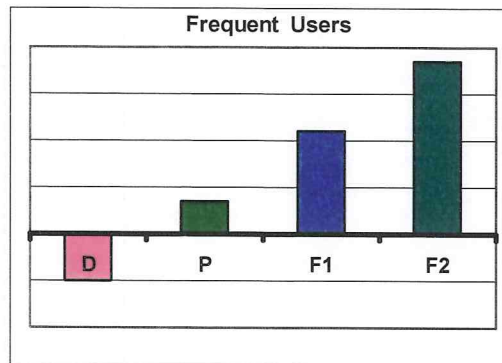
Drug use and abuse. The group of people who reported taking pills *regularly*, and taking heroin and cannabis ten or more times, had the lowest average score on the Dependence psychometric scale. The next two graphics show the comparative average scores on the four valency scales of frequent users and non-users of Pills, Cannabis, Heroin and Cocaine.

³³ Legend: baD: Valency for Dependence; baP: valency for Pairing; baF1: valency for Fight-flight (competitive dimension), baF2: valency for Fight-flight (persecutory dimension).

Graphic 2



Graphic 3

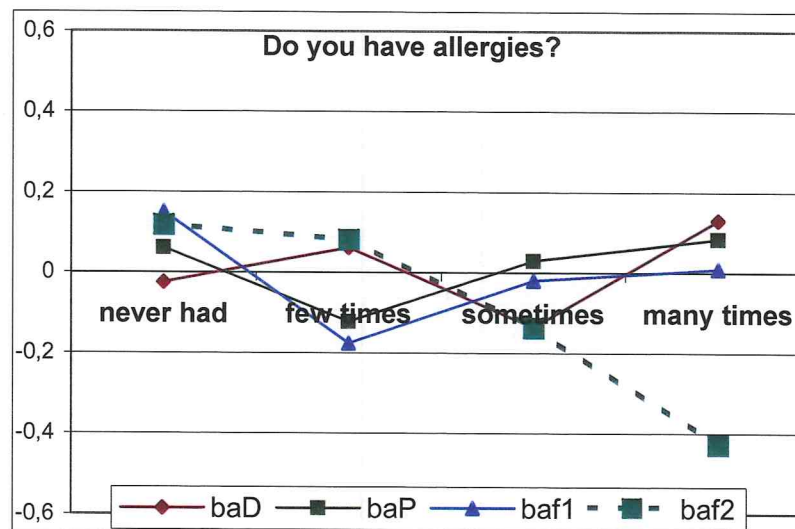


It can be seen that while the *non-use of drugs* is associated with average (near 0) values in all the measures of valences, the frequent users show evident imbalances in the various different valency scores: negative value for Dependence and strongly positive values for both Fight-flight scales. These results on the “appetite for drugs” can be interpreted in a similar way to the appetite for food in the previous section of results. I have elsewhere (Torres, 2003b) reviewed strong evidence for neurophysiologic (i.e. protomental) common pathways in the brain’s systems of reward, at the endogenous opioid system, for food and drugs as well as for socio-emotional dependence (attachment, separation anxiety).

Allergies. The next graphic shows that F2 diminishes radically when there is a greater occurrence of allergies³⁴.

³⁴ Because F2 is significantly lower in women, and women also relate significantly higher occurrence of allergies, the occurrence of allergies could be mainly associated with Gender rather than F2. However, when F2 and Gender are controlled simultaneously in the correlation with the question about allergies, the F2 score maintains its significant effect.

Graphic 4



An allergy is an overreaction of the immune system defences that can be seen as corresponding to "false alarms" (e.g. Pirlot, 2002). I interpreted the data at the light of Bion's model as suggesting that this overreaction of the immune system is associated with the suppression of the psychological awareness of persecutory elements, which are expressed in the F2 psychometric scale.

In this viewpoint, the allergic symptoms could be seen as a protomental expression of the "persecutory" sensibility to threat, at the level of the somatic immunity system, instead of being experienced at a mental level.

Wisdom elaborated this theme in a particularly clear way:

When primary distress is projected there is no psychological protection against an internal threatening object. There remains, however, recognition of threat. Somatic changes are not caused by the threatening object but by the body's reaction to it (...) Physiology is then in a position, so to speak, to play its natural part. The result is physiological dysfunction or hyperactivity, prolongation of which may produce organic lesion" (Wisdom, 1959, p. 145).

Considering these interesting preliminary results, I decided to test more systematically the protomental hypothesis in groups of people that were clinically affected by the disorders. It was this endeavour that originated the present work.

In the next chapters of the thesis I will present the design of the study, its methodology and results obtained.

Chapter 5. Hypotheses and Design of the study

In this chapter I will present the hypothesis being investigated, the research design used to test the hypothesis, and introductory methodological issues related to the assessment and measurement of the theoretical constructs.

Hypothesis

As previously explained in the introductory chapter of the thesis, there are a) one conceptual hypothesis and b) two clinical hypotheses

The *conceptual* hypothesis is that *both* extremely *high* and extremely *low* reported emotional intensities in valency are related to *more* alexithymia; *medium* emotional intensities in valency are associated with *less* alexithymia¹. This hypothesis reflects the idea of two modes of *deficits* in emotional containment: *fragmented* and *rigid*, as presented in detail in the previous chapters, and particularly in chapter one and three.

The *clinical* hypotheses are that there is a) an association between the cluster of diseases under study and alexithymia and b) an association of each of the specific disorders with specific valences, as proposed in detail in chapter 4.

¹ This corresponds to a curvilinear U-Shaped curve in the statistical relation between the 2 variables. I have addressed this notion previously in a forum presented in the Centre for Psychoanalytical Studies (Torres, 2003c). This U shaped relation between emotional variables and cognitive-behavioural output has been demonstrated in various fields of psychology. The relation between stress and cognitive performance (*low* stress = *low* performance; *average* stress = *good* performance; *high* stress = *low* performance), and the relation between drug use and avoidance of close relationships in young people (abstinence = high avoidance; experimental use = low avoidance; abuse = high avoidance [Shedler and Block, 1993]), are only two examples of these U (or U-inverted) shaped relations, in which there seems to be a balanced emotional mid-point with “good” cognitive output, and extreme emotional values with “bad” cognitive output.

Conceptual hypothesis:

A deficit in transforming emotional states into symbolic verbal representations (alexithymia) is associated with both: a) very high reported emotional intensity in valences (this association corresponding to a fragmented type of containment) and b) very low reported emotional intensity in valencies (this association corresponding to a rigid type of containment).

Clinical hypotheses

A cluster of disorders comprising of the addiction to substances, psychosomatic symptoms and suicide attempts are all associated with measures of

- a) a deficit in transforming emotional states into symbolic verbal representations (alexithymia) and
- b) deficits in the intensity regulation in three different socio-emotional systems (valences).

The hypothesised relations between specific deficits in the intensity regulation of valences and specific disorders of this cluster are:

b.1) Addictions to substances are specifically associated with deficits in the intensity regulation of the *Dependence* valency.

b.2) Psychosomatic disorders are specifically associated with deficits in the intensity regulation of the *Fight/flight* valency

b.3) Suicidal tendencies are specifically associated with deficits in the intensity regulation of the *Pairing* valency.

Design

It is consensual that there are two main ways of collecting data on people: the quantitative or “fixed” designs and the qualitative of “flexible” designs² (e.g. Robson, 2002).

In general it can be said that “fixed”/quantitative designs are better at determining relations between “variables” in the *nomothetic* sense (Smith et al, 1999) but at the cost of imposing too much of the researcher’s perspective on the subjects data production. On the other hand, the flexible designs allow the researcher to more easily grasp the subjects’ perspective and the gain a deeper understanding of their world, in an *idiographic* sense (*idem*); however they are inadequate in testing the association between variables due to a lack of quantification and statistical testing (see also Robson, 2002; Smith, 1995).

Since each of the methods have inherent limitations and virtues, it is becoming more frequent (research resources allowing) to combine quantitative and qualitative designs, to improve the quality of data collection (e.g. Robson, 2002; Tashakkori and Teddlie, 1998).

Multiple design

The present design incorporates both qualitative interviews and quantitative questionnaires, i.e. a fixed design and a flexible design, and hence can be called a “multiple design” (Robson, 2002) or “mixed method” (Tashakkori and Teddlie, 1998); however the former term is preferable to avoid confusion with “quantitative mixed methods”.

I will now describe the objectives of the flexible and fixed components in more detail.

² I will follow Collin Robson’s (2002) terminology in respect to research designs.

Flexible design: qualitative life story interviews.

The aim of the qualitative design is to provide an in-depth understanding of the clinical conditions under study, by accessing the subjects' own memories of emotional experiences in social interaction, and to identify patterns of emotional containment (fragmented and rigid) of the different valences. Specifically, the objective was to try to identify patterns of events and interpersonal dynamics that took place before the onset of the clinical condition, and in that way infer causal factors of the clinical problems.

Life-story interviewing

Hollway and Jefferson (2000) give good reasons to believe that eliciting personal narratives, (such as life-stories) is a better way of in-depth interviewing than questioning about discrete, disconnected situations or periods, because people tend to organize meanings and remember things in a narrative way³.

A concurrent approach to address the research questions would be to specifically ask the subjects about their life situation during a specific time-span before the onset of their condition, as is done in the traditional research on the influence of life-events in the development of disease (e.g. Totman, 1979). However, there are reasons for not adopting very structured interviewing techniques: the topic-focused interviews, which largely impose the researcher's agenda on the interviewee, have been shown to produce brief, defensive, abstract and rationalised answers, and hence can prevent an in-depth

³ While stories do not provide a transparent account through which we learn truths, story-telling stays closer to actual life-events than methods designed to elicit explanations (Hollway and Jefferson, 2000, page 32) Furthermore, Hollway and Jefferson have pointed out the similarities between the narrative eliciting method of gathering data and the psychoanalytic method of free association, in which the researcher, as the psychoanalyst: "Is eliciting the kind of narrative that is not structured according to conscious logic but according to unconscious logic; that is, the association follows pathways defined by emotional motivations, rather than rational intentions" (page 37). This makes life-stories adequate not only in achieving depth and thus reliability and validity of the interviews, but also makes it a good way to establish interfaces and compare results between psychoanalysis and research in other fields of the human sciences.

exploration of subjective experiences (Hollway and Jefferson, 2000)⁴. This entails a loss of reliability and validity of the data and has often led to flawed findings, and to theoretical models that don't sufficiently take the complexity of the subject's context of psychosocial interaction into account (Schroeder and Costa, 1984).

Fixed design: self-reported questionnaires

The fixed design consisted in a survey using two questionnaires to measure *alexithymia* and *valences*; these will be detailed in the following chapter.

The survey was of a *cross-sectional* nature (i.e. applied in only one moment in time for each subject) and included a *comparative design* of three groups of clinically ill subjects with one group of non-clinical subjects. According to Robson (2002) this type of survey methods should be included in the category of *relational designs*, meaning that they assess the statistical relation between two or more numerically categorized variables.

Sometimes these designs are referred as *correlational studies*, to distinguish them from experimental and quasi-experimental designs where the subjects are exposed to conditions or "treatments". While it is generally assumed by quantitative researchers that in experimental designs the causality can be addressed directly (e.g. Campbell and Stanley, 1966), in correlation studies it definitely cannot, and only correlations, or co-occurrences, can in fact be assessed.

In what respects the questionnaire design, the *conceptual hypothesis* was tested determining the nature of the correlation between the quantitative measures of valency and of alexithymia (using Ordinary Least Squares regression coefficients); and the *clinical hypotheses* were investigated determining the quantitative differences in both the

⁴ Critical assessment of life-event research (Schroeder and Costa, 1984), has shown that there can be serious flaws in this methodology, because when subjects are asked to remember specific periods of their past, they tend to easily forget some events while exaggerating others.

measures of valency and of alexithymia in each of the groups under comparison (using Multinomial Logistic Regression coefficients).

Objectives of the Combination of both designs

The qualitative or flexible design aims at covering areas that are not accessible by research based on the relation between statistical variables measured by closed questions:

1) Gathering of in-depth and phenomenological relevant information about actual socio-emotional experiences of the subjects in their own perspectives. This information will be combined with the statistical results to illustrate how the phenomena detected with statistical techniques translate into recalled emotional experiences.

2) Tracing the direction of causality between the emotional containment processes and the protomental disorders: The cross-sectional nature of the questionnaire assessment precludes the possibility of establishing a temporal sequence, and hence causal link (Haynes, 1992) between the valences' containment and the onset of the disorder. I tried to overcome this flaw through a retrospective approach of the subjects' history. I am assuming here that it is reasonably possible to access the sequence of events through the autobiographical memory of the interviewees (Conway, 1990)⁵. However, only a longitudinal design would allow for determining the precise time sequence, and hence

⁵ There is reason to believe that autobiographical memories are reasonably objective and substantive realities, and thus not only can be grasped through discourse but also can be used to access the actual past experiences of the subjects. This is one of the basic assumptions of Freudian in-depth psychology research. However, autobiographical memories are prone to be distorted, by unconscious or conscious defensive processes (e.g. Conway, 1996), and specific techniques must be used to access them. In a fairly recent revision of autobiographical memory research, Martin Conway concludes that although autobiographical memory may primarily represent interpretations and not facts, it is clear that at least some factual information is preserved (idem, p.12). According to the same author, and a point very important to the present research, "Information about the location of an event and temporal information about the date of occurrence of an event, appear to be ubiquitous features of autobiographical memories" (ibidem, page 11). Furthermore, there are reasons to believe that flagrant errors and confabulations of autobiographical memories are rare even among severely brain-damaged people (idem). In any case, the partial errors of autobiographical memories "do not violate the meaning of the recalled episode; in fact, if anything they seem to emphasize the meaning" (Conway, 1990, p.11).

causality; in this sense the retrospective approach taken in the present thesis is only tentative in uncovering causality.

On the other hand, if the quantitative questionnaire results are congruent with qualitative data, they will make it possible to determine whether the episodes and narratives recalled by the interviewees are relevant to a substantially larger group of people as well as the probability of them being just random occurrences in the present sample.

Measuring the concepts in study

I will now address the question of the feasibility of observing and measuring the concepts under study.

Deficits in the cognitive-symbolic representation of emotional states

The cognitive deficits in symbolic representation of emotional states were measured through the theoretical construct of “alexithymia” and a self-reported questionnaire to quantify it (the *Toronto Alexithymia Scale*), and were observed also through thematic and interpretative analyses of interviews with subjects clinically affected by the disorders under study.

Historically, the psychometric measurement of alexithymia followed the clinical observation of it as a style of communication in patients undergoing psychoanalytical psychotherapy (Taylor, 1987; Taylor et al, 1997). Firstly, procedures such as the Scored Archetypal Test with Nine Elements (SAT9) test (Taylor, 1987, p.100) for systematically observing and quantifying alexithymia were established. Subsequently, other indirect measures were built in to the form of the questionnaires, and correlations between these

questionnaires, the direct observational measures and also clinical ratings were found, giving validity to the indirect self-report measure of alexithymia⁶.

Deficits in the quantitative regulation of Valency

I have also used the thematic and interpretative analysis of the interviews with clinical subjects to identify features in the individuals' socio-emotional behaviour correspondent to the notion of valences. Previous authors have interpreted observations of individuals in a group using the concept of valency (Bennis and Shepard, 1956; Gustafson and Cooper, 1985). For instance, Bennis and Shepard (1956), have made a parallel of "orientations towards authority or intimacy that members bring to the group", with Dependency and Pairing valences. However, I believe my study is the first one interpreting qualitative interviews in the light of Bion's concept of valency.

On the quantitative side, there have been some previous studies (e.g. Schutz, 1955; Stock and Thelen, 1958; Thelen, 1985; Armelius and Armelius, 1985; Lion and Gruenfeld, 1993; Karterud, 1990, 2000) which have attempted to measure Bion's concept of valences. Some of these studies have used Thelen's RGST⁷, a psychometric test build specifically to measure valences (Armelius and Armelius, 1985; Stock and Thelen, 1958; Thelen, 1985 Thelen; 1985), while others have used personality and psychopathology questionnaires (Lion and Gruenfeld; 1993; Karterud; 1990, 2000). For instance; members that were rated as "submissive and friendly" in the Symlog test⁸ behaved in accordance

⁶ See the following section on the validity of TAS-20, and also Taylor et al (1997), for a more detailed description of these research endeavours.

⁷ *Reactions to Group Situations Test*. Herbert Thelen and colleagues built various techniques in the 50's to assess valency (Stock and Thelen, 1958; Thelen, 1985). However, 1) he divided *basic assumption emotionality* and *work-function* sharply. In contrast, our objective is to assess the work-group-function procedures imbued with basic assumption emotional patterns (see previous chapter). 2) These previous instruments did not have very satisfactory indexes of reliability (Karterud, 1989, 2000).

⁸ SYMLOG (System for the Multiple Level Observation of Groups) is a test of personality and character types developed by Bales that was developed to provide measures of basic personal values (see Lion and Gruenfeld, 1993). According to Davidson (1994): SYMLOG summarizes the three groups of personal

with the Dependency assumption group styles, members “dominant and unfriendly” behaved with Fight style, and members “dominant and friendly” behaved with Pairing group style (Lion and Gruenfeld; 1993, p. 251-252). These studies demonstrated that it was possible to measure individual characteristics that predicted congruent behaviours of the subjects when immersed in a group

As mentioned in the previous chapter, I started to explore the measurement of individual differences in valency in two pilot studies. In the first study (Torres, 1999) some preliminary indicators of validity were found: significant correlations between the Fight-flight scale and the question “I love to drive fast in cars and/or motorbikes” ($r=.22$; $p<.05$) and between Dependence and the question “I maintain a stable love relationship” ($r=.30$; $p<.001$). However, the reliability of the scales was low (from .57 to .74) and there were no clear statistical relationships with somatic symptoms.

Following the ideas of Foddy (1993) about reliability and validity of the psychometric measurement of attitudes, and due to Bion’s (1961), emphasis on the work-group-function as a source of suppression of valences, I decided to emphasise the valences associated with the work group function (i.e. “how do you behave in a work group”), instead of trying to measure “pure” valences (“how you generally are/ behave”).

In a second study, I composed a new questionnaire, which served as blueprint for the one used in the present work.

The first step comprised qualitative semi-directive interviews with the objective of collecting assertions about Work Group Function attributes. The interviews were

values as follows: (1) dimension UD: desire for material success and power and its opposite, ascetic self-denial; (2) dimension PN: group-centred values (called P for Positive) as opposed to self-centred values; and (3) dimension FB: conforming values as opposed to nonconforming values. Thus, the three dimensions summarize six basic values, as each dimension is bipolar. Observations are obtained by asking raters to assess how often the person being rated displays the described behaviours (Davidson, 1994, pp. 3-4)

recorded, and then transcribed⁹. Emotionally charged assertions were chosen and we used Gould's (1997) tables of basic assumption characteristics to assign these assertions to one of the three basic assumption categories: Dependence, Flight/Fight, and Pairing.

In the final questionnaire, a section was added with questions about somatic and behavioural issues, in order to measure the severity of somatic symptoms, substance abuse and suicidal ideation¹⁰.

A *principal components factorial analysis* was then performed and a four-component solution was found. The first component was interpretable¹¹ as Dependence, the second component was interpretable as Pairing, and the third and fourth components were both interpretable as Flight/Fight: while the third component was *competition* orientated, the fourth component centred on the *dangers and threats* caused by persecutors, therefore was more related to "fear of persecution" and "Sensitivity to danger and threat"¹².

Reliability and Validity of the scales

⁹ The guidelines were as follows: *How is your relationship with others in a working group? What is your dominant personality trait when you are in a working group? What are the most importance issues for you in a working group? What makes a working group more pleasant? What is right and wrong in a working group? What do you expect to obtain in a working group? What do you consider necessary in order to achieve a good result in a working group?*

¹⁰ The questions, with a four point response scale from *Never*, to *Often*, were the following: *I have stomach troubles, I think about death, I have allergies, I Take pills to calm down, I have experienced drugs (Cannabis, Ecstasy, Heroin, Cocaine), I Have headaches, I lose sexual pleasure or interest, I have chest or heart pains, I lose my appetite, I feel my heart beating fast, I have breathing difficulties, I eat too much.*

¹¹ For the notion of "interpretation of factors" in factor analysis, see appendix 5 ("WGFS psychometric procedures and assessment").

¹² The separation between fight and flight as been made previously by Schermer (1985), who clearly separates the fight leader from the flight leader, and also by Armelius and Armelius (1985), who have separated the quantitative measures of fight from flight in their empirical research. The present factorial solution also requires the assumption of a duality in flight/fight, although not in quite the same way as the ones previously mentioned. Instead, we divided the flight/fight psychometric scales in a) a Competitive dimension and b) a persecutory-alert dimension..

The reliability of the scales was quite higher than the first study¹³. To test the validity we used Cronbach and Meehl's (1955) notions of construct validity and nomothetic network.

The question *I Maintain or look for a stable and unique relationship* had positive correlations with the scales D¹⁴ and P¹⁵ and correlation zero with F1 and F2. The question *I like to drive very fast in cars and motorbikes* had positive correlation with F1(.124)¹⁶. Prison inmates scored significantly higher both on F1¹⁷ and F2¹⁸ scales.

Age had a negative correlation with D¹⁹, and a positive correlation with F1²⁰ and F2²¹; this can be interpreted as a tendency to be less Dependent and more Fight/flight oriented with age; in fact, students who, in Portugal, are traditionally very dependent on their parents, scored higher on D and lower on F1 and F2 than the general population group, which was older. Also men scored higher than women on F1²² and F2²³ scales.

Parents of psychiatric children had very low scores on D. If one agrees with the point that Dependence biogenetic core is "child-rearing" (Schermer, 1985; p. 141), this result can be seen as reflecting the fact that these disturbed children need to depend on outside family care due to lack of dependability in their family. Anorexics, Drug addicts and Prison inmates and students, who were all dependent on social support, scored positively on D.

¹³ According to Cronbach's Alpha method: Dependence (D) .80, Pairing (P) .77, Flight/Fight1 (F1) .73, Flight/Fight2 (F2) .74

¹⁴ Kendall's Tau_b; (.227) P=.000

¹⁵ Kendall's Tau_b; (.130) p=. 004

¹⁶ Kendall's Tau_b; p=. 005

¹⁷ [F_(6,238)= 5,505; p=. 000]

¹⁸ [F_(6,238)=4,923; p=. 000]

¹⁹ Kendall's Tau_b; (-.099) p=. 014

²⁰ Kendall's Tau_b; (.105) p=. 011

²¹ Kendall's Tau_b; (.133) p=. 002

²² [F_(1,229)= 28,944; p=. 000]

²³ [F_(1,229)= 8,917; p=. 003]

I have developed a second questionnaire to measure valences, and I have substantially revised and extended it as part of the present doctoral research into the Work Group Function Scales (WGFS). However, it was not yet possible to correlate this quantitative measure of valences with observational methods of subjects in a group²⁴. I have tried to compensate for this by correlating the results of the valency measurement with other personal characteristics of the individuals reflecting their objective behaviour e.g. marital status and professional occupation, using Cronbach's idea of construct validity. These results are presented in section "validity of the WGFS" of the next chapter and in more detail in the appendix 5.

²⁴ This work is being included in the Ullevål Personality Project in Norway, using Sigmund Karterud's (2000) GERS (Group Emotionality Rating System), an observational measure to quantify valency behaviours, which has demonstrated adequate reliability and validity; the long-term nature of the study have hindered the availability of results so far.

Chapter 6. Methods

In this chapter I will present the rationale for the selection of participants (sample) and their composition, and the qualitative and quantitative instruments used to collect data. Finally, I will describe the procedures for data analysis.

Participants

The fieldwork of this research was conducted in Portugal, and the process of data collection occurred from July 2002 to March 2004.

The total sample is composed of two different kinds of participants: non-clinical subjects and clinical patients. Within the clinical participants there are two sub-groups: the total sample that answered the questionnaire, and a sub-sample that was invited to undergo a qualitative interview. Since the objective of my own qualitative study was to have a basis of comparison of the socio-emotional dynamics before the onset of a clinical condition or disease, only clinically affected subjects were interviewed. However, as will be explained below, in the quantitative design, a non-clinical group was included.

Sampling

The choice of participants was *non-probabilistic* and was not intended to represent the proportions of the Portuguese population in terms of demographic variables, but to obtain representative groups of the conditions under study by using non-probabilistic sampling. The main objective was to obtain a “large enough” number of participants in each group (non-clinical, psychosomatics, addictions and para-suicide)

to perform robust statistical tests¹. The type of sampling used includes features that belong either to what is commonly called “purposive sampling” (Robson, 2002) and “convenience” sampling (Kalton, 1983; Henry, 1990).

These types of non-probabilistic samples are the only option when the desired population for the study is rare or very difficult to locate and recruit for a study, and/or the number of subjects of the total population and their characteristics are unknown, which is the case for the clinical groups in the study, and especially illegal drug abusers (Henry, 1990, p.23). The biggest drawback of purposive sampling is that the type of people who are available for study may be different from those in the population who can't be located. In order to reduce the bias, I included several types of sub-groups in the substance abuse category (alcoholics, Therapeutic Community patients and illegal drug users not in treatment).

Procedures for contacting participants

For all clinical and non-clinical participants, the first procedure was to establish partnerships with institutions that were willing to participate in the research. This entailed contacting subjects, collecting the questionnaires, and providing a place in their facilities for the qualitative interviews.

After negotiation the ethical issues and the logistics of the research with the directive boards, one member of the staff of each institution who agreed to participate was given a written protocol explaining how to gather the questionnaires. The potential participants were contacted by the appointed staff member and invited to answer the questionnaire and to attend an interview.

¹ As there were no previous studies to determine the number of subjects required to attain a specific statistical power (Cohen, 1988), the objective was to get as many subjects as possible while assuming that that statistical *small effects* would be present. In general the type of tests used (OLS and Multinomial Logistic regression models) require a minimum of 100 cases in total and at least 10 cases per each variable included in the mathematical models.

The non-clinical sample

The subjects from the non-clinical sample were contacted via two institutions: the *Carnaxide primary school* and in the *Institute for Professional Training*, both in Lisbon. In Carnaxide primary school the participants were both members of staff (professors and administrative) and parents of students; they were invited to participate in staff and parents meetings. In the Institute for Professional Training, the participants were mature students undergoing an adult training course, and were invited to participate in the end of the seminars.

The clinical sample

The patients were invited to participate during an appointment with their key clinician (doctor, nurse) in the case of hospital patients, and in staff-patient meetings in the case of patients in a therapeutic community and community support².

Clinical Diagnostic

At the start of the project, I decided not to focus on one specific medical diagnosis of clinical afflictions in the categories of psychosomatics and addictions. The inclusion of a range of symptoms in each category is done on the theoretical assumption that a) there are common emotional determinants of disease proneness independent of diagnosis' specificity, and that b) by bringing together different diagnostics in the same clinical group (e.g. skin diseases and respiratory diseases in the psychosomatic group, and alcohol addiction and addiction to illegal drugs in the addiction group) the common

² The subjects from the clinical sample were contacted in eight institutions. *The Military hospital of Lisbon* contacted subjects with psychosomatic skin diseases and gastric disorders. The *Dona Estefânia Hospital* contacted subjects with psychosomatic respiratory diseases. The *University Hospital of Coimbra* and the *Psychiatric Hospital Julio de Matos* contacted para-suicidal patients. The *Community Centre of Carcavelos (CCC)* and the *Homem project* contacted drug addicted participants. The *Regional Centro Regional de Alcoologia do Sul (CRAS)* contacted alcoholic patients.

variance would come to the fore. However, the individual diagnostics were registered for a more diagnostic-specific approach if it happened that no significant effects had been found.

The diagnostic of the participants in the clinical sample had previously been done by the medical/psychiatric staff of the institutions involved as part of the internal process of the institutions. I discussed the range of the patients' diagnostic that should be selected with the appointed research collaborator in each institution:

Firstly, no patients with a psychotic diagnosis or severe neurological problems should be included. Secondly, the categorization of an affliction as a psychosomatic disease is a conceptual one that is imposed secondarily: it requires the existence of previous evidence of the disease to be non-communicable (non-infectious) and its onset and course being strongly determined by emotional and psychological factors. The range of diagnostics that was considered psychosomatic was based on relevant literature (Panconesi, 1984; Koblenzer, 1987; Folks and Kinney, 1992a; Folks and Kinney, 1992b, Alarcão e Silva, 1991).

Skin diseases: Alopecia Areata, Acne, Urticaria, Rosacea, Psoriasis, Vitiligo, Hiperhidrosis, Acne Rosacea, Psoriasis and Lupus.

Gastric disorders: spastic colon (also called functional bowel syndrome, irritable colon and spastic bowel).

Respiratory diseases: Asthma and Allergic Rhinitis

Non-psychosomatic skin diseases were considered: Infectious Dermatitis (eczema, mycosis and pityriasis).

The diagnosis of alcohol addiction, drug addiction and para-suicide was a straightforward one since it was based on observable behaviours and on hospital records

and police and criminal records, which were part of the individual process files of the patients.

In the *addictions* category, there were three types of subjects: 1) drug addicts in therapeutic community treatment, 2) in community support (while consuming illegal drugs or methadone) and 3) alcoholics in residential care.

In the para-suicidal patients group there was a sub-group of outpatients from the University Hospital of Coimbra and a sub-group of inpatients from Julio de Matos Psychiatric Hospital in Lisbon.

Demographic Characteristics of the participants

The total sample is constituted by 337 participants, with a mean age of 36,6 years (minimum of 16 and maximum of 84) all of them living in Portugal. Two hundred and twenty three of these subjects (65,2% of the total sample) were undergoing medical and/or psychosocial treatment for conditions suggested as being “protomental” (psychosomatic conditions, addiction disorders and suicide attempts) at the time of the survey. The rest of the subjects were either non-clinical (without any known medical diagnostic) or subjects suffering from non-psychosomatic skin conditions. The general features of the sample constitution are presented in table 1.

Although the total number of questionnaires collected was 337, the statistical models used to test the hypothesis varied in their number of subjects due to missing values in the variables included in the models³, and to specific constraints of one of the regression models used.

³ The data on the questionnaire TAS-20 from the patients suffering from respiratory conditions was not gathered due to a mistake in the procedures of questionnaire collection.

Table 1. Demographic Characteristics and Diagnostic Group of Participants

| <i>Diagnostic group</i> | <i>N</i> | <i>Percent</i> |
|---|----------|----------------|
| Non-clinical | 97 | 28,8 |
| Non-psychosomatic skin condition | 16 | 4,7 |
| Addiction to illegal drugs | 63 | 18,7 |
| Addiction to alcohol | 40 | 11,9 |
| Psychosomatic skin condition | 63 | 18,7 |
| Psychosomatic gastrointestinal condition | 6 | 1,8 |
| Psychosomatic respiratory condition | 17 | 5,0 |
| Para-suicide | 35 | 10,4 |
| Total | 337 | 100.0 |
| <i>Age at time of survey (years)</i> | | |
| <20 | 16 | 4,7 |
| 20-29 | 89 | 26,4 |
| 30-39 | 94 | 27,9 |
| 40-49 | 85 | 25,2 |
| 40-59 | 26 | 7,7 |
| 60-69 | 16 | 4,7 |
| >69 | 5 | 1,5 |
| Missing information on age | 6 | 1.8 |
| Total | 337 | 100.0 |
| <i>Gender</i> | | |
| Female | 186 | 55.2 |
| Male | 146 | 43.4 |
| Missing information on gender | 5 | 1.5 |
| Total | 337 | 100 |

Sub-sample for the qualitative interviews

This sub-sample is composed of 12 participants⁴: 4 hard-line drug addicts, 4 dermatological patients with psychosomatic diseases (skin diseases), and 4 survivors of

⁴ As is typical of the majority of qualitative studies (Ritchie et al, 2003), the present sample is a non-randomized, *purposive* (or *criterion-based*) sample. This type of sampling is justified in exploratory research and for studies where the risk of less precise results in terms of generalization *vis a vis* general population is accepted (Kinnear and Taylor, 1979). Qualitative research generally looks at quite small samples, because the process is very time consuming, and also because it is more focused on in-depth and detailed descriptions than with quantitative issues (Ritchie et al, 2003). According to Arksey and Knight (1999), a sample of eight is often sufficient for intensive interviews designed to explore a topic, although survey methods should then be used to verify the findings (*idem*, page 58).

suicide attempt (para-suicidal). The selection of the subjects to be interviewed was made on the following criteria:

a) *belonging to three specific pathologic conditions* (drug addiction, psychosomatic disease, attempted suicide [excluding subjects with psychotic co-morbidity]);

b) *gender* (similar proportions of males and females in the groups);

c) *age* (adults only); and

d) *Ethnic and linguistic background* (only Caucasian Portuguese native speakers).

This kind of purposive sampling composition has been called *Stratified purposive sampling* (e.g. Ritchie et al, 2003), in which the “aim is to select groups that display variety on a particular phenomena, but each of which is fairly homogenous so that subgroups can be compared” (Ritchie et al, 2003, p.79)

The Table 2 summarizes the sample constitution in terms of the pathologic conditions, age, sex, and also their fictitious names.

Table 2 Qualitative Interviews Sample Composition

| | <i>Gender</i> | <i>Age</i> | <i>Code Name</i> |
|-----------------------|---------------|------------|------------------|
| SKIN DISEASES | Male | 57 | Richard |
| | Male | 35 | Tino |
| | Male | 45 | Carlos |
| | Female | 54 | Mercy |
| DRUG ADDICTION | Male | 38 | Paul |
| | Male | 35 | Mario |
| | Female | 26 | Jo |
| | Female | 34 | Gina |
| PARA-SUICIDE | Male | 42 | J.C. |
| | Male | 28 | Gil |
| | Female | 52 | Maria |
| | Female | 23 | Carla |

Since I am interested in finding patterns independent of gender, I tried to get a balanced number of males and females in each group and in the whole sample⁵. This is justified because there are differences between how males and females recall their past⁶.

There was no sampling control of other demographic variables such as geographical origins and marital, fertility, educational and professional status, since the selection based on these variables would have substantially increased the difficulty and time spent on the sampling procedures to the point of making it impossible to finish the research⁷.

Instruments

Qualitative life-story interviews

The issues concerning the ways in which the interviews were conducted can be divided in three main areas: a) Epistemological issues b) Technical issues and c) Ethical issues.

The *epistemological* assumptions are important because they determine and justify both the methodologies of gathering data (conducting interviews) and the type of analysis performed (Hollway and Jefferson, 2000; Ritchie and Lewis, 2003). The *technical* issues have mainly to do with achieving reliability and validity, which has a different meaning than in quantitative analysis, since they have to do with achieving

⁵ Unfortunately, in the group of psychosomatics this was not completely possible, and only one female was interviewed

⁶ Their memories tend to focus differently, men more readily talk about work, women about family life, and also that women are likely to find it easier to talk about recalled feelings than men (Thompson, 2000, p.179)

⁷ According to Arksey and Knight (1999) sampling must balance practical concerns (time, money, access) with the required degree of generalisation from data.

depth in the personal descriptions of the interviewee and with transparency of the analysis⁸.

The techniques employed in achieving reliability and validity in the present research were: a) Face-to-face interviewing in a private setting b) Use of a guide of interview topics for in-depth exploration c) Use of open, narrative-eliciting, questions d) Verbatim recording and transcription of the interview.

Pre-test

A pre-test of the interview was made with a student of an English University. He had suffered a psychotic crisis circa ten years previously and was diagnosed with a bipolar disorder (manic-depression) and was under pharmacological treatment. The pre-test was discussed in the “PhD Mini-Course on Life-story and oral history Interviewing”, University of Essex, 2003, presented by Paul Thompson.

Structure of the Interviews

For the present study a *semi-structured* method of interviewing was chosen (e.g. Smith, 1995). This choice had two rationales:

- a) Accessing the perspective of the interviewees, instead of impinging on them the theoretical agenda and scheme, and at the same time
- b) Allowing some systematic comparison and analysis of the various interviews.

The research agenda was pre-established in the Interview Guide (see Table 3). However, the order of the questions and the wording of the questions were not totally predetermined, but instead they matched the interviewee’s linguistic range and thematic emphasis and the spontaneous course of narrative of the interviewee.

⁸ see appendix 1 for a more detailed description of the epistemological issues and of the of the technical issues involved

Interview guide

A guide for the interview adapted from Paul Thompson's life-story interview guide⁹ (Thompson, 2003[1978]) was prepared, which included a series of domains of enquiry to be explored in similar depth with all the participants. According to Thompson "these questions are not a questionnaire, but a schematic outline, an interviewer's guide for a flexible life-story interview" (idem, p. 309). See Table 3 - Guidelines for the Qualitative Interviews.

Stages of the interviews

We used a six-stage interview, as summarised by Legard et al (2003):

1) Arrival: the first few moments after the meeting. The researcher needs to be aware of the interviewee's emotional state, and try to put him/her at ease.

2) Introducing the research: Involves providing a clear reiteration of the nature and purpose of the research, reaffirming confidentiality and seeking permission to record the interview.

3) Beginning the interview: The researcher asks for background information. At this stage I also tested the quality of the recording sound, by recording this first sentence and replaying it.

4) *During the interview*: the researcher guides the participant through the key themes – both those anticipated by the researcher in the guide (see Table 3) and those that emerge from the interview. Each question is explored in depth with a series of follow-up questions.

⁹ Paul Thompson's original guide includes the following issues: Parents; Siblings/Cousins/Uncles/Aunts; Day-life in childhood; Community and Class; School; Employment; Leisure and Courting; Marriage and children; Changing daily life; Later life (Thompson, 2000, pp 309-323).

Table 3 -Guidelines for the Qualitative Interviews

| |
|--|
| <p>Guidelines for the qualitative interview</p> <p>0. Introduction and warm-up</p> <p>Background of the person (age, marital status, children, etc)</p> <p>prompt "I would like to understand something of the story of your life"</p> <p>Focusing on the problem's onset time (suicidal behaviour, OR addiction, OR psychosomatic symptom)</p> <p>When and in what circumstances did the problem begin?</p> <p>With what groups did you use to interrelate with before the onset of your problem? (Family group, workplace, scholar group, free-time group/group of friends, associative groups, etc)</p> <p>How was the dynamic of these groups?</p> <p><i>Family:</i> composition</p> <p>What kind of support did parents give you when you had problems?</p> <p>How much time used to spend with the family</p> <p>What kind of relation with the family members and with the family as a whole.</p> <p><i>School:</i> what was the course</p> <p>Relation with teachers (influence)</p> <p>Relation with colleagues Did you make Friends?</p> <p>Relation with the school as a whole</p> <p><i>Job:</i> what was the job? The most important job</p> <p>Relation with the superiors</p> <p>Relation with colleagues Friends at work?</p> <p>Relation with the job group as a whole</p> <p><i>Free-time/friends:</i></p> <p>Adolescence Best friends (did you do things your parents disapprove?</p> <p>Mates. Did it work-out?</p> <p>What kind of activities was engaged in?</p> <p>Relation with others</p> <p>What groups does the subject relate with, belong to at the present time (family, workplace, scholar, free-time/group of friends, associative groups, etc)</p> <p>How is the dynamic of these groups?</p> |
|--|

5) *Ending the interview:* a few minutes before the end, the researcher can signal the approach of the end of the interview, to allow the interviewee to gradually return to the level of ordinary social interaction. It is also important to check that the participant has not been left with any unexpressed feelings or issues of burning importance left unmentioned.

6) *After the interview:* when the tape recorder is switched off. The researcher thanks the participant warmly, and helps him/her to move out, saying something about how their contribution will help the research. This is the time to provide information

about support groups or services. If the participant seems to want to talk, either about the interview or not, it is important to be prepared to stay a little longer.

Places and conditions of the interviews

All interviews were conducted in a private room at the therapeutic facilities where the patients were getting treatment. The interviews were recorded on tape, using an external stereophonic microphone. The length of the interviews varied from 45 minutes to an hour and 15 minutes, depending on the individual.

The Framework of the qualitative interview analysis

There are several types of life-story interviews analysis. (See appendix 1 for a more detailed description) The method I used corresponds to Thompson's (2000), "Narrative analysis" and "Reconstructive cross-analysis", which is a systematic thematic analysis. The objective is to gather original material from the narratives of people's life, organise and label it in broad themes and categories, and verify in what measure they adjust the theoretical background.

The specific analytic framework used in this study is based upon the method developed during the 1980s at the National Centre for Social Research (Ritchie and Spencer, 1994), and also on the similar analytic procedures of *Interpretative Phenomenological Analysis* (IPA) proposed by Smith et al (1999). In the appendix 2 is presented more detailed background information on these analytic methods.

The process of analysis consisted in three stages, comprising what Spencer et al (2003b) call the "Analytic Hierarchy":

Data management (or "initial coding" [Smith et al, 1999]);

Descriptive accounts (or “identifying shared themes”[ibid]);

Explanatory accounts (or “Exploring and theorizing shared experiences” [ibid]).

Stage 1

In *stage 1* (Data management) the objective is to organize the enormous amount of raw information contained in the interview transcripts. Firstly, through codifying the individuals’ direct discourse in central themes and sub themes according to a previously established index, and then by condensing the coded chunks of discourse into summaries and key-phrases.

Index

The index is comprised of three main themes: 1 *Context of onset and relapses of the disease* 2. *Childhood and adolescence*, and 3. *Emotional expression/inhibition*. These general themes were subdivided in sub-themes for greater discrimination, as can be seen in the next table.

The aims of this index format were 1) to compare different individuals’ life just *before* the onset of the problem, 2) to compare the early years of all individuals, 3) to find examples, clarify and give phenomenological meaning to the concepts of Work-group-function, Emotional Suppression, and Alexithymia, which are central to understand the processes of *rigid emotional containment*, and compare their features in the different individuals

Table 4 Index for The Analysis of the Interviews

| |
|---|
| <p>1. <u>Context of onset and relapses of the disease</u></p> <p>1.1 Life events previous to onset of symptoms</p> <p>1.2 Psychosocial context</p> |
| <p>2. <u>Childhood and Adolescence</u></p> <p>2.1 Personality-Temperament</p> <p>2.3 Father</p> <p>2.4 Mother</p> <p>2.5 Family-as-a-whole</p> <p>2.6 Troubles (health, mates, school)</p> |
| <p>3. <u>Emotional expression inhibition</u></p> <p>3.1 Work-Group-Function</p> <p>3.2 Emotional Suppression</p> <p>3.3 Alexithymia</p> |

Labelling/tagging

In a second step of the stage 1 (data management) the transcripts of the interviews were read thoroughly and the subjects' discourse was labelled or tagged according to the themes and sub-themes previously defined in the index¹⁰. Therefore, the life-stories of all subjects are here compared on the basis of the index's common themes and sub-themes.

In the following example is shown how the interview transcripts were tagged, by means of code numbers that represent the correspondent theme and sub theme in the Index.

¹⁰ This is called "cross-sectional code and retrieve method" (Spencer et al 2003b, p. 203), in which "a common system of categories [an index] is applied to the whole data set and all subjects, and used as a means of searching for and retrieving chunks of labelled data" (idem, p.203).

Raw transcript of the interview:

“What happened was that I decided to run away from home, and to drug myself. *What age were you?* About 14-15 years. Actually, the first time I ran away was when my father gave me money to cut my hair. But I liked having long hair; it was fashionable among surfers like me, so I ran away from home for 2 months. *That was the first time?* Yes, I went for a walk, so I thought, and I stayed with fishermen on the beach (page 1) [...] They noticed that I was sleeping there and wouldn't have anything to eat and offered me sandwiches, and I felt grateful to them. And it was because of those fishermen that I started to use drugs, because they'd smoke joints, and then I met others that were into hard drugs, and it was then that I started to try drugs (page 2) “

Coded transcript

What happened was that I decided to run away from home, and to drug myself. *What age were you?* About 14-15 years. **1.1 (life events associated)**

Actually, the first time I ran away was when my father gave me money to cut my hair. But I liked having long hair; it was fashionable among surfers like me, so I ran away from home for 2 months. **2.2 (Father)**

That was the first time? Yes, I went for a walk, so I thought, and I stayed with fishermen on the beach (page 1) [...] They noticed that I was sleeping there and wouldn't have anything to eat and offered me sandwiches, and I felt grateful to them. And it was because of those fishermen that I started to use drugs [...*et cetera*]
1.2 (Psychosocial context)

Subsequently in a third step, a *summary* of each chunk of the labelled text is produced, allowing the original material to be seen in reduced or condensed form.

Summaries:

Run away from home at 14, and started taking drugs (page 1) **1.1(life events associated)**

Father wanted him to cut hair, he ran away with money at 14 (page 1) **2.2(Father)**

Group of fisherman gave him food and shelter when he was homeless. He is grateful, they also gave him drugs, that's how he started (page 2). **1.2 (psychosocial context)**

Table 5 Thematic Chart for Theme 1: Context of onset and relapses of the disease

| | 1.1 Life events associated | 1.2 psychosocial context |
|----------------------------|---|---|
| Mario (drug addict) | (p.1) <i>Run away from home at 14, and started on drugs</i> | (p. 2) <i>group of fisherman gave him food and shelter when he was homeless. He is grateful They also gave him drugs, that's how he started</i> |
| Gil (para-suicidal) | (p. 1) <i>separated from wife, she got all his money, he went broke</i> | (p.1) <i>Disturbed because knew that ex-wife had had sex with other men in front of his daughter</i> |

In a fourth step the summaries are placed in a grid, called a *thematic chart*, with columns numerically ordered according to the index's order of themes and sub-themes. As can be seen in the thematic chart presented in table 5, each sub-theme is displayed in a separate column in the thematic charts, while each individual is allocated a row in it.

Stage 2

Stage 2 (Descriptive accounts) is based on the analysis of the summaries previously allocated in the thematic charts (see Table 8). The main objective is to display data in a way that is *conceptually* clear and meaningful in preparing the theoretical interpretation.

In a first step the summaries on each cell are further condensed into broader descriptions (*key-phrases*), and secondly these key-phrases are clustered into conceptually wider categories, which can correspond to theoretically grounded concepts (Spencer et al. 2003b).

This is necessarily a subjective process based on clinical judgement and guided by the chosen interpretation of the researcher. However, the adequacy of the key phrases and of the conceptual clustering can be checked by the reader, following the notion of transparency of analysis (as discussed above in the section on *instruments*); It is easy to recover the summaries and the actual sentences of the subjects from the conceptual clusters, and to assess the adequacy of the conceptual cluster to represent and grasp the individuals' actual discourse.

Key-phrasing

Key-phrases to further condense the summaries are shown in a bold font:

Run away from home at 14, and started on drugs **Premature autonomy**

Father wanted him to cut hair, he ran away with money at 14 **Rebelliousness against father**

Group of fisherman gave him food and shelter when he was homeless. He is grateful they also gave him drugs, that's how he started **Attachment to drug culture peer group**

While each summary is totally different from all other summaries, because they are based on different sentences, key-phrases can be common to different summaries and participants. An example is presented in the following thematic chart. The key-phrase *attachment to a drug culture group* is common to two subjects (Paul and Gina).

Table 6 Thematic Chart for Sub-theme 1.2 "Psychosocial Context"

| Case | 1.2 psychosocial context of onset and relapses of the disease |
|----------------------------|--|
| Mario (drug addict) | (Page2) group of fisherman gave him food and shelter when he was homeless. He is grateful. They also gave him drugs, that's how he started Attachment to drug culture peer group |
| Paul (Drug Addict) | (Page 1) At 14 years had already left home and was on his own Premature autonomy (Page 2) Paired with a woman who also took drugs Attachment to a drug addict partner |
| Gina (drug addict) | (Page 7) In the drug scene she knows lots of people similar to her and that makes her feel good Attachment to drug culture peer group (Page 7) Made a pact with her brother of not crying and taking drugs instead if one of them died Pact for repression of sadness |
| Gil (para-suicidal) | (p.1) Disturbed because knew that ex-wife had had sex with other men in front of his daughter disturbed by sexual exhibitionism of ex-wife |

Conceptual Clustering of key-phrases

The key-phrases that correspond to conceptually similar phenomena are then clustered in to broader categories. In the next tables are presented a) a cluster formed by the two key-phrases of *Attachment to a drug addict girlfriend* and to a *drug culture peer group* that was called PEER PRESSURE TO USE DRUGS, and b) another cluster formed by the two key-phrases of *pact for repression of sadness*, and *premature autonomy* (this cluster was named PREMATURE AUTONOMY AND TOUGHNESS)

Table 7 Cluster 1 "Peer Pressure to use drugs"

| |
|---|
| Attachment to a drug addict partner Attachment to drug culture peer group <u>PEER PRESSURE TO USE DRUGS</u> |
|---|

Table 8 Cluster 2 " Premature Autonomy and Toughness"

| |
|--|
| Pact for repression of sadness Precocious autonomy <u>PREMATURE AUTONOMY AND TOUGHNESS</u> |
|--|

As a rule, I tried to keep the *key-phrases* closer to common-sense terminology based on the account of the subjects, and endeavoured to ensure that the subsequent categorisation in *clusters* would approach conceptual terms (Spencer, 2003)¹¹

Stage 3

Finally, in *stage 3* (Explanatory accounts) I looked for patterns in the data and tried to build explanations for those patterns. According to Spencer (2003) this stage is comprised of two main sub-phases:

1. *Detecting patterns* (linkages between sets of phenomena; attachment to subgroups, verifying associations).

2. *Developing explanations* (inferring an underlying logic; developing explanatory concepts; drawing from other empirical studies, using theoretical frameworks).

In the sub-phase of *detecting patterns* I built tables where I cross-tabulated the clusters with the patients' condition (drug addiction, psychosomatic, para-suicide), as exemplified in the next table:

Table 9 Example of Cross-Table of Condition by Clusters

| <i>Clusters</i> | <i>Condition</i> | | |
|---|-----------------------|----------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| PEER PRESSURE TO USE DRUGS | Mario, Paul, Gina | | |
| PREMATURE AUTONOMY AND TOUGHNESS | Mario, Paul, Gina | | |

¹¹ This method represents a compromise between *grounded theory* and *interpretative phenomenological analysis* (see appendix 2 for a more detailed background on the rationale of these analytic procedures).

It could be verified that the co-occurrence of *peer pressure to use drugs* and *autonomy/toughness* is a pattern of the interpersonal context before the onset of drug abuse, and one that which is present in all drug addicted interviewees¹².

One major advantage of this analytic technique is that it makes it easy to go upward and backward in the “analytic hierarchical ladder”: from common-sense descriptions to more abstract concepts related to the theory.

The third stage of analysis (explanatory accounts) is a process of interpretation guided in the context - and limited by the specific boundaries of - Bion’s categories of basic socio-emotional systems (valencies).

Limitations and focus of the interpretation method used

In the various stages of analysis, I was mainly focused in detecting, categorising, and interpreting emotional events that were manifest in the discourse flow of the subjects, such as perceptions, actions, expressions of raw affective states, and salient features of the discourse itself.

Perceptions and images the subjects convey of others and of themselves;

Actions, inter-actions, sequences of actions and reactions and in general emotional states that are very salient because they are translated in actions (including the use of words as actions such as in quarrels with others).

Expression of raw emotional states, such as terror, anger, pain, anxiety, passion, etc, which are salient enough to be verbalized

Features manifesting in the flow of discourse itself, such as stammering, abruptly interrupted sentences, the inability to find words to elaborate internal states, etc.

¹² The fact that there are two opposing pressures (“getting away”-autonomy and “merging”-peer pressure) means there is a pattern of behaviour that can be interpreted further in stage 3 of the analysis (*Explanatory Accounts*).

In other words I have not interpreted the putative latent meaning of the discourse, such as in trying to infer unconscious contents.

The next table illustrates the analytic process; this process was repeated for each sub-theme the *index* (see previous section “stage 1”):

| Stage 1: Data management | | Stage 2: Descriptive accounts | Stage 3: Explanatory accounts | | |
|--------------------------|-----------|-------------------------------|-------------------------------|--|--|
| Transcripts | Summaries | Key-phrases | Conceptual clusters | Cross tabulation of clusters by condition. | Detecting patterns of clusters by condition. |
| → | → | → | → | → | → |

After this explanation of the procedures for the qualitative analysis of life-story interviews, I will describe the procedures for the quantitative analysis of the questionnaires.

Questionnaires

Two self-administered questionnaire instruments were used: 1) *WGFS-1.02* to measure Valences, and 2) *TAS-20* to measure Alexithymia.

The WGFS (Work-Group-Function Scales) were built as a self-administered measure of the three types of valency, and has been developed since 1999 (Barbosa, 1999; Torres 1999; Chagas, 2004); It is originally in Portuguese language; it was translated in to English under the supervision of Robert Hinshelwood¹³.

The TAS-20 (Toronto Alexithymia Scale-20 Items) is a questionnaire developed by Graeme Taylor and colleagues (e.g. Taylor et al, 1997) used in many clinical settings in several countries, including Portugal.

¹³ Sigmund Karterud and colleagues at the University of Oslo are testing a Norwegian version of the WGFS.

Work-Group-Function Scales (WGFS).

The WGFS version 1.02 consists of 50 items that express the subjects' opinions and attitudes concerning work-groups. The full questionnaire is presented in the appendix 7. Figure 1 presents examples of one item of each valency.

Figure 1. Examples of Pairing (1.), Dependence (2.) and Fight-flight (7.) items

| In a working group it is essential... | |
|---|-------------------------|
| 1. that there are members from both sexes, who may complement each other | |
| Is not essential 1.....2.....3.....4.....5.....6 | Is absolutely essential |
| 2. That everyone learns from those with more experience in the group | |
| Is not essential 1.....2.....3.....4.....5.....6 | Is absolutely essential |
| 7. That members should be aware of destructive and suspect elements in the group | |
| Is not essential 1.....2.....3.....4.....5.....6 | Is absolutely essential |

There are a total of 12 psychometric scales: 3 General Valency scales (D, P, and F) and other 9 sub-scales that differentiate subtleties within each valency¹⁴:

Pairing: 1) Excitement; 2) Open-mindedness; 3) Good Humour

Fight/flight: 1) Victory, 2) Cruelty; 3) Paranoia; 4) Flight/Avoidance

Dependence: 1) Peer-solidarity; 2) Leader-dependency

The items comprising of each sub-scale are presented in the next tables:

Pairing: Excitement

| |
|---|
| V14 That the group produces brilliant ideas |
| V17 That there are flirtatious people in the group |
| V30 Flirtation, on occasions, can increase interest and enthusiasm |
| V22 That everyone's aim in a work group is to achieve innovation |
| V41 that there are members from both sexes, who may complement each other |

¹⁴ These subscales were built through a process of *exploratory factor analysis* (e.g. Kline, 1993); as such they do not reflect a priori theoretical assumptions about the factors composing each valency; instead they reflect the emergent dimensions in the data, calculated from correlations between the variables (items of the questionnaire) in the data. More details on this procedure are presented on appendix 5.

Pairing: Open-mindedness

-
- V47 that the group can achieve radical change and innovation
 - V39 that the group's atmosphere is permissive and easy-going
 - V34 that the creativity and spontaneity of the people can flow freely
 - V44 achieve consensus in the group without imposition from the leader
 - V11 That people don't feel satisfied/content with what is done/completed, and always look for further achievements
-

Pairing: Good Humour

-
- V01 To have humor since then we can achieve anything
 - V03 To have a joker in the group
 - V06 That someone can sustain an atmosphere of hope in the group
 - V08 Everyone bears in mind that if things go badly, they are likely to go better next time
 - V25 That each member needs someone special for intimate personal contact
 - V27 To escape into planning the future when the present is difficult and morale is low
-

Fight/flight: Victory

-
- V20 That the group is motivated towards success or victory
 - V16 That the group achieves more than any other group
 - V35 to try hard to achieve high levels of speed and effectiveness in the actions
 - V31 That all the members are selflessly committed to victory over competitors
-

Fight/flight: Cruelty

-
- V40 to leave behind those who cannot keep up with the group's pace
 - V50 to get angry with the difficult or uncommitted members who hinder the group
 - V23 The group rebels against members who try to oppress others
 - V26 To follow the decisions/resolutions of the stronger and more ambitious members
 - V37 to be able to take courageous and drastic measures when the group is threatened
-

Fight/flight: Paranoia

-
- V18 The group should beware of suspicious members
 - V10 That everyone bears in mind that there will always be destructive people in the group
 - V45 to be able to identify our enemies
 - V07 That members should be aware of destructive and suspect elements in the group
 - V28 To find out who is responsible for the problems in the group
-

Fight/flight: Flight/Avoidance

-
- V43 to be realistic about succeeding or failing
 - V13 that the group gives up when things get too difficult
 - V25 That each member needs someone special for intimate personal contact
 - V36 to keep an emotional distance and avoid getting over-involved with things
 - V42 to avoid conflicts that may cause people to feel unsafe
 - V32 that the people can get distracted with stuff not relevant to the group's objective
 - V40 to leave behind those who cannot keep up with the group's pace
-

Dependence: Peer-solidarity;

-
- V29 That the group is very helpful to those who are less able and most in need
 V15 That everyone listens to, and understands, each other
 V33 To listen carefully to the more experienced members and to learn from them
 V12 To enjoy each other's company because it will make the group more productive
 V09 Members are totally available to help each other
 V19 Members need each other to achieve their learning
 V21 That everyone's aim in a work group is to increase the maturity of group members
-

Dependence: Leader-dependency

-
- V02 That everyone learns from those with more experience in the group
 V38 to obtain support and solidarity from the group's leader
 V46 to entrust the responsibility to someone wise and more able
 V24 the group members' aspire to be good, generous and saintly people
-

Preliminary Psychometric work

The psychometric instrument used to measure valences (WGFS version 1.02) is an original one, built specifically for the present doctoral research. The procedures for the construction of the WGFS was threefold: 1) writing down of items, 2) selecting and assessing the reliability of the psychometric scales, and 3) assessing the validity of the psychometric scales.

The initial 18 items of the previous version were build from the thematic analysis of semi-structured interviews with professionals and students of various fields, regarding their beliefs, values and attitudes about working groups (Barbosa, 1999), as already described in chapter 4.

To increase content validity and reliability, and following a systematic review of the literature¹⁵, a new pool of 32 items was added during the present PhD research. The

¹⁵ *References used in the literature review:* Armelius and Armelius (1985), Atherton (2001), Billow, R. M. (2001), Bion (1952) Bion (1961), Blomfield (1987), Brown, D.G. (1985); Darlington, T. (1998); Gould (1997) Greene (1967) Gustafson, J.P. and Hartman, J.J. (1978) Gustafson, J.P. and Cooper, L. (1985) Harrison (2000) Hinshelwood (1989) Hinshelwood, Chiesa, (2001) Hirschhorn, L. (1988) Hogget (1992) Karterud, S. W. ; Foss, T.(1989) Karterud, S.W. (1990) Karterud, S.W. (2000) Khaleelee and Miller, E. (1985) Kernberg (1978) Kernberg (1980) Lion, C. L.; Gruenfeld, L.W. (1993) Lipgar, R. M. (1998) MacNamara et al. (1982) Meltzer, Harris (1976) Miller, E. (1998a, b) Miller (1998) Moxnes, P. (1998) Neri (1995) Palmer, (2001) Rosen, D. et al (2001) Scheidlinger, S. (1982) Schermer, V.L. (1985)

total collection of items was meant to cover the domains of the theoretical constructs presented in table 10. The detailed matching of each item of the questionnaire with the various domains of each valency is presented in appendix 6.

Table 10. Domains of Valency characteristics' identified in the literature

| DEPENDENCE (D) | FIGHT-FLIGHT (F) | PAIRING (P) |
|--|--|---|
| Guilt and depression | Anger, hate, fear, panic | Messianic hope, optimism |
| Devotion and Awe to the leader/god | Leader is the most violent | Leaderless/leader unborn |
| denial of hostility/envy/dissent | Incapacity for understanding and love | Denial of: death, difficulties, despair, rivalry, jealousy |
| Learning from the wisdom of the authority | Aggressive control, war metaphors | High level of aspiration and expectations |
| Responsibility/decision/effort Centralised in the leader | Strategic focus on efficiency and control | Oedipal temptations |
| Benevolence/ | Combativeness/courage/self-sacrifice | Removal of libidinal prohibitions. |
| Interdependent relationships, helplessness-helpfulness | Purposes of preserving the group/individual welfare is secondary | Sexual fantasies, passion, eroticisation, fertilization symbols |
| Immaturity/ helplessness | Readiness to fight | Creative experience |
| Safety/security | Rebellion and criticism | Joyfulness, euphoria |
| Dogmata | Loyalty versus treason | Emphasis on salvation |
| Submissiveness | Scapegoating | Emphasis on the future |
| Authority, rules, structure, tradition | Running away from neuroses | Innovation/revolution |
| Welfare state | Greed, competition | Partnership, friendliness |

After the data collection, but before the hypothesis testing, it was necessary to test and refine the instrument's a) factorial structure, b) reliability and c) validity¹⁶. The factorial structure was tested using Exploratory Factor Analysis. The Reliability was

Schneider, S.C. and Shrivastava, P. (1988) Schutz, W.C. (1955) Shambaugh, P.W. (1985) Sherwood, M. (1964) Sutherland (1985) Thelen, H (1985)

¹⁶ The term *Validity* means that a test actually measures what it claims to measure (e.g. Kline, 1993). Unlike reliability, there is no single figure that indicates test validity; instead it is a subjective issue, which cannot be settled by producing a clear statistic (Kline, 1993, p. 13-15). There are many operational definitions in the literature, such as "face validity", "concurrent validity", "predictive validity" and "construct validity". Construct validity is usually the chosen approach for personality tests, because it is difficult to establish its validity by means of any of the other methods (Kline, 1993). It consists in "setting up a number of hypotheses, derived from the nature of the measured variables, and putting them to test" (Kline, 2000, p.25-29).

tested and refined using Item Analysis, namely *Cronbach's Alfa* and associated procedures.

The validity was tested using the notion of “Construct validity” by statistical testing of the associations between the valency scales and 1) demographic and behavioural characteristics of the subjects (see section below: *Some Indicators of the scales' Validity*); and 2) Scores on TAS-20 (see next chapter). The psychometric procedures are described in detail in appendix 5.

Reliability and validity of the WGFS

Table 11 presents the values of Cronbach's Alfa reliability obtained in two studies, including the present one. As can be seen in Table 5, almost all the General Scales reach the value of .70, or stay very close. Kline (1993) considers this the minimum figure for an adequate test. Only two scales are below .65 (F Flight/Avoidance and P Open-mindedness). However, they will be kept since they showed good results as to their validity¹⁷.

Some Indicators of the scales' Validity

The validity was tested using the idea of “Construct validity” (Cronbach and Meehl, 1955; Kline, 2000) in two steps of hypothesis.

Association with Alexithymia: as the valency scales are intended to measure emotional containment/regulation, they are expected to be associated with a standard measure of deficits in emotional containment: Alexithymia¹⁸. These hypotheses were

¹⁷ The open-mindedness scale was able to discriminate subjects who have “creative-humanistic professional activities” from the others; the flight/avoidance scale was able to discriminate subjects who “drive very fast”, and subjects that have “lack of sexual interest, from the others (see appendix 5 for the detailed results)

¹⁸ I expected a curvilinear relation of the valency General Scales to alexithymia scores (i.e. the higher and lower extremes of valency scores are associated with a decrease in emotional containment/regulation corresponding to an increase in Alexithymia).

tested and confirmed for the three General valency scales and the results will be presented in next chapter as the *testing of the conceptual hypothesis*.

Table 11 Cronbach's Alfa Reliability of the WGFS in two studies¹⁹

| | Present Study | Chagas (2004) |
|-----------------------------|---------------|---------------|
| Pairing General | .75 | .69 |
| P Excitation | .69 | - |
| P Open-mindedness | .56 | - |
| P Good-Humour | .69 | - |
| Fight/flight General | .80 | .78 |
| F Victory | .72 | . |
| F Cruelty | .71 | - |
| F Paranoia | .76 | - |
| F Flight/ Avoidance | .59 | - |
| Dependence General | .83 | .68 |
| D Peer-solidarity | .79 | - |
| D Leader-dependency | .66 | - |

Association with specific criteria: As the 3 psychometric valency scales are intended to measure the individual differences in the intensity of expression of 3 different socio-emotional systems (D, P, and F), they are expected to be associated with other data from the participants that have a logical connection to the specific emotional field of each valency. A series of statistically significant associations that contribute to the validity of the scales were found:

1. *Fight/flight* valency scores were associated with a) being a military and with b) the participants' self-report of "driving very fast".

¹⁹ The study by Chagas (2004) was conducted using a modified version of the WGFS 1.02, which was called version 2.02. In order to reduce the size of the questionnaire, only general valency scales (P, D, F) were included, in a total of 34 items.

2. *Pairing* valency scores were associated with a) self-report of sexual/erotic interest and with b) having a “creative-humanistic” profession.

3. *Dependence* valency scores were associated with a) being a non-autonomous dependent member (being a housewife) instead of having a professional career, and with b) being married instead of being single.

The detailed results and discussion of these procedures are presented in appendix 5.

The 20 Item-Toronto Alexithymia Scale (TAS-20)

The TAS-20 seems to be consensually the most valid and reliable self-report measurement tool for assessing alexithymia (Taylor et al, 1997). It includes three factors, which represent three dimensions of alexithymia.

Factor 1 reflects *difficulties in identifying feelings and distinguishing them from the bodily sensations of emotion,*

Factor 2 reflects *difficulties in describing feelings to others,*

Factor 3 reflects an *externally oriented mode of thinking.*

There is additionally a Global score (analogue to the General Valency Scales), which includes all the items, irrespective of the factors. The items in English are the following²⁰:

F1 - Difficulty Identifying Feelings

- 1 I am often confused about what emotion I am feeling
3. I have physical sensations that even doctors don't understand.
6. When I am upset, I don't know if I am sad, frightened, or angry.
7. I am often puzzled by sensations in my body.
9. I have feelings that I can't quite identify.
13. I don't know what's going on inside me.
14. I often don't know why I am angry.

²⁰Note: Items 4, 5, 10, 18, and 19 are inversely keyed. They are inverted when calculating the scores.

F-2 - Difficulty Describing Feelings

2. It is difficult for me to find the right words for my feelings.
4. I am able to describe my feelings easily.
11. I find it hard to describe how I feel about people
12. People tell me to describe my feelings more.
17. It is difficult for me to reveal my innermost feelings, even to close friends.

F-3 - Externally-Oriented Thinking

5. I prefer to analyze problems rather than just describe them.
8. I prefer to just let things happen rather than to understand why they turned out that way.
10. Being in touch with emotions is essential.
15. I prefer talking to people about their daily activities rather than their feelings.
16. I prefer to watch "light" entertainment shows rather than psychological dramas.
18. I can feel close to someone, even in moments of silence.
19. I find examination of my feelings useful in solving personal problems.
20. Looking for hidden meanings in movies or plays distracts from their enjoyment.

Reliability and Validity of the TAS-20

Taylor et al (1997) reported a series of studies that contributed to the validity of the TAS-20 as a measure of alexithymia (Bagby et al, 1994b). For instance, the TAS-20 scores had *strong negative* correlations with a measure of psychological mindedness assessing the patient's suitability for analytic-oriented psychotherapy (Conte et al, 1990, 1994, cit. in Taylor et al 1997, p. 60).

The factorial validity of TAS-20 has been shown to be relevant and replicable in the Portuguese language (Prazeres, 1996). The Table 12 presents the values of Cronbach's Alfa reliability of the Portuguese version of TAS-20.

Table 12 Cronbach's Alfa Reliability of the Portuguese TAS-20 in two studies

| | Prazeres (1996) | Present Study |
|---|--------------------|------------------|
| Factor 1 | | |
| Difficulties in identifying feelings | .80 | .85 |
| Factor 2 | | |
| Difficulties in describing feelings | .64 | .71 |
| Factor3 | | |
| Externally oriented mode of thinking | .44 | .60 |
| General Score | .79 | .86 |

Psychometric Problems with the TAS-20

In recent years some criticisms of the TAS-20 have appeared in the literature. Richard Lane et al (2000) asserted that if the respondent had a very severe degree of alexithymia, the assessment of alexithymia by self-report questionnaire could be biased due to the lack of understanding of the questions; he advocates assessment of alexithymia by indirect and implicit methods. However, in a study of emotion recognition, the TAS-20 yielded the same significant results as indirect measures of assessment such as LEAS (Levels of Emotion Awareness Scale)(Lane et al, 2000).

Kooiman et al (2002) stated that the majority of studies on the TAS-20 were conducted with non-patient samples, and that some studies show a different factor structure to exist in patient samples. This was confirmed in their own study with psychiatric outpatients in whom the dimensions 'identifying feelings' and 'describing feelings' collapsed into one single subscale. Also, as in other studies, the reliability of the dimension '*External Oriented Thinking*' was low (idem). For this reason we only used the *Global Score* and the *Factor 1* scores in our statistical testing of the hypothesis.

I will now describe how the quantitative scores corresponding to the measured independent variables (psychometric scales of the WGFS and TAS-20) are calculated for each subject. In the chapter of the results I will explain the statistical models used in estimating the relations between the variables in study.

Calculation of scores

TAS-20

The scores of factors 1 and 2 of the TAS-20 are calculated using the averaged sum of values obtained in each of the item's response. The TAS Global score is calculated using the simple sum of all of the items of the questionnaire. Taylor et al (1997) present a clinical cut-off point for the TAS Global score: a person with a score equal or greater than 61 is considered clinically alexithymic, and a person with less than or equal to 51 is considered a non-alexithymic person; the middle range between 51 and 61 is considered undetermined²¹.

WGFS

As in the TAS-20, each WGFS scale score is calculated using the averaged sum of the items that compose the scale. The items corresponding to each scale were presented above.

Ethical Issues

The ethical issues involved in the interviews and questionnaires can be divided in to two main areas. The first has to do with general ethical procedures involved in

²¹ These cut-off scores were established in a study with 39 "behavioural medicine outpatients" (Bagby et al, 1994b; Taylor et al, 1997, p. 62-63) who were assessed concurrently by an observational measure of alexithymia, the BIQ (Beth Israel Hospital Psychosomatic Inventory)

research with people in general: issues of questionnaire and interview design. The second area has to do with ethical features specific to life-story interviews, and is concerned with a) in-depth disclosure of a personal information b) narrative copyright issues.

I have followed the British Psychological Association's "Ethical principles for conducting research with human participants" (B.P.A., 1993), and the details of these procedures are explained in the appendix 11.

In the next chapter I will present the results obtained from the data analysis.

Chapter 7. Data Analysis and Results

In this chapter I will first present the results obtained in the flexible-qualitative design, and then those corresponding to the fixed-quantitative design. This is because, as explained in the introductory chapter, the empirical approaches to Bion's theory of the protomental system and emotional containment were an unexplored area of research; therefore it was important to begin with a more phenomenological and descriptive approach to explore the subjects' own narratives on their emotional experiences and social interaction; in other words a "qualitative research design" in order to provide an in-depth understanding of the clinical conditions under study.

Flexible Design: Life-story interviews

In the presentation of results I begin by justifying why certain pieces of discourse were labelled according to a specific theme and sub-theme of the index. In a second stage, a table with a cross-tabulation of the conceptual clusters by *clinical condition* is presented for each sub-theme of the index; within the table cells are identified the participants that have produced pieces of discourse that corresponds to the conceptual clusters.

Finally, I looked for *patterns* of clusters that differentiate the conditions (see previous chapter for a detailed description and examples of this analytic process); in this procedure I will go back to the original texts in vignettes and concrete examples, in order to get a phenomenological meaning of the pattern of clusters that were identified.

As previously described in chapter 6, this is an interpretative process based on the clinical judgement of the researcher. The methodological steps have previously been

explained in chapter 6 and are detailed in the appendixes. The interpretative process corresponds to the third stage of analysis (*explanatory accounts*), and is limited to a process of interpretation guided in the context - and limited by the specific boundaries of – Bion’s categories of basic socio-emotional systems (valencies).

The next table illustrates the steps of the analytic process, which were already described in detail in the previous chapter. The process illustrated in the table was repeated for each sub-theme of the index:

| Stage 1: Data management | | Stage 2: Descriptive accounts | Stage 3: Explanatory accounts | |
|--------------------------|---------------------------------|---|--|--|
| Transcripts | Summaries Key-phrases | Conceptual clusters | Cross tabulation of clusters by condition. | Detecting patterns of clusters by condition. |
| → | → | → | → | → |
| Unpublished ¹ | Thematic charts (appendix 3) | Rationale for clustering the key phrases (appendix4) | Main text (present chapter) | |

The *thematic charts* that contain the summaries of discourse and the respective key-phrases for each of the sub themes of the index (corresponding to stage 1 “data management”) are available in appendix 3. The Rationale for clustering the key phrases into determined conceptual clusters (corresponding to stage 2 “descriptive accounts”) is presented in appendix 4.

¹ Due to copyright matters (see Appendix 11, “ethical issues”).

Theme 1. Context of onset and relapses of symptoms

The Labelling of theme 1 to discourse was based on the answers the subjects gave to questions about their life circumstances before the onset of the problem. The discourse about the life context that preceded relapses or occurrences of the symptoms other than the first time was also allocated in this theme.

This theme is subdivided in two sub themes: 1.1 Life events associated, 1.2 Psychosocial context.

1. Context of onset and relapses of the disease

1.1 Life events previous to onset/exacerbation of symptoms

1.2 Psychosocial context

Sub-theme 1.1 Life events previous to onset of symptoms

The labelling of discourse as this sub-theme was quite straightforward: “life events” are events such as getting a new job, marrying/divorcing, having children, moving house, accidents, etc, and represent changes that require adaptation and changes that can be experienced as distressful (e.g. Schroeder and Costa, 1984).

Drug addicted subjects: the cluster *Separation from support objects and attachment problems* includes all of the drug addicts². Hence, a pattern seems to emerge composed of life events concerned with separation from family and from support objects in youth, all of which precedes the onset of drug addiction. These are all events

² *Paul, Mario* and *Gina* ran away from home due to domestic violence, physical or sexual abuse, and *Jo* expelled her parents out of home after a tremendous physical fight. In all cases this separation occurred in their youth. .

that raise separation anxiety, and are related to the emotions/ feelings of dependence valency.

Table 1. Clusters of *Life events* by condition

| <i>Clusters</i> | <i>Condition</i> | | |
|---|-----------------------|----------------------|--------------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| Separation from support objects and attachment problems | All subjects | Mercy | Carla, Maria |
| Separation from libidinal objects and Sexuality problems | | | All subjects * |
| Health Problems and Accidents | Jo | Richard, Tino | All subjects |
| Stresses in Family (without separation), work or school | | All subjects | Maria |
| Serious financial ruin | | | Maria, Gil, JC ** |

* Mercy (when having suicidal ideation)

** Paul (when having suicidal ideation)

Para-suicidal subjects: Both the cluster *Separation from libidinal objects* and the cluster *Sexuality/ reproduction problems* include all of the para-suicidal subjects³. Additionally, all the para-suicidal subjects are included in the cluster *Health Problems and Accidents*⁴.

³ *Carla* knew that she could not have children due to hormonal problems. Additionally she had a late and very ambivalent initiation to sexual life with a boy with whom she “wants to keep distance”.

JC was having problems with his girlfriend because her family demanded that they have a catholic wedding before they live together, which was impossible due to the fact that he was already divorced. Previously, his family compelled him to break up with his girlfriend when an ex-girlfriend he had an affair with became pregnant (he was dating both women simultaneously when the first got pregnant).

Gil knew about his ex-wife sexual promiscuity from gossip, and learned that their little daughter had been allowed to watch her mother having sex with boyfriends; he was also having many difficulties in finding a girlfriend.

Maria started having suicidal intentions after her partner (whom she cherished and idealised and who was the only romantic relationship of her life), had died before they could officially marry.

Mercy (a psychosomatic patient) recalled having strong suicidal ideation accompanied by feelings of overwhelming shame when her teenage daughter became pregnant without being married.

⁴ All interviewees had had at least one serious accident, and some of them a chain of chronic health problems that incapacitated them for work

The cluster *financial ruin* includes also para-suicidal subjects only⁵ or subjects of other conditions in situations of suicidal ideation. The problems relating to sexuality, reproduction, and “libidinal” partners are obviously related to the pairing valency as defined originally by Bion; the other two patterns together (severe health problem and financial ruin) make the person an economic burden for their families.

Psychosomatic subjects: *Stress in Family, work or school* is a cluster that includes all the psychosomatic subjects⁶. Three out of the four subjects were also found under the cluster *Health problems and accidents*.

The emergent pattern is thus composed of experiences of stresses and strains in “conventional” situations such as family life, school, workplace and health, but unlike the addicted subjects, these events neither result in nor stem from violence, separations or fights. Thus the onset of psychosomatic skin disease is associated in all the cases of this sample with life events in which the subjects endure stress due to threats from which they are unable to fight against and control, or escape. Some of the events of this pattern are obviously related to the fight-flight valency in terms of arousal of aggressiveness (the abuse and harassment by superiors at work, or by a dominant partner at home).

Sub-theme 1.2 Psychosocial context of onset/relapse of symptoms

I chose to label this sub-theme to discourse when there were descriptions about emotional states or traits, and about the interpersonal context before the onset of the condition (hence the term “psycho-social”). In contrast to the life-events’ sub-theme,

⁵ *JC, Gil* and *Maria* suffered financial difficulties caused by the divorce or widowhood, which compromised their autonomy and made them a burden on their families.

⁶ *Richard, Tino* and *Carlos* suffered great performance pressures, or harassment by superiors, at work and/or school; at the same time they had also to cope with health problems, and two of them had to take care of a handicapped relative (son or brother). Similarly, *Mercy* had been under strain for many years dealing with her chronically alcoholic husband, and had also to care for her granddaughter after her daughter divorced.

where the emphasis is on objective-concrete events, in this sub theme the emphasis is placed on the “socio-emotional field” composed of subjectively experienced states of the internal world and in the interpersonal context.

The cross-tabulation is presented in the next table. As can be seen in the table, all the subjects in all conditions recalled having suffered internal turmoil and distress (cluster1.)⁷. The rest of the clusters of the psychosocial context are specific to each condition. Hence it is possible to identify some clear patterns.

Table 2. clusters of *Psychosocial context of onset/relapse by condition*

| <i>Clusters</i> | <i>Condition</i> | | |
|---|-----------------------|----------------------|--------------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1.Internal turmoil and distress | All subjects | All subjects | All subjects |
| 2.General inhibition of Emotional expression-linking | Mario | Carlos | All subjects |
| 3.Emotional dependence and traditional parental values | | Mercy, Richard | Gil, JC |
| 4.Autonomy/Independence, anger and Rebellion | All subjects | | Gil, Maria |
| 5.Inhibition or lack of Emotional Dependence and parental responsibility | All subjects | | JC |
| 6.Inhibition or lack of aggressiveness and rebellion | | All subjects | |
| 7.Inhibition or lack of “Joy of life”, and social isolation | | | All subjects * |
| 8.Peer pressure to use drugs | All subjects | | |

* Mercy (suicidal ideation)

⁷ These states are conveyed in the following examples: “I totally freaked out, lost my mind, got traumatized with that” (Carlos, harassment by the superior, p.6). “I felt like... I couldn’t eat, couldn’t dress properly, I would cry in my workplace (Mercy, teenage pregnancy of daughter, p.1). “The despair, the despair, it was the despair itself” (Carla, sister left home p. 7). “After my medical discharge I realised that didn’t have any money at all, and got in to a panic” (Maria, bankruptcy, p.4). “That would disturb me, my head was upside down, I don’t know what I was thinking, millions of issues at the same time” (Mario, domestic violence, p. 1). My mother crying and griping my father, all those things, it still gives the creeps (Paul, domestic violence, p. 2).

Drug addicts Clusters that include all interviewees are: *Autonomy/independence, anger and rebellion, Inhibition or lack of emotional dependence and of parental responsibility*⁸, and *Peer pressure to use drugs*.

Thus, all the addicts in this sample were immersed in a psychosocial context characterised by inhibition of emotional links of the dependent kind, linked with arousal of aggressiveness, rebellion and promotion of premature autonomy. In Bion's protomental model terms, this clearly corresponds to suppression of the dependence valency and to dominance of fight-flight.

In addition, all of the subjects had *peer pressure to use drugs*, which is a ubiquitous finding present in the studies about psychosocial determinants of drug addiction (e.g. Hawkins et al, 1992).

Psychosomatics: The clusters *Inhibition or lack of aggressiveness and rebellion* includes all of the psychosomatics⁹. This is quite the opposite of addicts; all the psychosomatic subjects in this sample are immersed in a psychosocial context where aggressiveness, anger and rebellion are strongly inhibited due to social pressures. This can be interpreted as the suppression of the Fight-flight valency.

Para-suicidal. The cluster *General inhibition of Emotional expression-linking* as well as the cluster *Inhibition or lack of "joy in life"/social isolation* include all the suicidal subjects¹⁰.

⁸ For instance *Mario* rebelled against his autocratic and violent father when he was 14, by running away from home with the father's money; additionally at the age of 18 he had beat his father up to prevent him from beating up the mother. *Jo* had a physical fight with her parents and expelled them from home, and complained that her parents were irresponsible and didn't guide her; *Gina* reported that she always used a facade of toughness and autonomy to spare others the burden of having to take care of her.

⁹ *Mercy* got furious when she knew that her husband was flirting with other women, but accepted the advice from her daughters not to get angry with him or to separate from him. *Carlos* got furious with his superior's abuse of power, but said that he could not react due to the army's hierarchy. *Richard* stated that he had "no hard feelings" towards the man whose recklessness had caused him to be badly injured and spend many years in and out hospital.

¹⁰ For instance: *Maria* related how after the deaths of her husband and her father she lost her previously abundant joy in living and instead wanted only to be alone in her home. *Gil* reported feeling very lonely and avoiding going out with friends. *Carla* reported a deep-rooted pessimism about life and avoidance of

All of them reported inhibiting their social contacts to an extreme, as well as very gloomy feelings such as intense shame, dread of being emotionally hurt, and despair. They report a momentary or enduring lack of hope in the future and lack of enthusiasm or comfort in any kind of social contacts. These feelings are the reverse of the feelings characteristic of pairing valency (hopeful expectation, optimism, etc); they are linked with a voluntary isolation from social contacts with friends, colleagues and family, and hence can be interpreted as characteristic of the suppression of pairing valency.

Theme 2. *Childhood and Adolescence*

I chose to label theme 2 to discourse based on the interviewees' accounts of their childhood and adolescence: either the interviewees' spontaneous discourse about the childhood/adolescence events throughout the whole interview, or when prompted by a question that, with slight variations, went like this "could you tell me about your infancy".

This theme is subdivided in 5 sub themes: 2.1 Personality-Temperament, 2.2 Father, 2.3 Mother, 2.4 Family-as-a-whole, 2.5 Troubles (Friends/mates, school, health).

2. Childhood and Adolescence

2.1 Personality-Temperament

Father

Mother

Family-as-a-whole

Troubles (health, mates, school)

all her many previous social activities. *JC*, facing the revelation of his scam for getting money, turned his mobile phone off and isolated himself for several days before attempting suicide.

Sub-theme 2.1 Personality and temperament

I chose to label this sub-theme to discourse based on the subjects' descriptions of their temperament, feelings and behaviours as children and adolescents; it addresses emotional events experienced as located or originating in the internal world or self of the subject, such as in sentences such as "I used to be...; I would feel like... I always wanted/thought...I liked to...". I expected that this sub-theme would clarify the individual's dominant valency during their development, as experienced by themselves.

Table 3 Clusters of *Temperament-personality* by Condition

| <i>Clusters</i> | <i>Condition</i> | | |
|--|-----------------------|----------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1.Internal distress (undifferentiated anxiety) | Paul | Tino, Carlos | Carla |
| 2.Inhibition of emotional expression-linking | Paul | Carlos | Carla, Gil, JC |
| 3.Rebelliousness and Aggressiveness | All subjects | | Gil, Maria |
| 4.Sanctioned expression of aggressiveness/naughtiness | | Richard, Tino | JC |
| 5.Fearfulness and Inhibition of Rebelliousness | | All subjects | Carla, Gil |
| 6.Extroversion/social dominance | Gina, Jo | | Carla, JC |
| 7.Autonomy/independence | All subjects | Carlos | Gil, Maria, JC |
| 8.Emotional Dependence | Mario, Gina, Joana | Mercy, Richard, Tino | |

Drug addicts: All the addicts are included in the clusters *Autonomy/Independence* and *Rebelliousness and aggressiveness*. In fact, all of them show pervasive physical aggression towards others (two of them showed aggression towards parents), this was bolstered by ideas of an allegedly exceptional physical strength and boldness in all of them¹¹. On the other hand, none of the drug addicts was included in the clusters *Fearfulness and Inhibition of Rebelliousness* and *Sanctioned expression of aggressiveness/ naughtiness*.

It is noteworthy that three of the addicts are also in the cluster *Emotional Dependence*¹² However, these dependent emotional links are systematically frustrated, as can be seen in the discussion of theme 1 (context of onset and relapse of the disease), by life events such as death of the support objects, domestic violence, or sharp inconsistency in the parents' personalities (see also discussion of sub-themes 2.1 and 2.2 [Father and Mother]).

Hence, the aggressiveness/rebellion in the personality-temperament of addicts seems to be in some extent associated with the frustration of the dependence valency and its subsequent suppression.

Illustrative vignettes:

1) The interpretation of suppression of dependence valency and dominance of fight-flight valency in an interpersonal context can be depicted in the following passage by Gina:

¹¹ Examples: "When I'd get into a fight with someone I was never afraid, but if someone beat me I'd chase that person until I had won the fight, otherwise my brothers would call me a chicken" (Gina, page 4). "I was a rebel, a malcontent [...] I would beat up my colleagues, and once even the teacher got some of it" (Mario, page3)

¹² As an example: "My mother would protect me a lot, she still does" (Mario, page 2); see also Gina's description of her relation with her mother in the overall discussion of theme 1., and Jo's quote below in this page.

Maybe my older sister didn't protect me so much [...] because I was quick-witted, I never liked to show insecurity, on the contrary, I was stronger than her, more pushy, and it was her who asked me stuff and opinions. Maybe I projected myself as stronger than I really was; I would pass the image of being tough, self-reliant, that I didn't need the others, so as not to overload the others with my needs (page5)

Suppression of dependence: "my older sister didn't protect me so much because I never liked to show insecurity"... "would project the image...that I didn't need the others"... "so as not to overload the others with my needs".

Dominance of fight-flight; "I was stronger than her, more pushy", "I would pass the image... of being tough and self-reliant"

2) In the following passage by Jo, she depicts her self as an over-dependent child, who saw her dependence needs frustrated by the inconsistency of her mother and how she consequently turned out to be a rebellious and independent child

I only first went to school at 6 years of age, and it distressed me a lot, I even had fevers because I couldn't stand being away from my mother [...] My mother was always very sweet to children [...] but she would start to be cold to children when they'd get to 2 or 3 years of age, she wouldn't approach or cuddle children from that age on, including me (page 1)

I always was very rebellious since I was a little kid, I remember my mother telling that I was against everything and everyone (pages 1-2)

3) In the following passages by Paul and Mario the frustration of infantile dependent needs of protection, expressed in feelings of helplessness ("I was just a kid and did not have the capacity to defend against it"; "as I was a child...I was defenceless"), and the consequent decision to run away from home and/or rebel against the father, can be interpreted as suppression of dependence valency and dominance of fight-flight valency,:

I had to run away from home...There was such a malignant power there, and I was a kid and did not have the capacity to defend against it (Paul, page 1).

My father would come from work and he'd get drunk and beat up my mother...and then I'd see my mother being beaten without me being able to do anything, since I was a child, as a child I obviously couldn't do anything, I was defenceless, what happened was that I ran away from home [...] because I didn't have any chance of acting against it, to face my father, I was a child, only when I was 17 or 18 did I beat up my father and he stopped hitting my mother (Mario, page 1)

It is useful to contrast the previous reports with the ones from the two psychosomatic subjects that also mentioned feeling unprotected by their parents (Richard and Carlos), because the emotional strategies to deal with it seem to be totally different; in the psychosomatic subjects there is no violence and no flight from home; they resort instead to substitutive dependence groups with peers through inter-help and companionship.

1) Richard was sent by his parents to study and live in another city, far away from home:

I was only 11 years... it wasn't easy at all. It could have been worse but I had four cousins in the same school, and we had contact with each other, hence the separation was minimized [...] and then my sister came to study in the same place and the situation got better, but initially it was a shock (page 4).

2) Carlos' lack of protection from parents and resultant helplessness was recalled in two situations: i) at 12 years of age Carlos decided to leave school and start to work, because his father wouldn't pay Carlos' school on time and the teachers would pressure and humiliate the child. ii) In his first jobs, older colleagues and bosses would abuse him verbally and physically; he'd complain to his father but, similarly, the father would ignore him. However, at work Carlos used to share his food with the poor colleagues:

I would take food from home and the blacks would ask me for some and I'd give it to them. My cousin didn't agree with that and would be mad [...] the food was

more than enough for me, and I liked to share it with them, there was conviviality and a good atmosphere among us (pages 4-5)

Psychosomatics: All of the subjects of this group are represented in the cluster *Fearfulness and Inhibition of Rebelliousness*. Furthermore, none of them is represented in the clusters *Extroversion/social dominance*, and *Aggressiveness and Rebelliousness*.

This pattern can be interpreted as suppression of fight-flight valency and dominance of dependence valency as is clear in the following vignettes:

1) *Would you do things disapproved by your parents?* No, my parents never had to worry on that account. Some kids would mess around, stealing fruit, others would swim and cross the river, but not me, I was afraid of the consequences. I've never worried my parents with those kinds of issues (Richard, p.3).

2) *Sometimes kids do things against the parents's rules...?* No, no, no. That never happened because all of us [siblings] showed a lot of respect toward my father. Because my father would only have to open his eyes and we would immediately get...we'd say to each other "oh no, our father is going to tell us off" (Mercy, page 3)

Suppression of fight-flight: "some kids would mess around...but not me, I was afraid of the consequences" "No, no, no, I never did things against the parents' rules"

Dominance of Dependence: "I've never worried my parents"; "all of us [siblings] showed a lot of respect toward my father".

This submissive tendency towards authority and the parents' will contrasts sharply with the addicts' disobedience, rebellion and autonomy, as can be seen in the following vignettes:

1) I went to work because I wanted to buy a motorbike, and they [parents] didn't want to give me one, but I wanted one, and so I didn't comply and I started studying at night and working in the day to buy the motorbike. They got mad, but I got away with it (Jo, page 3)

2) I was 14 or 15...My father gave me money to cut my hair. But I liked having long hair, it was fashionable among surfers like me, so I ran away from home for two months (Mario, page 1)

This non-submissive tendency is also evident among some of the para-suicidal patients:

1) My Parents were a bit strict and I had to toe the line, but I would deviate from parents' rules as much as I could, and then they'd reprimand me! (JC, page 6)

2) Once a teacher wanted to hit me but I warned her that if she did that I would go mad and leave school. (Gil, page 2)

Para-Suicidal: The para-suicidal group seems rather atypical as to their temperament-personality in childhood. The only clear pattern is their absence of references to the cluster *Emotional dependence-attachment*. However, unlike the addicts, they are neither overtly aggressive nor clearly suppress emotional dependence needs. They seem to be just emotionally *detached* (this issue will be clearer in the discussion of the following Themes *Father* and *Mother*).

Indeed, as illustrated in the following vignettes, these subjects convey the impression of haughtiness and self-sufficiency in their self-descriptions:

1) I never asked for help, I've always been a very closed person, always very haughty. *Since you were a little child?* Yes I think so, I've always been a bit haughty (page 7) [...] I don't feel right borrowing money from colleagues to dine out with them, I prefer not to go and stay alone (JC, page 8)

2) I don't trust anyone, not even my father or mother, nobody (page 4) [...] I wouldn't cry in front of them [parents], I wouldn't show weakness to them (Carla, page 8)

3) *Who would you ask for help if you had a problem?* I wouldn't ask to anybody, and I wouldn't open my heart to no one, maybe that's my problem [...] I've always been like that, since a child (Gil, page 4).

4) When I was twelve years old she [mother] went to visit me in the orphanage, and they [the nuns] forced me to kiss my mother, I didn't want to because I said "I don't have a mother". (page 2) [...] Since I was a child I always thought about going away from that place where my family was. I didn't want to stay near my family due to my anger against them. I managed to do what I wanted (Maria, page 4)

Furthermore, while all the other subjects make references to some kind of love or romantic or childhood-adolescent flirts, the same is not true this group; this could be interpreted as a suppression of pairing valency. This point will be elaborated in the analysis of the sub-theme 2.5 (Troubles).

Sub-theme 2.2 Father

I chose to label this sub-theme to discourse in the cases of descriptions of the interviewees' father and of their relationship, during childhood and adolescence.

Table 4 Clusters of *Father* by Condition

| <i>Clusters</i> | <i>Condition</i> | | |
|---|-----------------------|----------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1.Bad Father (abusive, deviant) and rebelliousness | All subjects | Carlos | |
| 2.Strong traditional father/obedience | | All subjects | Gil, JC |
| 3.Benevolent Image of and relation to father | | Mercy, Richard | Carla, Gil, JC |
| 4.Inconsistency in the image and relationship | Paul, Mario, Jo | | JC |
| 5.Emotional distance/ absent father | | Tino, Carlos | All subjects |

Addicts: They have the most negative recall of the father during childhood. All the addicts are included in the cluster *Bad Father and rebelliousness*¹³. Most of them also recall also a sharp *inconsistency in the image of and relation with the father*. None of them is included in the clusters *Benevolent Image* or *Strong traditional father*. Hence, for them the father cannot be trusted and depended upon because he is seen as bad, unreliable and/or inconsistent¹⁴. All the addicts refer to some degree rebelliousness and disobedience towards the father and escaping from home or angry separation from the father (see also discussion of theme 1).

Psychosomatics: The cluster *Strong traditional father* includes all of the psychosomatics. This condition is thus characterized by recall of a very demanding, strong and consistent image of the father, whom they had never disobeyed or got angry shower their anger against, out of respect or fearfulness¹⁵. This can be interpreted as suppression of anger and of dissention towards the father; this seems to be related with the idealisation of the paternal figure. See also discussion of theme 2.1 (personality-temperament).

¹³ In 3 out of 4 cases the father was seriously deviant (alcoholism in three cases and paedophilia in one).

¹⁴ Examples: "My father was really nasty...I've never seen anyone as evil as he was...when he died I didn't know whether to be happy or sad" (Gina, pages 2 and 4). "When I was little, my father used to put me to sleep, would tell me stories, and then he became this cold and arrogant, frowning person" (Jo, page 2). "My father was always very violent towards me, I'm not saying the he's not fond of me, of course he has always been fond of me, but it's that he's bad tempered" (Mario, page 2).

¹⁵ Examples: Sometimes I wouldn't agree with him. Probably, he was the one who was right...*would you get angry at each other?* No, no. We never got to that, because my father was someone towards whom I had much respect, much admiration, he was an exceptional person; he had an enormous sense of responsibility (Richard, p. 2)

Illustrative vignette

In the following example, the suppression of rebellion, aggressiveness and disobedience (fight-flight), is linked with an overly-rigid father and the assimilation of his educational values:

My childhood was a bit troubled because my father would force me to study a lot, and I, at that age, I just wanted to play [...] and I would watch the other kids playing outside, while there I was totally oppressed, sometimes I'd have to spend a whole day banging my head against the books [...] My father didn't approve of mannish playfulness, and would hit me with a whip when I'd do something wrong [...] I would never play at fighting with other kids [...] I would always avoid the bad influences of rebellious kids who'd miss the classes to play around, this was something I kept inside me and today I tell my daughters the same "always avoid the bad influences" (Carlos, pages 2-6).

Suppression of fight-flight: "I would always avoid the bad influences of rebellious kids who'd miss the classes to play around"

Assimilation of fight-flight suppression values: "this was something I kept inside me and today I tell my daughters the same 'always avoid the bad influences'"

Para-suicidal: The cluster *emotionally distant/absent father* includes all the subjects with this condition¹⁶. This is congruent with the emotionally detached personality-temperament (see previous sub-theme 2.1). There seems to be an emotional hole in the relationship with the father, which is in total contrast with the very emotionally charged relationships both of the addicts and the psychosomatics. This pattern do not seem to be lend itself to an interpretation in terms of a specific valency.

¹⁶ Examples: "My father hardly speaks, he's a bit introverted, doesn't reveal his feelings (page 1) We've never had an open relationship" (Carla, page 8); "I would never open my heart to my parents, I've always been a very closed person, very haughty" (page 7) (JC, page 8) . "My father was rarely at home, he would be working all the time [...] he would arrive home and go to feed the animals, it was very rare that he'd speak with me" (Gil, page 4).

Sub-theme 2.3 Mother

I labelled this sub-theme to discourse in the cases of the subjects' descriptions of their mothers and relationship with them, during childhood and adolescence.

Addicts: Most recall a good image of their mothers; Jo presents a very contradictory image of her mother, but in the end the idealised version of the mother prevails¹⁷. The exception is Paul's mentally ill mother¹⁸.

Table 5 Clusters of *Mother* by condition

| <i>Clusters</i> | <i>Condition</i> | | |
|--|-----------------------|------------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1.Bad image/upsetting relation | Paul, Jo | | Carla, Gil, Maria |
| 2.Conventional mother/ Obedience | Mario | All subjects | JC, Gil |
| 3.Benevolent/protective against father's discipline | Mario, Gina, Jo | Mercy, Richard, Carlos | JC |
| 4.Inconsistency in the image and relation to | Paul, Jo | | |
| 5. Emotional distance/absence | | | All subjects |

The addicted subjects thus seem to maintain a good image of the mother. However, as can be seen in the discussion of theme 1(context of onset and relapse of the disease) and sub-theme 2.1 (personality-temperament in childhood), the dependent relationship to the mother is in *all* cases frustrated by separation from her, either in situations of violence, domestic hostility or death. In fact, some of the relapses in drug abuse after a period of abstinence are related to the impossibility of being with the

¹⁷ "My mother was very arrogant, even when she was wrong, [...] she is, however, a five-star person, really very good... my mother is above all things on earth, as God is in heaven" (page 4).

¹⁸ She would terrify him with her black-magic practices and would beat him severely. However, Paul excuses his mother's behaviour on the grounds of her mental illness and suffering at the hands of a violent husband.

mother, and to the need to get out of home¹⁹ (the exception is Gina, but her mother died before she became addicted to heroin).

Psychosomatics. They all recall a *conventional mother*²⁰. Sometimes the relation with the mother is “umbilical”, in the sense that there is no clear separation between self and mother, preventing psychic autonomy and independence even in the adult age²¹.

Although these subjects did eventually become financially independent and have their own families, they seem to sacrifice *psychical autonomy* in favour of an over dependent emotional relation with the mother.

This state of affairs is in utter contrast to that of drug addicts and with the para-suicidal; although almost all of the drug addicts and the para-suicidal participants have at some point returned to their parents’ home due to economic problems and failed marriages, they can never establish an *emotionally dependent* relation with the mother.

Para-suicidal. Have the most negative recall of their mothers. All of them are included in the cluster *Emotional distance/absence*, and 3 out of 4 in the cluster *Bad Image/upsetting relation*. The bad image of the mother and the emotional absence in the relationship is in some cases quite extraordinary.

¹⁹ Jo once has a relapse after a row with mother; Mario once allegedly relapsed due to endless rows and violence between his parents; Paul tried to get help from his parents after leaving a treatment program, but got upset with his mother’s mental illness and had to leave his parents’ home for good.

²⁰ I.e.: from whom they get advice and obey, who’s on the father’s side, occasionally protecting the children from his harsh discipline.

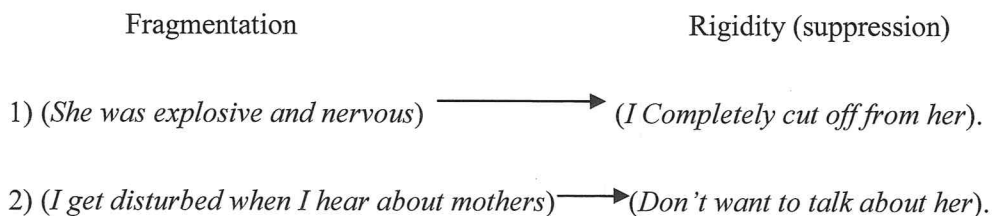
²¹ Examples: ”There was a boy that wanted to date me, but my mother told me to shrug him off because he probably just wanted to take advantage of me... and I just gave up on him” (Mercy, p. 5). “*Your relation [with husband] has been difficult for long?* Yes, for a long time. I’d complain to my mother, and she would say “Oh, for the sake of your dead father’s soul, don’t leave him, because he is a good man!” I also think he’s a good person, it’s just the alcoholism...” (Mercy, page 2). “I clearly remember my first salary [...] and I remember that I arrived home - I would always have lunch there - and I said to my mother “take my salary!” [...] I never kept even a penny for myself, I would give it all to my parents. When I needed some money I’d say: “mother please give me 20 escudos”, and she would give it to me” (Richard, pages 3-4).

Illustrative vignettes

1) I don't want to see her even now, I don't want to talk about her and I get disturbed when I hear stories about mothers (page 1) [...] I feel now very revolted with my birth, when I hear about mothers I get very upset (Maria, page 2)

2) My mother was explosive and nervous. I would get beaten by her and I'd always shut up [...] Our characters are incompatible [...] there were times when I'd say to myself "I won't bother, I won't cry, I'll be stronger than her" . In adolescence I used to think "it's useless, she won't change" and I cut myself off from here completely (page 2)

In both vignettes the transition from fragmented to rigid types of containment is also patently manifest in dealing with the relationship with the mother:



However, this pattern does not seem to be lending itself to an interpretation in terms of a specific valency.

Sub-theme 2.4 Family-as-a-whole

I labelled this sub-theme to discourse in the cases of descriptions of events that affect the whole family, such as moving home, economic problems, relationship of the parental couple, and family-as-a-whole activities (such as going to church).

Table 6 Clusters of *Family-as-a-whole* by Condition

| <i>Clusters</i> | <i>Condition</i> | | |
|--|-----------------------|------------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1. Conventional/Home Stability | | Mercy, Richard Tino | Gil, JC |
| 2. Broken home/ domestic violence/housing instability | All subjects | Carlos | Maria |
| 3. Incongruence between parents | Mario, Gina, Jo | Carlos | All subjects |
| 4. Rural environment | | Mercy, Richard Tino | |
| 5. Urban degraded environment/ crimes | All subjects | | |
| 6. Poverty or economic instability | <i>All subjects</i> | Mercy, Tino | |

Addicts. Addicts consistently come from the most troubled families: all are represented in the clusters *Broken homes, Poverty or economic difficulties and Urban degraded environment/ crimes*. There is a constellation of psychosocial and economic aspects that renders the family unsafe, unreliable or inconsistent. This state of affairs can be seen as another factor preventing the development of emotional links characteristic of the dependent valency, such as the feeling of safety, being protected and nourished; These family-as-a-whole problems add up to other factors deleterious to emotional dependence that were already addressed in previous sub-themes. There is also

the availability of illegal drugs and the pervasiveness of illegal activities in the vicinity of the family home.

Psychosomatics. They are the only group to have lived their childhood in a rural environment, and most of them are also included in the cluster *Conventional/Home stability* (the exception for both clusters is Carlos). Furthermore it is noticeable that all of the psychosomatic subjects moved from their small hometowns to other places, eventually to big cities. Two of the subjects (Mercy and Tino) refer to not being able to adapt to the more aggressive, autonomous and unpredictable group culture of the city²². This can be seen as a sign that these subjects are not able to mobilise the assertiveness and autonomy characteristic of Fight-flight valency, which is congruent with the interpretations of the previous themes.

Para-Suicidal: All are included in the cluster *Incongruence between parents*²³. It is noticeable however that in this group the parental incongruence presents a different nature from the other subjects where there is parental incongruence. Firstly, in three cases, it is the mother who is depicted as more harsh than the father, while in all the other subjects it is the father who is harsher and the mother kinder; and secondly, also in 3 of the 4 cases, although there is incongruence, there's no domestic violence in contrast with the addicts where the parents are perceived as very emotionally linked by violence and aggression. Again, as in the sub-themes 2.2 and 2.3 (father and mother) these patterns do not seem to be lending themselves to an interpretation in terms of a specific valency.

²² Examples: "People from the village are different from the city... Here in the city everyone has their own life, and in the village there's more conviviality with the people we know, people get together, [...] in the village everyone is acquainted and people are closer" (Tino, page 3). "I wasn't used to neighbours from so many different places, I found it all very strange, All the families were angry with each other, everybody was raising the roof"(Mercy, p.5).

²³ In *Gil* and *Carla's* accounts, the mother is the punisher, while the father is indifferent and did not punish the child. In *JC's account*, the mother would only pretend to follow the father's decisions, but would secretly act differently towards the child. In *Maria's case*, only the father would visit her in the orphanage.

Sub-theme 2.5 Troubles (Friends/Mates, School, Health)

The labelling of discourse to this sub-theme was based on the subjects' descriptions of troubles and problems they had in childhood.

Table 7 Clusters of Troubles by Condition

| <i>Clusters</i> | <i>Condition</i> | | |
|--|-----------------------|------------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1. Fearfulness of teachers | | Mercy, Richard, Carlos | Maria |
| 2. Rigid pressures to study from parents | Paul | Richard, Carlos, | Carla, JC |
| 3. Problems with authority (Police/School) for misbehaviour | Paul, Mario | | Gil |
| 4. Difficulty getting or maintaining friends | All subjects | Mercy, Carlos | Gil, Carla |
| 5. Difficulties in intimate/romantic relationships or sexuality | Mario, Gina, Jo | | Carla, Gil, Maria |
| 6. Somatic problems and accidents | Paul, Jo | Mercy | Gil |

As can be seen in the table above, the majority of subjects recall having *Difficulty getting or maintaining friends in childhood and adolescence (Cluster 4.)*²⁴. There are accounts of a disturbance in the *gregariousness* or *group affiliation* in the childhood and adolescence in most of these subjects (eight out of twelve), which results in difficulties in getting social support and group containment.

Another cluster that includes people from all the conditions is the *rigid pressure from parents to study*. Even in cases where there is no concrete reference to rigid

²⁴ This however is due to different reasons: defensiveness and distrust (Paul, Mario, Gil, Carla), moving home and changing school (Jo, Carlos) bad reputation of the family (Gina), or a combination of more than one factor. In the cases where there is no overt reference to these difficulties there is however memory of a geographical separation from peer groups (Richard), or emotional haughtiness (JC).

pressures to study (Mario, Jo, Gina, Tino, Mercy, Maria²⁵), the childhood is recalled as very much centred on study and school tasks²⁶.

This is particularly interesting since it is present even in cases where we would expect otherwise, such as the chaotic families of the drugs addicts. In the three cases left out of this cluster (Jo, Gina, Gil) there are however reports of starting work early in adolescence²⁷. In fact, starting work early in adolescence and/or helping parents to work since childhood is also almost universal in the sample as a whole. These subjects' infancy and adolescence seems marked by a strong achievement pressure in school or work. This is particularly interesting because of the concept of work-group-function, and will be further elaborated in discussion of theme 3.1 (work-group-function).

There are also some identifiable patterns in the type of childhood troubles recalled, specific to each clinical condition.

Addicts: all of them report *Difficulty in getting or maintaining friends*, and 3 out of 4 of them also recall difficulties in *Romantic relationships/sexuality*. This boils down to difficulties in attachment and affiliation with peers. As they also have difficulties in attachment to parents (see theme 2.2 and 2.3) this represents a strong problem in terms of the dependence valency. The difficulties with romantic relationships mentioned by the interviewees consist in love disappointments in relationships in which they had

²⁵ Until the age of 21 Maria lived in the orphanage, so her home was at the same time her school, and had very strict discipline and exaggerated punishments

²⁶ *What would you do at home?* At home we'd study. I studied until I was 16 years old (Mario, page 1)

Could you tell me a bit about your childhood? Normal, like any other kid, there was the school. That was it. [...] *What kind of rules were there at home?* Let me see... do the school homework (Tino, page 1)

How would your parents impose discipline? We would rise in the morning, go to school, all of us did the 4th grade, we would return from school and were obliged to do homework and we'd certainly do it (Mercy, page 3) [...] I loved going to school [...] I used to be the best student in my class (Mercy page 4)

²⁷ Examples: I studied until the 9th year. I always liked school [...] at 16 I started to work and kept studying at night [...] I'd like to party a lot but would work to have my own money (Jo, page 2); I did the 2nd year. I liked the school a lot, but had to leave it, there was no way I could continue, I had to clean the house, help do the household chores (Gina, page 3); I studied until my 4th year, and then I went to work with my father and brother as a mechanic, I was 14 years old (Gil page 2).

invested a lot²⁸. This seems a repetition of a general pattern with the mother (see sub-theme 2.3): they start to be emotionally dependent and keep a fairly idealised image of the object (both the mother and the romantic partner); but there are disruptive factors that keep them apart.

In other words, their accounts can be interpreted as having a high valency for dependence but it seems to remain frustrated and fragmented (“heart-broken”). Eventually, they suppress the dependent emotional link it and they become *in*-dependent and loners (see also themes 1.2 [psychosocial context], 2.1 [temperament], and the following theme 3.1 [suppression]).

Psychosomatics: three out of four are included in the cluster *Fearfulness of teachers*. This is congruent with the results in theme 2.1 (temperament-personality): they are very compliant, and cannot react to aggressive authority, being especially vulnerable to abuses of authority. They seem to have been subjected, with some amount of terror, to teachers’ abuses²⁹.

The states of terror can be interpreted as fragmented containment of fight-flight related emotions (e.g. Cannon, 1942). The difficulties in getting family support in the containment of terror related to school are obvious in Mercy’s case (whose mother fainted facing Mercy’s distress) and in Carlos case (whose father ignored Carlos’ problems at school [see theme 2.2 Father]). These situations contrast with those of drug addicts and the para-suicidal subjects, who can face and confront authority by themselves, by responding with aggressiveness, rebellion and autonomy (see theme 2.1 [temperament]).

²⁸ Examples: I had a big childhood love affair with a boy who lived nearby, we both changed house, and I stayed heart broken for almost a year (Jo, page 4). I had my first significant girlfriend when I was very young, at 15. It was a very strong relationship, we loved each other a lot, then she moved faraway and disappeared and we lost contact, we never saw each other again (Mario, page 3).

²⁹ “Professor X, that woman was the terror, and Dr Z, he destroyed many people’s lives, because he was extremely demanding” (Richard, page1). “During the exam I got very nervous because the teacher shouted at me. My mother fainted when she saw me crying” (Mercy page4).

None of the psychosomatic subjects refers to problems in romantic relationships; they relate having inconsequent teenage flirtations, until marriage and keeping stable families, following the conventionality of their parents.

Para-suicidal. 3 out of 4 recall difficulties in *Intimate/romantic relations*; actually these are three cases related in which they had no romantic or sexual relation at all in adolescence³⁰. This pattern can be interpreted as suppression of pairing emotional links.

These difficulties are in great contrast with those of the addicts: while all the addicts report having been in love, the para-suicidals do not recall being in love at all, which is congruent with their deep-rooted emotional detachment and self-sufficiency (see discussion themes 2.1, 2.2, 2.3).

In the next table are presented the most salient patterns identified in theme 1 and theme 2 for each clinical condition group of interviewees.

³⁰ In *Carla's* case it was due to a deep-rooted dread of intimate/close relations; in *Maria's* it was due to living in a orphanage for girls with very strict rules, and *Gil* had his first girlfriend at 18 (when he had already been working for several years), but broke up with her because she was 15 and his colleagues told him that they were going to tell her father. Although JC didn't overtly mention difficulties, he had only one girlfriend in adolescence, whom he eventually married; Gil and Maria also married the person with whom they had their first relationship.

Table 8 Patterns identified in themes 1 and 2

| <i>Sub-themes</i> | Drug addiction | Psychosomatic | Para-suicide |
|--|---|--|--|
| 1.1 Life events previous to the onset of symptoms | Separation from support objects and attachment problems | Stress in family, work or school (without separations) | Separation from libidinal objects and sexuality problems. Health problems and accidents |
| 1.2 Psychosocial context | Autonomy/independence, anger, rebellion Inhibition or lack of emotional dependence and parental responsibility | Inhibition or lack of aggressiveness and rebellion | Inhibition or lack of "joy of life", and social isolation |
| 2.1 Personality | Rebelliousness and Aggressiveness. Autonomy/independence | Fearfulness and Inhibition of Rebelliousness | Emotional detachment and self-sufficiency |
| 2.2 Father | Bad Father (abusive, deviant) and rebelliousness | Strong traditional father/obedience | Emotional distance/ absent father |
| 2.3 Mother | Idealization and good image of, but impossibility of consistent dependence | Conventional mother/ Obedience to mother | Emotional distance/Absence |
| 2.4 Family as a whole | Broken Home/ domestic violence/housing instability Urban degraded environment/ crimes Poverty or economic instability | Moved from rural and small-town environment in childhood to capital cities | Incongruence between parents |
| 2.5 Troubles (Friends-Mates, School, Health) | Difficulty getting or maintaining friends | Fear and terror at school | Few or no romantic and sexual relations in adolescence |

Theme 3. *Work-group-function, Suppression and Alexithymia*

The aim of analysing this theme was to find concrete manifestations of these theoretical concepts, so as to add phenomenological and clinical meaning to them, and also to differentiate them more clearly, since they all address the inhibition of emotional expression in one way or another. I chose to label this sub-theme to discourse when the subjects' accounts fitted theoretical concepts in question particularly well.

This theme is subdivided in three sub themes: 3.1 Work-group-function, 3.2 Emotional Suppression, and 3.3 Alexithymia.

| |
|--|
| 3. <u>Emotional expression inhibition</u> |
| 3.1 Work-Group-Function |
| 3.2 Emotional Suppression |
| 3.3 Alexithymia |

Sub-theme 3.1 Work-group-function

I chose to label this sub-theme to discourse when the subjects mentioned their factual and emotional experiences in work-function related tasks, in any time of their life (e.g. *I'm very demanding with myself since I started to work. Even in school I felt I was not allowed to fail*).

Table 9 Clusters of *Work-group-function* by Condition

| <i>Clusters</i> | <i>Condition</i> | | |
|--|-----------------------|------------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1.Bound to serious work tasks in childhood/ adolescence | All subjects | Mercy, Richard, Carlos | Carla, Gil |
| 2.High perceived efficacy in work tasks | All subjects | Mercy, Richard, Carlos | Carla, JC |

| | | | |
|--------------------------------|-------------|------------------------|------------------|
| 3.Work tasks felt as enjoyable | Mario, Gina | Mercy, Tino, Carlos | Gil, JC Carla |
|--------------------------------|-------------|------------------------|------------------|

There is no clear pattern of clusters by condition. What is interesting is that almost all the interviewees claimed something that shows a high ability to work group function, namely *high-perceived efficacy* and/or *enjoyment in work tasks*. This is especially interesting in the case of drugs addicts, who are commonly taken as being the epitome of idleness³¹.

Another noticeable result is that the great majority of interviewees were bound to important work tasks in childhood/ adolescence. As mentioned in analysis of theme 2.5 (Troubles), these subjects' infancy and adolescence seems to be marked by pressure to achieve in school or work. the following quote from Tino sums it up:

Can you tell me a bit about your infancy? It was normal, like all the other kids; there was the school, that's it.(p. 1)

There are interesting differences in the emotional tone of the discourse about work experiences in the 3 groups, and these will be addressed in the following illustrative vignettes. In the case of two of the addicts there's a strong tone of rebelliousness and non-compliance with authority at work, which can be interpreted as the dominance of Fight-flight valency. These accounts contrast sharply with the typical passive and non-aggressive response of the psychosomatic interviewees to similar problems with bosses. As with the addicts but without the violence, the para-suicidal are not characterised by compliance with authority

Illustrative vignettes

1) **Drug addicts**

³¹ However, this result could be an effect of sampling, that is, the addicts who volunteered for being interviewed had some particular characteristics not found as frequently in the population of drug addicts as a whole. This issue was discussed in the previous chapter, on the "sampling" section.

How were your relationships with bosses? It was also a bit troubled. [...] There was one who was rude to me, I punched him several times and then I was fired. There was another one that didn't wanted to pay me the extra hours, I didn't swallow that and I chased him and destroyed his car (Paul, page 5).

He [boss] wanted to pay me only half of what he had promised [...] I was very nervous; I opened the cash-box and took out the money he had promised me (Gina, pages 5-6)

2) Psychosomatics:

Have you ever wanted to change job in these 30 years? Yes, several times, but my boss made a promise that he has to deliver. He promised me some extra commissions and a share of the company profits and he still hasn't paid me. A promise made about 25 years ago...(Richard, page 5)

(see also Carlos' submissive reactions to authority abuses in analysis of theme 1).

3). Para-suicidal

They told me not to wear short skirts but I didn't go along with that, didn't obey; it is my way of being in society, I am not going to change it just because someone tells me to (Carla, page 6)

I have been enjoying a very good relationship with my superiors, but if they weren't fair with me I would tell them off. This attitude caused me problems several times (Gil, page 3)

In this theme it is clear, on the one hand, a tendency of drug addicted subjects to rebellion and aggressiveness (dominant fight-flight valency), and on the other hand a tendency of psychosomatic subjects to suppress fight-flight valency in situations of clash with the authority; these patterns are congruent with the ones found in the previous sub-themes. However, as in some of the previous sub-themes (father, mother, family-as-a-whole) the para-suicidal subjects' behaviour do not seems to be easily interpreted at the light of specific valences.

Sub-theme 3.2 Emotional suppression

I chose to label this sub-theme to discourse when the subjects described features of emotional suppression, i.e., the presence of strong emotional states not allowed expression (e.g. *I'd keep feelings to myself, when I felt like exploding or moaning*), or that are denied (e.g. *I told him "your cowardice caused my disaster [a serious injury] but never mind", I don't hold on to hard feelings*), sometimes due to group norms (e.g. *I couldn't react because of the army's hierarchy*).

Table 10 Clusters of Emotional suppression by Condition

| Clusters | Condition | | |
|--|-------------------|---------------|----------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1. Suppression of emotional linking | Paul, Mario, Gina | Carlos | Carla, Gil, JC |
| 2. Suppression of dependence of significant others | All subjects | | |
| 3. Suppression of fight-flight | | All subjects | Carla |
| 4. Suppression of pairing | | | All subjects |

Addicts: The interpretation of discourse as suppression of dependence on parents was already analysed in themes 1 and 2. The discourse of all the addicts about the suppression of dependence on their partners reveals the same attitudes: they prefer to be apart to avoid harming each other³². As in the case of adolescent love (see theme 2.5

³² Examples:

Paul: So we concluded that it was best for us to separate, and now we are friends, we see each other once in a while and have a coffee, we chat, but it is not possible to have a relationship, there was a lot of shit. *Have you had any relation since that one?* Only one night stands, but not a stable relation with feelings involved. I only had that one, and that one lasted for 11 years, because we really suited each other well (Paul, page 7).

Mario: A girl with whom I was, and still am, very fond of, but now, now we don't even see each other, and that has affected my life a lot since we broke up... I don't want girlfriends anymore; I got so badly affected by this woman that I don't want girlfriends anymore. I can sleep with one woman today

[troubles]) the addicted subjects they seem to maintain an idealised image of their partners but they prefer to avoid an emotionally close relationship. However, there seems to be no inhibition/suppression of their sexual drives and they have regular sex in non-committed dating. It is very clear that it is the emotional link of interpersonal dependence itself that is felt as impossible to maintain and is suppressed by the subjects.

Psychosomatics. The suppression of rebellion/anger towards parents was already analysed in theme 2. There are also clear signs of suppression of the fight-flight valency in professional and adult relations³³ (see also overall discussion of theme 1 for examples of fight-flight suppression in Mercy's and Carlos' interviews). In sum, there are emotional states of anger, irritation and/or resentment that are not symbolically elaborated or allowed expression either in behaviour or verbally.

The active and voluntary effort involved in suppression of resentment and anger is very clear in the next passage:

and with another tomorrow, but nothing like a girlfriend to live with, I don't want that because I'm afraid of failure, and I got hurt, got hurt in my heart, very hurt. Because I was stupid not to respect a girlfriend who loved me a lot and whom I loved a lot, it's this I don't understand, how did I get into this situation (Mario, page 4).

Gina: We started to becoming friends, then we started dating, and I went to live with him [...] He is a very good friend of mine, but we can't be together [...] I prefer to be away from him, in this way he takes good care of our son, instead of us being together and messing everything up; I know he is a good father. (Gina, page 7)

Jo: My husband always had a lot of aptitude for taking care of children and old people, that's what first captivated me about him [...] I separated from him because I knew that he'd use more drugs when he was with me [...] so I backed away from him in order not to harm him because I didn't wanted to see him go down (Jo, page 10).

³³ *Richard:* I got injured in a mine. I hurt both my legs, and I lost my left ear. In all these years I had 18 chirurgic operations. *How would you feel about it?* I would accept it, I would accept it...[...] It was a platoon that saw a mine and came back. That platoon should have gone there to complete the mission, but they didn't, I went, it was kept for us...well, I don't hold on to hard feelings. I don't accept this, because it was his guilt, a sergeant. When he came back I looked for him and I said to him "your cowardice caused my disaster, but never mind" (Richard, pages 1 and 4).

Tino: *You told me that at work there was more pressure than usual?* No, it's that the jobs are not as easygoing as they were before. But I never felt wrong; it's only that there are times when one is more nervous than usual, isn't it? But this thing of being nervous, one is born with it. *You mean you're a nervous person?* No, it's not nervousness... it is normally said that everybody gets nervous, but I don't mean nervous to a point of kicking things around, I mean one is a bit more agitated than usual. And it was then that this thing started to strike my scalp (Tino, p.1).

I take things very personally but I don't bother anyone, I swallow it, ruminate on it, go to bed, don't give it vent, don't tell my wife anything, I don't want to upset others (Carlos).

Para-suicidal. The suppression of pairing, in the form of avoidance of childhood and adolescence romantic relationships, was already analysed in sub-theme 2.5. The suppression of the pairing valency in its component of erotic and sexual satisfaction in adult age is also rather clear³⁴.

Once more it is very apparent that it is the fulfilment of sexual and erotic emotional links in itself that it is made impossible and suppressed, for a variety of reasons. Interestingly, there is also the suppression of pairing valency in a more formal sense, i.e., the frustration of or even the impossibility of marriage, due to the formal social rules of marriage whether civil or religious³⁵.

And finally, the intentional suppression of cheerfulness in social contacts and hope in the future (already analysed in theme 1.2), and which is depicted in these two quotes:

One year ago I was such joyful a woman, so amused, I would go to discotheques, and now I find myself in this state, you wouldn't believe...I enjoyed walking on the street, but not now, now I isolate myself (Maria, page 5)

³⁴ *Gil*: I am someone who knows few girls, I'm acquainted with them but I'm afraid now, I've suffered once so I'm afraid to make a move on another one, I'm very jealous [...] I like to travel a lot; alone, because I don't have, like, a female colleague or two to go with me. I never got along with them; this has been the story of my life, when I go to parties it's rare for me to ask a girl to dance (Gil, pages 4 and 6).

JC: That was a marriage...ha... I only slept in the same bed as her because I was expected to...she would approach me to have sex but I'd avoided that. *What about the other woman?* No, the other one said: "now that you are married we're through, there are problems enough, we can't go on with our relationship" (JC, page 5).

³⁵ *Have you married again?* Not me, because marrying officially never again, it's not easy, I think I've had enough. I have a relationship with a girlfriend now [...] She wants to marry, but I suggested we try living together, to see how things went, but she...her parents are a bit conservative and say: "you get married or else...", and it is complicated enough because I'm divorced and I can't be married again by the church and the idea was to marry by the church, and that for me it's impossible (JC, pages 5-6)

We didn't have a courting period; we went to live together right away. I knew him; he invited me to his place for a drink and I stayed there permanently. I thank God for 24 years of happiness (cries). I was 23 years of age. (cries a lot). He shouldn't have died [...] Since he was already married, I didn't marry him and when he died I was left with nothing (Maria, pages 2 and 4).

I always had the idea that I'd die early. I never had big hopes for life [...] maybe I associate this with unhappiness, not expecting much from life, shortening it a bit (Carla, page 1).

Sub-theme 3.3 Alexithymia

I chose to label this sub-theme to discourse when the interviewees manifested alexithymic characteristics, i.e., difficulty in talking about or elaborating feelings and emotional states (e.g. . *sometimes I feel like...a bit..., how can I explain..., it's not depressed, it's...how should I say this...*) or external-reality oriented thinking instead of elaborating inner feelings (e.g. Do you remember having any problem in childhood? [...] *Sometimes I would have to ask somebody older for help in some task, it was not like the kids today that know how to do everything, operate the TV, and whatever*), either in their actual flow of discourse, or in their accounts of past emotional experiences.

In the categorisation in clusters I used the 3-factor structure of alexithymia proposed by Taylor et al (1997) for the Toronto Alexithymia Scale.

As expected, all the subjects show alexithymic characteristics. There are no clear patterns by condition as all the subjects of each group are represented in at least one cluster of alexithymia. This is also an expected result, since the clusters represent 3 facets of the same clinical entity, and thus are very closely connected.

Table 11 Clusters of *Alexithymia* by condition

| <i>Clusters</i> | <i>Conditions</i> | | |
|---|-----------------------|----------------------|---------------------|
| | Drug addiction | Psychosomatic | Para-suicide |
| 1.Difficulty distinguishing between feelings and bodily sensations | Paul | Mercy | Gil |
| 2.Difficulty describing feelings to others | Mario, Gina | Tino Carlos | All subjects |
| 3.Externally-oriented thinking | Paul, Jo | All subjects | Carla |

It is noticeable that the alexithymic characteristics of discourse are frequently connected with very emotionally charged interpersonal situations, as can be seen in the next few vignettes.

Separation from hometown

Oh!, it was very hard. Even nowadays when I go back there and have to leave from there, the day before I can't eat, I lose my appetite. It's as if a thing gets into my stomach, I start losing my voice [...] (Mercy, page 5; *Difficulty distinguishing between feelings and bodily sensations*)

How did you feel when you moved? I never went back there again (Carlos, page 2; external oriented thinking)

Anger with significant family members

We [*she and her sister*] stopped having news about them [*parents*], we rented a smaller studio, bought furniture, I got a better job, my sister also, I changed motorbike, my sister changed car, we managed to stabilise things, then we moved to a bigger house (Jo, page 5; *external oriented thinking*)

I wouldn't show emotions, feelings, but when I'd get to bed I'd cry a lot...sometimes I didn't know why. (Carla, page 4; *difficulty describing feelings*)

Conflicts at work and financial problems

These things make me feel certain things and to react in certain ways that it's like it were not me acting, I am just spontaneously forced to that, it's like an automatic response to the situation (Paul, page 5; *externally oriented thinking and difficulty describing feelings*)

The loan company called me, saying I had to pay my delayed instalments, plus interest, that same afternoon or else they would take away my car. I got this blow and I felt a bit... I was also a bit troubled by my parents (J.C., page 1; *difficulty describing feelings*)

The alexithymic features in these interviews can thus be linked with deficits in the transformation of raw affects that are aroused in the context of particular events and interpersonal situation, and not just as an individual syndrome.

Summary of the qualitative analysis

The patterns uncovered in the second stage of the qualitative analysis (descriptive *accounts*) were summarised in Table 8.

Overall, in what respects to all the themes of the analytic index, the results of the qualitative analysis are compatible with the claim that suppression of dependence and dominance of fight/flight is characteristic of the addicted subjects; the suppression of fight-flight and dominance of dependence is characteristic of the psychosomatic subjects; and the suppression of pairing is characteristic of the para-suicidal subjects.

As already said, these interpretative conclusions correspond to the third stage of analysis (*explanatory accounts*), which is limited to a process of interpretation guided in the context - and limited by the specific boundaries of - Bion's categories of basic socio-emotional systems (valencies).

These results will be further discussed in the following chapter. I will now present the results obtained in the quantitative design.

Fixed-Quantitative design

In this section I will present the statistical testing of the hypothesis (see previous chapter). The first two sections will test the clinical hypothesis of a) an association of all the pathologic conditions with a general cognitive deficit of emotional containment

(using the TAS-20), b) association of specific conditions with specific valences (using the WGFS). A final section will present the testing of the conceptual hypothesis, which will analyse the relation between the TAS-20 and the WGFS.

The association between alexithymia and the clinical conditions, is a *replication of previous studies* by other authors (see chapter 4). The association between specific valencies and specific clinical conditions *is an original proposal* in my thesis. Finally, I will build upon the concepts of Alexithymia and Valency, testing a *new conceptual model* about how these two theoretical constructs are related. It was proposed in the hypothesis that both high and low valency arousal are related to higher alexithymia, i.e. difficulties with translating emotional experiences into words ³⁶.

Statistical testing

Clinical Hypotheses: Effects of alexithymia and of valency on Clinical Condition

In the next table are presented the mean values for the scores in the TAS-20 and WGFS scales in each group of the dependent variable. Also presented are the proportions of gender and the mean age by each clinical condition.

³⁶ This theoretical relation corresponds statistically to a curvilinear U-Shaped curve in the statistical relation between the 2 variables. I have addressed this notion previously in a forum presented in the Centre for psychoanalytical Studies (Torres, 2003c). This U shaped relation between emotional variables and cognitive-behavioural output has been demonstrated in various fields of psychology. The relation between stress and cognitive performance (low stress = low performance; average stress = good performance; high stress = low performance), and the relation between drug use and avoidance of close relationships in young people (abstinence = high avoidance; experimental use = low avoidance; abuse = high avoidance [Shedler and Block, 1993]), are only two examples of these U (or U-inverted) shaped relations, in which there seems to be a balanced emotional mid-point with “good” cognitive output, and extreme emotional values with “bad” cognitive output.

Table 12 Mean Values for the Independent variables in each of Condition³⁷

| | Non-Clinical N=97 | Psychosomatic N=78 | Addiction N=68 | Para- suicide N=35 |
|--------------------------------|----------------------|-----------------------|-------------------|--------------------------|
| Age | 37.10 | 35.37 | 35.82 | 35.54 |
| Gender (proportion of females) | .89 | .53 | .25 | .75 |
| TAS Global | 45.44 | 58.22 | 62.67 | 64.86 |
| TAS Factor1 | 2.16 | 2.80 | 3.29 | 3.79 |
| F General | 4.06 | 4.27 | 4.50 | 4.51 |
| F Paranoia | 4.17 | 4.26 | 4.60 | 4.71 |
| F Cruelty | 3.10 | 3.52 | 3.52 | 3.61 |
| F Victory | 4.62 | 4.85 | 5.20 | 4.95 |
| F Flight | 3.66 | 3.74 | 3.83 | 4.08 |
| P General | 4.61 | 4.59 | 4.79 | 4.70 |
| P Excitation | 3.65 | 3.85 | 4.18 | 4.11 |
| P Good Humour | 4.71 | 4.70 | 4.86 | 4.85 |
| P Open-minded. | 5.27 | 5.04 | 5.12 | 5.01 |
| D General | 5.39 | 5.26 | 5.55 | 5.34 |
| D Interdependence | 5.44 | 5.30 | 5.56 | 5.44 |
| D Leader Dependence | 4.87 | 4.87 | 5.23 | 5.07 |

As can be seen in the

Table 12, there are a greater proportion of females in the non-clinical sample than in all other groups, and the mean age is also higher in this non-clinical group. For this reason, the statistical models analysing the relation between the psychometric scales (TAS-20 and WGFS) and the variable *condition* will include *age* and *gender* in order to statistically control for the possible spurious effects caused by differences in gender and age in the groups.

³⁷ Although the initial number of questionnaires collected was 337, the following analyses do not include: 35 subjects addicted to drugs that were in TC treatment (see section “assumptions of the Multinomial logit model”); 6 subjects with gastric conditions due to the small number of subjects with gastric conditions; 16 subjects with non-psychosomatic skin conditions (see section “assumptions of the Multinomial logit model”), and 2 subjects with psychosomatic skin conditions due to missing values in age and gender.

Clinical hypotheses

A statistical technique that implies the *assumption of causality* was used; although due to the cross sectional design employed I am not accessing *empirically* causality but only empirical *correlation*, I am assuming theoretically and in statistical terms that certain variables (independent variables) precede others (dependent variables). It was assumed that valencies and alexithymia are *independent* variables and that the clinical condition is the *dependent* variable (for an in-depth explanation of this theme see Tacq, 1997).

The *clinical condition* is composed of four broad clinical *categories* (non-clinical, addictions, psychosomatic, para-suicide), and hence is a *categorical* variable measured in a “nominal” scale of measurement (see e.g. Tacq, 1997). For this reason I used a statistical technique adequate for unordered (nominal) categorical dependent variables with more than two categories: *multinomial logistic regression*³⁸.

³⁸ The logistic regression, also called *logit*, is a special case of regression analysis adapted for categorical dependent variables where the values of the dependent variable are transformed by taking the natural logarithm of the given probability of a case to fall in one of the categories. In the multinomial logistic model, one value of the dependent variable is designated as the reference category ($y=h_0$) and the probability of membership in other category is compared with the probability of membership in the reference category. For independent variables with a number J of categories, this requires the calculation of $J-1$ regression equations, one for each category relative to the reference category, to describe the relationship between the dependent variable and the independent variable (Menard, 1995, p. 80). In this study, the chosen reference category was the *non-clinical condition*, and the total number of categories is four, so $J=4$, hence the model will estimate 4 minus 1 equations (which is equal to 3). So if the reference category (non-clinical group) is D, and the other categories (addictions, psychosomatic, para-suicide) are A, B, and C, the model will compare the likelihood of the event A with that of event D, that of event B with that of event D, of event C with that of event D, by means of three nonredundant sets of regression parameter estimates (Liao, 1994, p. 51). The multinomial logit model uses the equation

$$\text{Prob}(y=j) = \frac{e^{\sum_{k=1}^K \beta_{jk} x_k}}{1 + \sum_{j=1}^{J-1} e^{\sum_{k=1}^K \beta_{jk} x_k}},$$

which gives the probability that $y=j$, where $j=1, 2, \dots, J-1$. Note that the parameters β have two subscripts in the model, k for distinguishing independent variables and j for distinguishing categories of the dependent variable. The subscript j indicates that there are $J-1$ sets of β parameter estimates (Liao, 1994, p.48). This is not the place to expand on the mathematical details of the logistic regression estimation, for which I refer the reader to some references (Liao, 1994; Menard, 1995).

Assumptions of the Multinomial logit model

One important issue in the use of *multinomial logit* models is the *assumption of independence of irrelevant alternatives*; it means that it is assumed that the ratio of the probabilities of belonging to any of two alternatives (in response categories) for a particular observation is not influenced systematically by any other alternatives (Liao, 1994, p.50). In simple terms it means that the two response categories must not be irrelevant, as they would be if they represented irrelevant variations of the same category³⁹. For instance, we assume that alcohol addiction and drug addiction are irrelevant alternatives that can be collapsed in one category of addiction only. The same holds for collapsing the psychosomatic sub-group of skin diseases and respiratory diseases into a single psychosomatic group

Construction of the dependent variable

Although there are four broad conceptual categories for the dependent variable (clinical condition), which are 1) non-clinical group, 2) addictions, 3) psychosomatic, 4) para-suicide, these broad categories are, in reality, constituted by different sub-groups. The addiction group includes a) alcohol addicts, b) illegal drug addicts in T.C. treatment and c) illegal drug addicts not in treatment. As to psychosomatics, there are two groups a) skin conditions, and b) respiratory conditions⁴⁰. The para-suicide group is relatively homogenous. There is also a group of non-psychosomatic skin conditions, which should, conceptually, be part of the non-clinical sample in the sense that these medical symptoms are known to be purely infectious and not determined by emotional factors.

³⁹ This assumption is normally exemplified by the so called “red bus/blue bus paradox” (Liao, 1994): Both the red and the blue are buses, so the probability of travelling by bus should not be affected by the colour of the bus. Therefore red bus and blue bus are irrelevant alternatives.

⁴⁰ The gastric disorders sub-group was taken out of the analysis due the small number of cases.

In order to test whether the categories that are supposed to be combined are really statistically indistinguishable in what respects to the relationship with the independent variables, a Wald test for combining dependent categories was performed (Long and Freese, 2001)⁴¹, establishing a significance level of $p < .05$. This test assures that none of the independent variable significantly affect the odds of one outcome over another, and this being the case we say that the variable are indistinguishable and can be combined (ibidem).

According to the results of the Wald tests, and considering first the relation to the WGFS scales, psychosomatic respiratory and psychosomatic skin conditions can be combined in one single category (which was called “psychosomatic”), and alcohol and drug addicts not in treatment can be also combined in one single category (which was called “addiction”). However, drug addicts in treatment cannot be combined with the other addictions sub-groups⁴². Also, non-psychosomatic skin conditions cannot be combined with the non-clinical group. These two subgroups, not possible to combine in broader categories, were taken out of the analyses, in order to maintain the assumption of independence of irrelevant alternatives.

In what concerns the TAS, the results of the Wald tests were very similar, except that the non-clinical group and the non-psychosomatic skin conditions can be combined. However, to maintain a comparable procedure it was decided to run TAS regression models similarly to the WGFS ones: without the non-psychosomatic skin conditions.

⁴¹ There are two tests for combining dependent categories available in the statistical program Stata: Wald and Likelihood Ratio, which according to Long and Freese (2001, p. 185) provide very similar results.

⁴² Perhaps due to the effects of TC treatment, which is very prolonged (up to more than a year) and focuses on changing the social interaction attitudes and values of the patients.

Specification of the multinomial regression models

All the models include age and gender as first step, in order to allow controlling statistically for the differences in these variables among groups⁴³. In a second step, the rest of the independent variables (either TAS or WGFS scores) were included in the model, and the impact on the model fit is assessed, using the Likelihood ratio test difference (LR Test)⁴⁴.

Results

Effects of Alexithymia on Condition

As can be seen in Table 13 by the positive sign and the significance level of the β estimates, both TAS global and TAS factor 1 are significantly associated with a greater likelihood of being psychosomatic, an addict or a para-suicidal, comparing with being a non-clinical subject.

As predicted in the hypothesis 1, alexithymia (measured by TAS-20 global and factor 1 scores) is associated with an increase in the likelihood of being an addict, a psychosomatic and a para-suicidal subject. These results are congruent and replicate previous studies on alexithymia in psychosomatics, addicts and para-suicidal patients, which were addressed in the theoretical introduction of this work.

⁴³ Ideally the groups would be equivalent in terms of demographic variables, namely gender and age. However, this was not possible due to the various constraints of field research and to the nature of the clinical conditions themselves. For instance, it is known that most of the addicts are men, and that women make more failed suicide attempts than men. On the other hand, due to the high mortality of those with chronic clinical conditions, the mean age of these conditions should be smaller than that of non-clinical subjects. In order to avoid spurious relations between independent and dependent variables caused by differences in demographic variables that are a priori different in the sample groups, the standard procedure is to include the demographic variables in the regression equation, this has the effects of determining partial beta estimates *ceteris paribus*, that is, as if these variables were maintained constant.

⁴⁴ As in the OLS regression in the previous section; if the LR ratio is statistically significant it means that the inclusion of the independent variables substantially increases the accuracy of the model, i.e., the explanation of the dependent variable (in this case *clinical condition*).

Table 13 Multinomial Logistic Regression predicting Condition⁴⁵

| Step ² | Model | | | MLogit β Estimates for CONDITION ¹ | | |
|-------------------|------------|--------------------|----------------|---|-----------|--------------|
| | Chi-Square | LR Test difference | Variables | Psychosomatic | Addiction | Para-suicide |
| 1 | 80.64*** | | Age | .010 | -.009 | -.011 |
| | | | Gender | 2.194*** | 3.195*** | 1.018*** |
| 2 | 164.51*** | 83.873*** | TAS-1 | .823*** | 1.474*** | 2.141*** |
| 3 | 155.35*** | 74.709*** | TAS- GLOBAL | 1.496*** | 2.229*** | 2.720*** |

Legend:
1. Outcome condition *Non-Clinical* is the comparison group.
2. Steps: All the models include age and gender as first step, in order to allow controlling statistically for the differences in these variables among groups. In a second step and third step the rest of the independent variables (either TAS or TAS Global scores) were included in the model; the impact on the model fit is assessed, using the Likelihood ratio test difference (LR Test).
*. p<0.05 ** . p<0.01 ***. p<0.001

Effects of valency on Condition

In order to test the hypothesis of the association of valencies with different conditions, a multinomial logit procedure was also used; the models' only difference from the previous models using TAS-20 is that the independent variables included were the WGFS' scales.

The theoretical hypothesis is that quantitative deficits in containment are represented by either extremely high or extremely low values of valency, so either a negative or positive relationship between *valency* and *condition* is expected.

Again, the Mlogit β estimates mean that the valency increases (positive sign) or decreases (negative sign) the likelihood of being in the clinical condition as opposed to being a non-clinical subject.

⁴⁵ The number of subjects included in these regression models is 242; from the total of 278 included in the variable *Condition*, there were 34 cases with missing values on TAS scores (3 non clinical, 11 skin diseases, 3 para suicide and 17 respiratory diseases) and 2 cases with missing information on age.

Table 14 Multinomial Logistic Regression predicting Condition⁴⁶

| Model | | | | MLogit β Estimates for CONDITION ¹ | | |
|-------|------------------|-------------------|----------------------------------|--|--------------------|--------------------|
| No. | LR Chi-Square | LR Test differ | Variables | Psycho- somatic | Addicts | Para- suicide |
| 0 | 79.73*** | | Age Gender | -.0171 1.948*** | -.0146 3.235*** | -.0127 1.015*** |
| 1 | 93.03*** | 13.30** | P General | .234 | 1.095*** | .390 |
| 2 | 94.70*** | 14.97** | P Excitation | .228 | .228*** | .538* |
| 3 | 93.74*** | 14.01** | P Good Humour | .307 | .958*** | .419 |
| 4 | 85.778*** | 6.05 | P Open mindedness | -.487 | -.117 | -.700* |
| 5 | 89.974*** | 10.244* | F General | .275 | .685** | .677* |
| 6 | 86.881*** | 7.151 | F Paranoia | .034 | .311 | .393* |
| 7 | 88.936*** | 9.205* | F Cruelty | .428* | .344 | .565* |
| 8 | 92.807*** | 13.077** | F Victory | .242 | .821*** | .410 |
| 9 | 89.207*** | 9.476* | F Flight | .240 | .433 | .760** |
| 10 | 92.166*** | 12.436** | D general | -.184 | .923* | -.078 |
| 11 | 88.351*** | 8.621 * | D Interdependence | -.204 | .650 | .022 |
| 12 | 95.059*** | 15.329*** | D Leader - Dependence | .128 | 1.036*** | .536 |

Legend:
1. Outcome condition *Non-Clinical* is the comparison group
*. p<0.05 **. p<0.01 ***. p<0.001

Psychosomatics: As can be seen in the Table 14, the likelihood of being a psychosomatic as opposed to being a non-clinical subject increases with the psychometric scale of *Fcruelty*. This confirms the hypothesis that psychosomatic illness is specifically related to the Fight/flight valency. However, none of the other Fight/Flight subscales showed a significant association with this condition. I will address further these results in the next chapter (discussion of results and conclusions).

⁴⁶ The number of subjects included in these regression models is 271; from the total of 278 included in the variable *Condition*, there were 3 cases with missing values on WGFS scores (2 skin diseases and 1 para-suicide) and 4 cases with missing information on age.

Addiction: the likelihood of being an addict increases with *Dgeneral* and *Dleader-dependence*, but also with all the Pairing scales (except *Popen-mindedness*), and also with *Fgeneral* and with *Fvictory*. These results are not totally congruent with the hypothesis; however, *Addiction* is the *only* condition that is significantly related to the Dependence psychometric scales, suggesting some specificity related to the Dependence valency.

Para-suicide: the likelihood of being a para-suicidal subject increases with all F scales (except *Fvictory*), and with *Pexcitation*, and decreases with *Popen-mindedness*. These results are not totally congruent with the hypothesis. However, para-suicide is the only condition that has significant relations with two sub-scales of the Pairing valency of *opposite signs*. In this sense there is some specificity related to the Pairing valency.

Conceptual hypothesis

To test the conceptual hypothesis, a series of three Ordinary Least Squares (OLS) multiple regression models was performed, with the Toronto Alexithymia Scale (TAS-20) scores as dependent variable, and each of the General Valency scales (D, F and P) scores as independent variables⁴⁷. Only the General valency scales were used in order to reduce the burden of statistics and interpretation.

There is a strong possibility that non-clinical subjects do not have equally serious emotional containment problems as the clinical subjects do. In fact, as can be seen in

⁴⁷ The OLS multiple regression models are estimated using the following equation:

$$\text{Equation 1: } Y = \alpha + \beta_1 X_1 + \dots + \beta_k X_k + \varepsilon$$

Where *Y* means the variable being predicted (dependent variable), *X* means the independent variable, the parameter α (also called "constant") represents the value of *Y* when *X* is zero, the parameters β represent the partial change in *Y* associated with a one-unit increase in *X* that provides the best linear estimate of *Y* from *X*, and ε means the error term representing the error in predicting *Y* from the *X*'s variables. The parameters α and β are estimated from the data using the method of ordinary least squares (OLS), which requires a number of statistical assumptions; this is not the place to expand on the mathematical details of the regression estimation; for more details see Cohen and Cohen (1983).

Table 12, the average value for TAS global in the non-clinical group (45.44) is well below the cut-off point proposed by Taylor et al (1997) for clinical alexithymia (i.e. 61), while the three clinical conditions have higher values (psychosomatics: 58.22; addictions: 62.67; para-suicide: 64.86)⁴⁸. For this reason the regression analysis were performed separately for each sub-sample (non-clinical group and clinical groups).

Only the TAS Global and TAS Factor 1 (“Difficulties in identifying feelings and distinguishing them from the bodily sensations of emotion”) scores of the TAS-20 were used in the analysis, because some doubt about the meaning of the scores of factors 2 and 3 was cast by previous research (Kooiman et al, 2002; see previous chapter on reliability of the TAS-20).

Regression Models Specification

The models were tested both for rectilinear and curvilinear relationships, in the later case using the squared transformation, also called “quadratic term”, of the D, F and P General scales⁴⁹. Each pair of models (rectilinear and curvilinear) were compared using the *coefficient of determination* (also called *explained variance* and represented as R^2); if the equation including the quadratic term has a significantly higher R^2 it means that the relation between the two variable can best be described as curvilinear⁵⁰.

⁴⁸ See table 18 in the next chapter (“Data analysis and results”).

⁴⁹ The squared transformation represents the quadratic polynomial of the independent variables and modulates a change in the direction of the regression line (Hair et al, 1995; Cohen and Cohen, 1983). With this operation, a curvilinear relation between the two variables can be accommodated and accounted for using linear regression. In this case the regression equation is

Equation 2:

$$Y = \alpha + \beta_1 X_1 + \beta_1 X_1^2 + \dots + \beta_k X_k + \beta_k X_k^2 + \varepsilon$$

Which is very similar to equation 1, except that it includes the squared component of each independent variable (X) in the form of X^2 and the corresponding β estimate.

⁵⁰ The statistical significance of the difference between the R^2 of the rectilinear and curvilinear models was made by means of the Likelihood ratio differences test (Long and Freese, 2001)

Conceptual testing. Valency and Alexithymia

The next table present the descriptive statistics of the TAS-20 and WGFS obtained in the total sample.

Table 15 Statistical characteristics of the TAS-20 and WGFS Scores⁵¹

| | N | Min. | Max. | Mean | Std. Deviation |
|-----------------------------|-----|-------|-------|-------|----------------|
| TAS FACTORI | 292 | 1,00 | 5,00 | 2,77 | 1,04 |
| TAS GLOBAL | 292 | 20,00 | 86,32 | 54,74 | 14,13 |
| Pairing General | 292 | 2,58 | 6,00 | 4,65 | 0,63 |
| Fight/flight General | 292 | 1,62 | 6,00 | 4,27 | 0,76 |
| Dependence General | 292 | 2,38 | 6,00 | 5,40 | ,58 |

Notes:
 N= number of subjects
 Min.= Minimum value
 Max.= Maximum value

Assumptions of the OLS regression models

The variables included in the OLS regression models were assumed to be measured in a continuous scale of measurement⁵². Also, none of the TAS-20 scores are significantly different from the normal distribution (as can be verified with the K-S test in appendix 8). The two previous points mean that the data meet the OLS assumptions for normality of the dependent variables and for continuous scale of measurements; the assumptions regarding the normality of the error term were checked after estimation and were also met⁵³.

⁵¹ The number of subjects included in the analysis is equal to 292 since there were 45 cases with missing values in either the TAS or the WGFS.

⁵² See Miles and Shevlin (2001; pages 61-62), for a discussion of questionnaire scales (ordinal level of measurement) used as continuous scales of measurement.

⁵³ The residuals' distributions were tested for normality using the K-S test, and none of the tests revealed non-normality of the residuals (see appendix 8).

Results

The next tables and graphics present the regression models for the *Global score* and *Factor 1* of the TAS-20 on the 3 General Valency scales, divided in the two subsamples (clinical and non-clinical). Following standard norms, the tables include the parameters estimates (β 's and the constant), the corresponding *T* values, and the probability ("sig.") of *T*. The tables also include the R^2 (explained variance), the corresponding *F* value for the R^2 and the probability ("sig.") of *F*. A significance level of $p < 0.05$ was chosen for the hypothesis testing.

Regression on the Fight Flight General Scale

Table 16 Regression of TAS Global Score on Fgeneral (quadratic models)

| | Clinical N=190 | | | Non clinical N=102 | | |
|-----------------------------------|---------------------------------------|----------|-------------|--------------------------------------|----------|-------------|
| | <i>Parameter</i> | <i>T</i> | <i>Sig.</i> | <i>Parameter</i> | <i>T</i> | <i>Sig.</i> |
| FGeneral | -20,85 | -2,12 | .035 | 23,01 | 1.96 | .053 |
| FGeneral Squared | 3,04 | 2,64 | .009 | -2,42 | -1.72 | .088 |
| (Constant) | 90,93 | 4,40 | .000 | -6,42 | -0.27 | .791 |
| Characteristics of the equations: | $R^2 = .11$ $F = 11,59; p = .0000$ | | | $R^2 = .07$ $F = 3.49; p = .0343$ | | |

Table 17 Regression of TAS Factor 1 Score on Fgeneral (quadratic models)

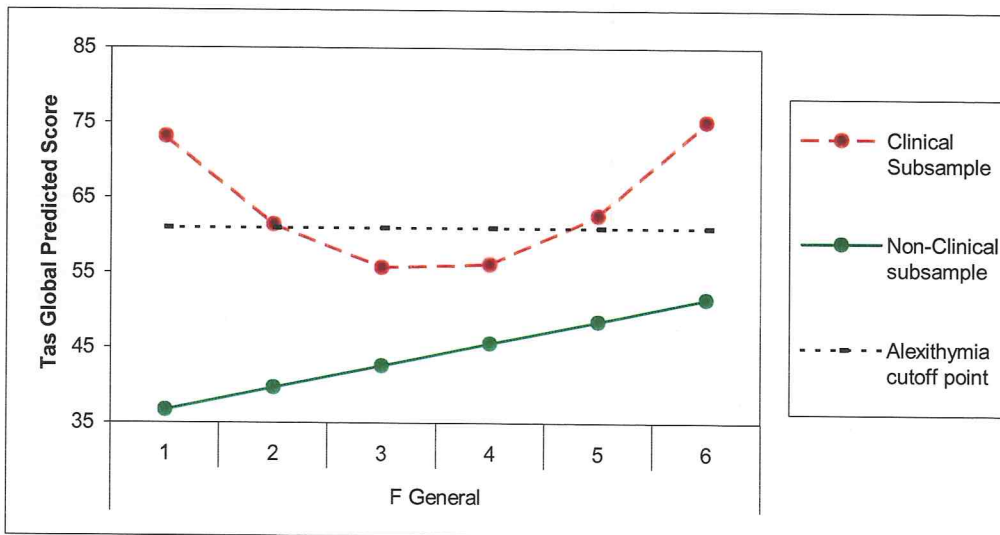
| | Clinical N=190 | | | Non clinical N=102 | | |
|-----------------------------------|--|--------------|-------------|---------------------------------------|-------------|-------------|
| | <i>Parameter</i> | <i>T</i> | <i>Sig.</i> | <i>Parameter</i> | <i>T</i> | <i>Sig.</i> |
| FGeneral | -2,34 | -3.15 | .002 | .92 | 1.11 | .26 |
| FGeneral Squared | 0,32 | 3.69 | .000 | -.09 | -.98 | .32 |
| (Constant) | 7,01 | 4.49 | .000 | .06 | .04 | .96 |
| Characteristics of the equations: | R ² = .14 F = 15.35; p=.0000 | | | R ² =.03 F =1.06; p=.35 | | |

To help with the interpretation of the models, the predicted values of TAS-20 scores for each value of the valency scales (1 to 6) were also calculated, using the estimated parameters of the model⁵⁴.

Then, in order to visually represent the regression parameters: the predicted values and the corresponding regression line were plotted in graphics for both sub samples. I also included in the graphics the cut-off point of 61 in the TAS Global score for clinical alexithymia, as proposed by Taylor et al (1997, p.62), in order to clarify the substantive clinical significance of the predicted values and regression line.

⁵⁴ Equation 2 presented in the previous section *Regression Models Specification*, was used to calculate the predicted values. Each possible value of valency (1 to 6) was introduced in the equation to calculate the predicted value for TAS-20.

Graphic 1 Predicted values of TAS Global by Fgeneral (quadratic models)



Clinical Sub-sample: As can be seen in Graphic 1, in the clinical sub-sample (red line) there is a U shaped curve in the regression line. The extreme values of Valency (1, 2, 5, and 6 respectively) correspond to predicted increases in alexithymia scores, reaching the cut-off point for clinical alexithymia (a score of 61). On the other hand the moderate values of valency (3 and 4) correspond to the lowest predicted scores on alexithymia, falling below the cut-off point for clinical alexithymia .

For TAS Global, the increase in the R^2 for the quadratic model is .033 (LR= 6.954, $p=.008$). For TAS Factor 1 the increase in the R^2 for the quadratic model is .058, (LR= 13.32), $p=.000$. This means that the quadratic models are significantly better in describing the relation between the F General scale and the TAS scores.

Non Clinical Sub sample: the increase in the R^2 for the quadratic model is not significant for either the TAS scales. There is a marginally significant rectilinear effect of F General on TAS Global (coefficient= 2.94; $t=1.98$; $p=.05$), which is illustrated in the graphic, but there is not a significant quadratic effect. There is not a significant effect on TAS factor1. This means that the relation between Fgeneral and TAS scores is negligible in the non-clinical sub-sample.

Regression on the Pairing General Scale

Table 18. Regression of TAS Global on PGeneral (quadratic models)

| | Clinical N=190 | | | non clinical N=102 | | |
|-----------------------------------|--|--------------|--------------|---|--------------|--------------|
| | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> |
| PGeneral | -26.72 | -1.67 | 0.098 | 2.84 | 0.16 | 0.876 |
| Pgeneral Squared | 3.54 | 2.03 | 0.044 | -.30 | -0.15 | 0.882 |
| (Constant) | 105.54 | 2.90 | 0.004 | 39.38 | 0.98 | 0.331 |
| Characteristics of the equations: | R ² = 0.094 F =9.79; p=.0001 | | | R ² =.0003 F =0.01; p=.98 | | |

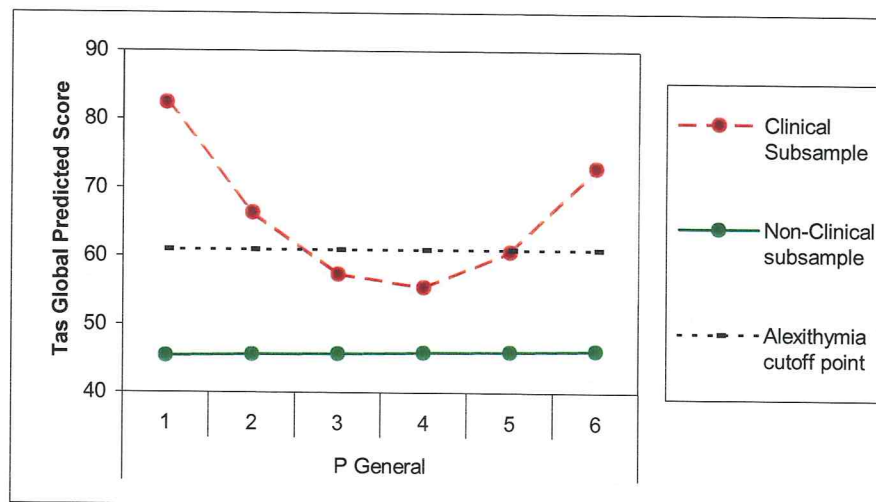
Table 19 Regression of TAS Factor1 on PGeneral (quadratic models)

| | Clinical N=190 | | | non clinical N=102 | | |
|-----------------------------------|---|--------------|--------------|--|--------------|--------------|
| | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> |
| PGeneral | -2.53 | -2.05 | 0.042 | .73 | 0.59 | 0.56 |
| PGeneral Squared | .32 | 2.39 | 0.018 | -.08 | -0.57 | 0.569 |
| (Constant) | 7.78 | 2.77 | 0.006 | .50 | 0.18 | 0.857 |
| Characteristics of the equations: | R ² =0.093 F =9.57; p=.0001 | | | R ² =.0036 F = 0.18; p= 0.83 | | |

Clinical Sub sample: For TAS Global, The increase in R² for the quadratic model is .02 (LR= 4.122, p=.04). For TAS Factor 1, the increase in R² is .028 (LR=5.59; p=.017). Again, this means that the quadratic models are significantly better in describing the relation between the two variables.

Non Clinical Sub sample: There is no linear or quadratic effect of Pgeneral on TAS Global or on TAS factor 1. Again, this means that the relation between Pgeneral and TAS scores is negligible in the non-clinical sub-sample.

Graphic 2 Predicted Values of TAS global score by P General (quadratic models)



Regression on the Dependence General Scale

Table 20 Regression of TAS Global on DGeneral (quadratic models)

| | Clinical N=190 | | | Non clinical N=102 | | |
|-----------------------------------|--|----------|-------------|--|----------|-------------|
| | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> |
| DGeneral | -20.184 | -1.51 | 0.132 | -10.58 | -0.47 | 0.640 |
| DGeneral Squared | 2.00 | 1.47 | 0.143 | .711 | 0.32 | 0.751 |
| (Constant) | 109.3 | 3.37 | 0.001 | 82.146 | 1.44 | 0.152 |
| Characteristics of the equations: | R ² =.012 F =1.19 ; p=.308 | | | R ² =.24 F = 1.26 ; p=.289 | | |

Table 21 Regression of TAS Factor1 on DGeneral (quadratic models)

| | Clinical N=190 | | | Non clinical N=102 | | |
|-----------------------------------|---|----------|-------------|--|----------|-------------|
| | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> | <i>Coefficient</i> | <i>T</i> | <i>Sig.</i> |
| DGeneral | -2.30 | -2.26 | 0.025 | -.230 | -0.15 | 0.885 |
| DGeneral Squared | .239 | 2.30 | 0.023 | .014 | 0.09 | 0.925 |
| (Constant) | 8.49 | 3.43 | 0.001 | 2.97 | 0.74 | 0.458 |
| Characteristics of the equations: | R ² =.027 F =2.66; p=.072 | | | R ² =.003 F =0.14; p=.86 | | |

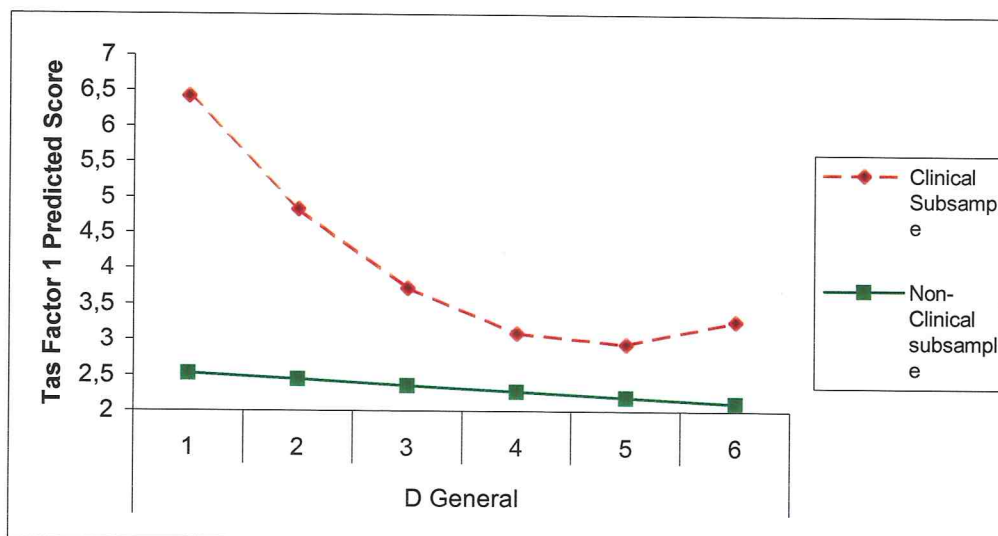
Clinical Sub sample: There is no linear or quadratic effect of Dgeneral on TAS Global. However, there is a quadratic effect on TAS factor1, as can be seen in Table 21.

The R^2 for the quadratic model increases .022 (LR= 5.30, $p= .02$), which signifies that the curvilinear model is better than rectilinear one.

Non Clinical Sub sample: There is no linear or quadratic effect of Dgeneral on TAS Global or on TAS factor 1.

As can be seen in Graphic 3, the D General scale shows a curvilinear relation to alexithymia similar to the previous scale in the clinical sample, although not as clearly “U shaped” as the former ones. Also, the model R^2 is marginally significant ($F = 2.66$; $p = .072$)⁵⁵.

Graphic 3. Predicted Values of TAS Factor 1 by D General



As predicted in the hypothesis, the three General Valency scales (F, D and P) have significant quadratic (or curvilinear) effects on the TAS-20 scores, but only in the clinical group. This effect means that extreme (high or low) values of valency are systematically associated with a significant increase in alexithymia.

I will address further the discussion of these results in the next chapter.

⁵⁵ This might have to do with the distribution of Dgeneral, which is very skewed (mean=5,40; see table 11 above), which means that most of the people scored highly in this scale independently of other scores; for this reason it might not discriminate very well subjects with different degrees of alexithymia.

Chapter 8. Discussion of results and conclusions

In this final chapter, I will begin with a discussion of the results, integrating the results obtained in the two designs (qualitative and quantitative). After that I will present the conclusions of the study.

Discussion of the Clinical hypotheses

Clinical conditions and cognitive deficits in emotional containment

- a) A cluster of disorders comprising of addiction to substances, psychosomatic symptoms and suicide attempts are all associated with a deficit in transforming emotional states into symbolic verbal representations (alexithymia).

In the fixed-quantitative design, the results show that alexithymia is associated with an increase in the likelihood of being an addict, a psychosomatic and a para-suicidal subject as opposed to being a non-clinical subject. These results are congruent with and replicate previous studies on alexithymia in psychosomatics, addicts and para-suicidal patients, which were addressed in the chapter 4.

As to the qualitative data, it was possible to identify a bigger picture of cognitive containment deficits of the alexithymia type: the *social context* of their occurrence, their association with the onset and/or exacerbation of symptoms and the sequence of events as recollected by the interviewees. This allows for the placing of the concept of alexithymia, which has often been reduced in the literature to an individual syndrome, in a larger context of deficits of emotional containment in function of socio-emotional dynamics.

It can be verified that all the interviewees produced, at some point, pieces of discourse that showed the subject's great difficulties in verbalizing their feelings; these difficulties were especially apparent when referring to challenging situations that occurred prior to the onset or exacerbation/relapse of the condition. The psychosocial context of these situations was typically characterised at an energetic-quantitative level by a high intensity of emotional turmoil and distress both at the internal and interpersonal levels, followed by forms of emotional detachment that can be interpreted as emotional suppression.

Overall in the context of onset and relapse of symptoms (see analysis of theme 1 in the previous chapter) there are frequent reports of violent and abusive acting-out, strong moralistic pressures, and of severe attacks on emotional links. In all groups of patients there are recurrent reports of distressful interpersonal situations that can be called *dramatizations* (Hinshelwood, 1987, p.116-118; 2001a, p. 95-101), where raw emotional states are enacted within group scenes rather than being symbolically and verbally elaborated (see also the illustrative vignettes below). While doing the analysis of interviews, I realised that these interpersonal scenes, characterised by proliferation of *beta elements* and *attacks on emotional linking* in the group dynamics, were depicted by Hinshelwood's (1994) notion of *attacks on reflective space*. This notion seemed to point to the bare bones of a great number of descriptions made in the interviews about situations of interpersonal crisis.

The overall descriptions of childhood/adolescence and family life of these interviewees, presented a similar picture independently of the condition: the subjects described an infancy suffused with:

- a) mindless violence and acting out (mainly the addicts),
- b) strict/mindless obedience and moralistic pressures (mainly psychosomatics),

- c) deep emotional detachment of parents (mainly para-suicidal),
- d) deficits in gregariousness/affiliation to peers.

The proliferation of beta elements and the attacks on reflective space, through violent acting-out, evacuation of mental pain into others through harassment and bullying, and lack of peer affiliation, are depicted in the following passage by Paul:

What about worries at school? That was permanent, due to the problems I had at home, in some way I would discharge my problems in drugs, mischief, harassing girls in the toilets, confusion [...] I wouldn't go to school to study, to learn, I went there instead to take refuge from the problems I had at home, to escape that thing; [...] I've never been very studious, how could I ever mentally concentrate in school? [...] *And what about your relationships with the other kids?* It was very much based on suspiciousness, nobody would trust anybody, it was "every man for himself", I was always defensive, against everything and everyone [...] *Did you made friends at school?* Few, very few, I couldn't get emotionally involved with people, with real feelings; I was not well with myself

In the following passage by Maria, the attacks on reflective space are clear as a situation of systematic child negligence and abuse. Her case represents an extreme form of emotional detachment from parents (abandonment and privation), and also institutional violence against children, with a resulting severe emotional disconnection:

My mother abandoned me when I was a baby of a few months old. I was raised by my aunt, my father's sister, but then she died and my father placed me in an orphanage from the age of 4 until I was 21 [...] I had to do everything they told me to. *Otherwise?* They would beat me. They would punish me, for instance they'd put us in the "mice house" and we'd have to stay there for a long times. I went there a lot, because I refused to drink milk, I never liked milk, it would disturb my stomach, and so I was punished a lot. If I threw up they'd forced me to drink the vomited milk. *How would you feel in the mice house?* I don't remember. I don't remember anyone from there now.

In the following passage by Carlos, the emotional disconnection is also clear, as is a moralistic superiority making pressures against emotional linking¹:

I would always avoid the bad influences of rebellious kids who'd miss the classes to play around, this attitude was something I kept inside me, and today I tell my daughters the same "always avoid the bad influences", and never in my life have I kept bad company, I prefer to go it alone than be with bad company [...] that's why I'm very reserved [...] I don't talk to anyone unless they talk to me. I only speak when I have to speak, because I'm not that kind of person who is always... gossiping, and chatting and whatever; to me it's black and white.

Finally, the feeling of a lack of reflective space in the family was mentioned directly by some of the subjects when lamenting the lack of emotional linking (openness and affection), group thinking processes, and verbalization of feelings:

We should have sat together and done a family reunion to speak about the issues, that would have been the best solution (Jo, p.5)

I don't want to make the same mistakes my parents made with us [...] the lack of openness and affection. (Carla, p. 5.)

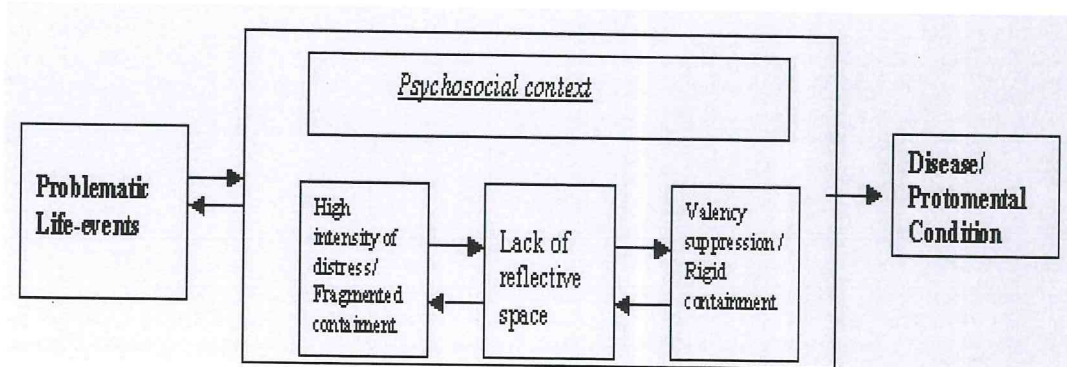
Conclusion of the first clinical hypothesis

The overall pattern of the psychosocial context of onset of symptoms can be summarized as follows: Problematic life events (separations, deaths, marital conflicts, employment problems, *etcetera*) occur in a psychosocial context that could be described as the *negative* of reflective space: distressful emotional states aroused by life-events are not adequately contained (cognitively and quantitatively) by either the individual or the group and degenerate in to dramatizations, acting out and attacks on emotional linking. This is experienced as oscillation between fragmented and rigid forms of containment (typically, from states of "freaking out" "losing the mind" to states of emotional

¹ Bion associated this kind of moralistic pressure with a damaged internal object ("damaged breast"), which he called a "*super*" ego (Bion, 1962, p.97).

detachment, avoidance and suppression). This state of affairs at the social-field level in turn provokes, or contributes to, more problematic life-events.

These ideas are depicted in the following graphic:



In this context, alexithymia as a cognitive deficit of emotional containment can be seen as one component of a more complex chain of events and processes in the larger psychosocial context of the individual.

Recent studies have uncovered associations of alexithymia (also measured by TAS-20) with weak network social support, and with social skills deficits (Lumley et al, 1996; Posse et al, 2002). Additionally, in two recent studies on psychosomatic skin diseases (psoriasis and vitiligo), these patients also revealed also lower perceived social support and higher alexithymia than did control subjects (Picardi et al, 2003, 2005).

Clinical conditions and Valencies

b) The hypothesised relations between specific deficits in the intensity regulation of valences and specific disorders are:

b.1) Addictions to substances are specifically associated with deficits in the intensity regulation of the *Dependence* valency.

b.2) Psychosomatic disorders are specifically associated with deficits in the intensity regulation of the *Fight/flight* valency

b.3) Suicidal tendencies are specifically associated with deficits in the intensity regulation of the *Pairing* valency.

As to the association of different valencies with specific conditions, the qualitative data seem to be compatible with the hypothesis that each condition is characterised by clusters of problematic life events and of the psychosocial context affecting predominantly different valencies or socio-emotional systems. The analysis referring to the theme of childhood and adolescence presented a similar picture of life-events and valency specificity.

The patterns that are specific to each condition are summarised in table 8 and table 10 presented in chapter 7 (pages 231 and 235).

The statistical analysis of questionnaires also supports some specificity of valencies in each group, however some significant results that were not predicted were also found. I will also discuss this in the following sections.

Addictions

Quantitative results

Although the results obtained were not as clear-cut as expected in terms of valency specificity, and some associations observed were not expected, some specific relations were found in the form predicted.

Drug addiction was the only condition associated with dependence valency scales, (Dgeneral and Dleader Dependence). In other words, the group of addicted subjects show significant differences from the normal controls in the Dependence scores, while all the other clinical conditions do not show any significant differences to the normal control group in any of the Dependence scores.

These questionnaire results have parallels with the interviews' results, where there are recurrent references to overwhelming needs to take drugs in situations of parental and close relations loss/deprivation; these situations, interpreted above as provoking deficits in the containment of the dependence valency are very specific to the addicted interviewees. At the same time the subjects, grown adults, still relied on their parents or on parental substitutes (such as support care programs), which can also be seen as a form of a dependence of "leaders", supposedly measured by the psychometric scale DLeader.

The psychometric scales F General and F Victory are also significantly associated with addiction. This result has also parallels in the interviews, in the form of aggressive and rebellious patterns of behaviour and pervasive outbursts of aggressiveness and anger. Three pairing scales (PGeneral, PExcitation and PGood-humour) were also associated with the likelihood of someone being an addict. This is also patent in the interviews, in the subjects justification of drug taking on the ground that they needed it to feel euphoric, outgoing, in good-mood, *etcetera*. In this sense the abuse of drugs can be linked with attempts to modulate emotional states in the direction of "feeling good", characteristic of the Pairing valency.

Qualitative results

The onset of addiction to drugs seems to follow experiences of violent separation from family and support objects. These separations are associated with personal and interpersonal deficiencies of emotional dependence and parental responsibility, and as a rule are dealt with by activation of autonomy, anger and rebellion and inhibition of emotional dependence.

This finding is supported by previous studies presented in chapter 4, which concluded that drug abusers had suffered important separation and loss in the childhood, as well as emotional absence of their parents; furthermore subjects had *weak* parental attachment and had run away, left, or had been placed outside their home, at an early age.

In Bion's protomental theory terms, these occurrences could be interpreted as suppression of dependence valency. The focus on vignettes of particular situations can further clarify the mechanism of emotional suppression of the dependence valency in the context of interpersonal emotional containment.

1) Gina was very attached to her mother, whom she considered

More a friend than a mother, she would not tell me off [...] She was such a good person, I don't recall her ever smacking me, on the contrary, if I'd do something wrong...she would show me the good and bad side of things [...] I'd be jealous when she would give things to my siblings, I'd moan that she didn't love me...she'd tell me that she loved all in equal manner, and ask me not to say those things because they hurt her " (p.1-2).

These are all signs of a strong emotional dependence of Gina to her mother (guidance, idealisation, jealousy of the peers' relation with the leader). Her mother died (one year after her father had died) when Gina was only 17. On the night of the funeral she felt "desperate". This feeling of desperation seems to correspond to a quantitative (energetic) and qualitative (cognitive) experience of fragmented containment of dependence emotions, experienced as separation distress and helplessness². On that same night, she took a lot of barbiturates and decided to try heroin for the first time. Since then she has been a drug addict.

² I have interpreted the feeling of *desperation* as a sign of psychic fragmentation and fragmented containment based on the assumption that this feeling represents a mounting state of excitation, which disorganizes the psyche of the individual. See the related definition of "psychological shock" by W. Cannon on chapter 4.

With the parents deceased, the siblings were left on their own; they resorted to stealing to survive instead of asking for help from (i.e. depending on) neighbours, social security, church or other institutions. She also mentions suppression of care and help among the siblings

After my mother died we isolated ourselves from each other, it was “every man for himself” (p.4)

These situations can be interpreted, in the context of a lack of reflective space, as a sign of suppression specifically of the dependence valency.

2) After some months abstinence from drugs, *Jo*'s first relapse followed an almost identical pattern. Initially she was very attached to her grandmother, whom she considered:

more than my mother, a spectacular person, she would sit me on her lap, play a lot (pag. 1)

When she died (coincidentally one week before *Jo* gave birth) *Jo* got very distressed, grieved and “extremely disoriented”; This feeling of being “extremely disoriented”, similarly to *Gina*'s desperation in a similar situation, can be interpreted as a quantitative and qualitative fragmented containment of dependence and separation distress. That day *Jo* asked her partner to get a lot of drugs. At the same time she took the decision of not breast-feeding her baby. This can be interpreted as suppression of a dependent emotional link with the child.

The analysis of theme 2.2 (relation to the father) seems to fit also the notion of dependence suppression, and also of fight-flight dominance, in the drug addicted subjects: the father seems unable to contain the child's needs for emotional dependence, safe closeness, and idealization, neither he presents as a consistent role model or

authority figure. These results are congruent with other studies presented in chapter 4 that uncovered high prevalence of hostility and violence in the addicts' fathers.

Both in the relation with the mother and with partners there is a similar pattern: they have a high valency for dependence but it remains frustrated and uncontained ("heart-broken" helplessness). Eventually, they suppress it and become *in*-dependent and loners; congruently with this result, in a previous study (Torres et al, 2001), we found that the patients with a history of chemical dependence have significantly higher values in "avoidance of close relationships". However they keep having *sexual* affairs with occasional partners; the sexual promiscuity associated with drug abuse was also depicted in other studies (e.g. Walsh, 1995), which view sexual promiscuity as a substitution for stable emotional attachments.

Finally, in the family of the addicts in this sample there is a combination of two main factors: a) the impossibility of being reliably dependent on the family (*broken homes, poverty*), and the availability of illegal drugs (*urban degraded environment*).

Psychosomatics

Quantitative results

The likelihood of someone being a psychosomatic increased with the F Cruelty scale, and was not associated with any other scale.

In other words, this mean that the only significant difference in the valency scores that the psychosomatic group of patients show from the normal control group is in one of the fight-flight scales (Fcruelty).

This result is compatible with the hypothesis that psychosomatic illness is specifically associated with problems in the containment of the fight-flight valency.

As explained in detail in appendix 5, I named the psychometric scale “cruelty” because it is composed of a pool of items that express rage, lack of compassion, and irritation. This corresponds to certain characteristics described in the literature such as, “Anger and hate are the cement that joins all the emotions” (Bion, 1961), “being extremely irksome to some individuals” and “sense of incapacity for understanding and love” (Bion, 1961).

In the interviews it is patent that, despite having a stable and traditional family of origin, subjects had been exposed to amounts of cruelty in infancy, largely due to educational strictness, including physical and psychological abuse. These moments were recalled as being very stressful. Furthermore, the interviewees seem to have identified internally with very strict and conformist norms of social behaviour.

They do not seem to re-enact cruelty and violence on others, and seem to have a rather apathetic reaction towards abuses and injustices against them. In compliance with these strict internal norms, the interviewees apparently endure immense suffering and abuse in their adult family and professional life, without being able to assert themselves. In a way, they are being cruel to themselves; a clear example is the case of Mercy, who tolerates an awful life with her alcoholic husband, and, in compliance with her parents’ expectations of conformism with traditional social norms, does not separate from him.

I propose that these prolonged stressful situations are due to the suppression of the cruelty component of the Fight-flight valency, because the subjects are not able to adequately assert themselves against abuses, or confront their problems at home or break up with the family (they can neither fight nor flight). This seems to be associated with their assimilation of strong traditional and conventional values, and submission to authority, which again can be interpreted as dominance of the dependence valency.

These results are also congruent with other research made in cooperation with a dermatologist (Tavares-Bello and Torres, 2003; Tavares-Bello et al, 2003a, 2003b, 2003c), according to which the common denominator of patients with various psychosomatic skin diseases (Acne, Psoriasis, Alopecia and Rosacea) is to have a significantly higher *Interpersonal Sensitivity* (measured by the questionnaire SCL-90) than patients with non-psychosomatic skin conditions; the *interpersonal sensitivity* scale is composed of items that express a mixture of: feeling critical of others, being easily hurt, shyness, embarrassment and inferiority. In sum, the patients easily feel resentful and critical, but they cannot assert their anger due to shyness and embarrassment.

Apart from the association with the scale FCruelty, the psychosomatic group does not differ from the non-clinical subjects in any other valency scales. This apparent “normalcy” is also patent in the interviews: all of the subjects had long lasting marriages, stable jobs, children, no psychiatric record and no problems with the law. Congruent with these results, some of the literature describes a phenomenon of “pseudo-normality” of psychosomatic patients³ (Wisdom, 1966; McDougall, 1980).

Qualitative Results

They seem to be afflicted mainly by experiences of stresses and strains in “conventional” situations like family life, school and the workplace, which generally are dealt with through the *Inhibition of aggressiveness and rebellion*. In terms of Bion’s protomental theory, this can be interpreted as the suppression of fight-flight valency. Again, the focus on individual cases and particular situations can further clarify the containment processes involved

³ For McDougall, these patients create the impression of having a stable and “normal” personality structure because they didn’t construct neurotic and psychotic barriers to conflict and stress; for this same reason they are more exposed to psychosomatic disorganization (McDougall, 1980, p. 418).

1) *Mercy*: her first symptoms of somatisation (vomits, blushing, diarrhoea) following distress started when she left her parents' home and migrated to the capital of the country with her recently married husband. She then experienced a severe culture shock. Coming from a rural and bucolic environment, she found herself in a very aggressive urban environment:

I wasn't used to neighbours of so different provenances, I found all those people very strange [...] all the families were angry at each other, everybody was raising the roof"(p.5)

This feeling of "strangeness" can correspond to an experience of fragmented containment of emotions of fear and aggression (fight-flight) at the cognitive level. She does not mention reacting with anger or aggression as a way of coping with that situation; she resorted instead to her faith in God's protection and guidance.

I used to say to myself "O my Dear Lord please help me in this situation!" (p.5)

This situation can correspond to a strategy of rigid containment, or suppression, of aggressiveness/assertiveness, backed by a dominance of emotional dependence (turning to God's help).

Previous studies on prevalence of psychosomatic illness also demonstrated that the more disparity exists between the demands of the social system and the culture people brought with them, the more ill health people suffer. (Cassel, 1964, Totman, 1990). As I have addressed in chapter 4, a phenomena of "cultural disparity" seems to be common to all the disorders under study; the present results suggest that in the case of psychosomatic illness the specific problematic cultural disparity involved might be a change from a rural, small community culture with close ties (dependency culture), to a more aggressive, independent and assertive culture characteristic of big cities.

A very clear example of fight-flight suppression in Mercy's interview is the turbulent relationship with her chronically alcoholic husband: she referred to their marriage as being almost "unbearable" for more than 30 years; once he told her that he had spent all their savings on alcohol; she grabbed the hunting gun and, in rage and despair, threatened to kill him (fragmented containment of fight-flight). However, she told that she gave up getting angry and screaming against him:

I used to tell him off, now I can only cry *You don't scream with him anymore?* I stopped screaming, it is useless to speak with him, screaming abuse, it only caused a bad climate among the neighbours who'd listen. So I said to my self " God help me and give me patience to bear my cross until the end" (page 2).

There is an experience of excessive intensity (quantitatively speaking) of anger and resentment (e.g. "screaming abuse") that is dealt with by emotional suppression ("I stopped screaming"), without any possibility of verbalization, mental elaboration and emotional linking at a cognitive level ("it is useless to speak with him").

Both the image of and relation to the father and to the mother seems also to fit the notion of fight-flight suppression and dependence dominance: there are constant accounts of suppressing rebellion and dissent towards strong and idealized father figures in the psychosomatic interviewees; in addition extreme obedience is consistently referred to as is emotional dependence on the mother figures.

Para-Suicide

Quantitative results

Para-suicide was the only condition that was associated with two pairing subscales of opposite signs (positive and negative): the PExcitation scale has a positive

association, and the P Open-mindedness scale has a negative one. This result supports the hypothesis of specificity of pairing valency containment problems in suicidal patients.

A parallel phenomenon could be discerned in the interviews: sexual excitation is expressed but coupled with conservative norms and values and associated sexual inhibitory mechanisms; these inhibitory mechanisms can, in part, be seen as a manifestation of a lack of open-mindedness,

However, all the Fight flight scales, except F Victory, were also associated with Para-suicide (Note that this is the opposite of addicts, where Fvictory is the only associated F scale). I could not discern an equivalent phenomena in the analysis of the interviews. In the psychoanalytic literature, however, aggressiveness is depicted as a central factor in suicidal behaviour ever since Freud (1917) proposed that melancholia was caused by a deflection of aggressiveness from the object into the ego. However, Freud stated that the self-inflicted aggression of suicidal patients is not obvious as aggression, but manifests in a disguised form as melancholy, severe gloominess, and lack of joy in life. These specific melancholic features were actually observed in the interviews.

As in the interpretation made about the psychosomatic group, the association of the para-suicidal condition with FCruelty can be interpreted as a sign of self-cruelty, which becomes apparent in the lack of joy, and presence of pessimism and gloominess in the para-suicidal interviewees' discourse.

Para-suicide is also the only condition associated with the Fparanoia and Fflight scales; in terms of flight, this is clear in the interviews, there is a very clear giving-up attitude: they decided at a certain point to give up living due to having endured too

much suffering, and faced with problems perceived as being too difficult to solve. Suicide is then attempted as a kind of flight.

Qualitative Results

Suicidal subjects referred in the present study typically resort to social isolation, aloofness and haughtiness, and report severe loss of joyfulness in life previous to the onset of suicidal ideation. At the same time there is a psychosocial context in which sexual, marital and reproductive matters are hindered either by intentional avoidance or severe difficulties finding partners.

In all subjects interviewed, the suicide attempt (para-suicide) is associated with life events in three categories a) sexual, fertility and marital problems b) severe health problems c) severe financial problems.

This cluster of events can be categorized as part of Decatanzaro's "self-preservation and self destruction model" (Brown et al, 1999), which is a function of sexual and romantic relationships (*reproductive potential* system) and perceived burden to close kin (e.g. financial status and health status).

In Decatanzaro's model of self-preservation/self-destruction, the combination of these three problematic factors contributes to diminishing *inclusive fitness* of the kin group, and hence increases the benefits for the survival of the kin group as a whole of that particular individual's self-destruction

As previously explained in chapter 4, in the section *Protomentality of Suicidal behaviours*, Decatanzaro's model can be viewed as a mathematical formulation of the "death instinct" based on the observation of social behaviour of animal models. Furthermore, the indicators of "reproductive potential", as put forward by Brown et al (1999), are compatible with the indicators of the Pairing valency in Bion's model.

The present findings are also congruent with a vast number of other studies presented in chapter 4. In Bion's protomental theory terms, this could be interpreted as the suppression of Pairing valency. I will illustrate this in the following vignettes.

1) *Carla*: By the time she began having suicidal ideas she knew that because of a hormonal deficiency there was a strong possibility that she could not have children. Carla deals rigidly with this problem, with indifference and aloofness:

I have never worried about having children anyway, I always lived very much in solitude and I'm afraid of not being able to educate a child (p.5).

The disavowal of the wish to have children ("I have never worried about [it] anyway") can be interpreted as emotional suppression of the pairing valency. On the other hand, she reported that her mother had been pressuring her sister and herself to have children since they turned 18 years of age, and that her own mother is haunted by the prospect of dying without grandkids:

My mother told my cousin: "my daughters are unnatural, they don't have boyfriends, don't want to know about having children, I will die before they even think about it" (p.5)

This interpersonal situation can be interpreted as having quantitative and cognitive features of fragmented containment of distress related to pairing valency (i.e. the fear of dying without having given birth to the next generation of kin), in a *dramatisation scene* (Hinshelwood, 1987, p.116-118; 2001a, p. 95-101) characteristic of the *attacks on the reflective space* described by Hinshelwood (1994). Hence, in the interpersonal field, there is what can be called an oscillation of fragmented containment (Carla's mother's evacuation of her fear of dying without grandchildren) and rigid containment (Carla's disavowal/suppression of her wish to have children).

A clear example of oscillation between fragmented and rigid containment of the pairing valency, also in a context of attacks on reflective space, is Carla's way of dealing with her sexuality:

Rigid Containment: Due to fear of getting emotionally hurt and of hurting others if they get intimate, she always rebuffed potential boyfriends; while at the same time she never disclosed her love feelings to anyone. Her first experience of romantic closeness and of sexual intercourse was at 23 years of age with a boy she now wants to keep a distance with because she finds him "immature".

Fragmented containment: On the other hand she stubbornly insists on dressing up provocatively in mini-skirts that are seen as outrageous by her work colleagues, causing conflicts in the workplace; Additionally she refers to having had sex outdoors with the boy mentioned above, which deeply embarrassed her and made her feel completely free from constraints and responsibility.

2) *J.C.:* During a period of his life, he was frequently sleeping with his jilted ex-girlfriend whom he said he did not love, while he was simultaneously dating a girl he said he loved. He said he "felt fantastic" in this double life situation. At a certain point his ex-girlfriend got pregnant, and his family forced him to marry her. The marriage became a failure in terms of intimacy:

I would only sleep with her in the bed out of obligation, she would want to have sexual relations with me but I avoided it (page 5)

Furthermore, while all the subjects from the other clinical conditions make references to some kind of flirtatious relationships and/or to romantic attachments in childhood-adolescent, this is not true for the para-suicidal group.

This lack of references to adolescent flirts, dating and romance adolescent can be interpreted as suppression of pairing valency. Paradoxically, however, 3 out of 4 of the para-suicidal patients married the first romantic partner they had, which is not typical of any other group. This contradiction can be seen in the light of an oscillation between extreme high and low arousal of the pairing valency.

The lack of romantic relationships in adolescence can also be seen as part of a more general character trait composed of emotional detachment and haughtiness towards all objects, including the parents. The interpretation of this pattern becomes clearer using Freud's (1917) idea of debility of object-cathexis in *narcissistic identification*, and Rosenfeld's (1971) notion of "negative narcissism", in which the person has a sense of superiority and self-admiration and lack of objectal emotional links with others. Furthermore, the lack of emotional relation with primary objects (maternal and paternal) observed in these interviews is reminiscent of Freud's idea of decathexis from the primary object in melancholic suicide, associated with narcissistic investment in the ego (Freud, 1917). The notion of narcissistic identification can be used to describe the self-sufficient and haughty traits of character presented in discussion of theme 2.1 [Personality-temperament]. Furthermore, the notion of *negative narcissism* by Rosenfeld, conveys a cluster of phantasies and defences that seem to fit adequately in the above descriptions (Rosenfeld, 1971 pp 173-4, quoted in Hinshelwood, 1989a, p.269).

Discussion of the conceptual hypothesis

A deficit in transforming emotional states into symbolic verbal representations (alexithymia) is associated with both: a) very high reported emotional intensity in valences (this association corresponding to a fragmented type of containment) and

b) very low reported emotional intensity in valencies (this association corresponding to a rigid type of containment).

The integrated results from the two designs are compatible with this hypothesis. Firstly, the quantitative results show a statistically significant “U” shaped relationship between the WGFS General scores (Valency) and the TAS scores (Alexithymia) in the clinical sub-sample: both extremely high and low values of all General valency scores are associated with higher predicted values of TAS-20 scores, reaching the cut point for clinical alexithymia proposed by Taylor et al (1997) in the case of Fight-flight and Pairing General valency scores (see graphic 1 to 3 in the previous chapter).

I will now illustrate the phenomena depicted by this statistical effect using qualitative vignettes. These will describe two interviewees contrasting emotional responses (fragmentation and rigidity) to a similar situation of conflict with a superior at work; both emotional responses are associated with inability to verbalize feelings and an indistinctiveness between the emotional experience and bodily sensations.

**Alexithymia with extremely high expression of fight/flight valency
(fragmented containment)**

There was one [*boss*] who was rude to me, I punched him several times and then I was fired. There was another one that didn't wanted to pay me the extra hours, I didn't swallow that, I got very disturbed and I chased him and destroyed his car [...] I couldn't control myself, it was such a big force, I felt like, I don't know, a kind of rage about everything, I had to put it outside me (Paul, page 5; *externally oriented thinking and difficulty describing feelings*)

Alexithymia with extreme inhibition of fight/flight valency (rigid containment)

Following Carlos' account of an outrageous abuse of authority by a superior, I asked Carlos how he reacted:

"I totally freaked out, lost my mind, got traumatized with that. [...] *But how did you react?* I couldn't react because he is an officer and I'm just a sergeant. *But how did you feel?* I couldn't, I couldn't vent or open my heart and that was a total shock and I freaked out psychologically [...] I had to stay two weeks off sick, with depression, motor disorders and muscular pains (Carlos, page 6, and *difficulty describing feelings*)

In both situations there is an intense emotional experience of psychic *fragmentation* (i.e. "a kind of rage about everything"; "I lost my mind") following the perception of injustice and abuse by a superior at work. However, the situations are dealt very differently, with what can be described as opposed levels of *fight-flight* valency expression: acting-out and violence (i.e. emotional evacuation) in the first situation and emotional suppression and a "psychosomatic discharge" in the second situation. Both responses are linked with difficulty in describing feelings, putting feelings into words (e.g. "I felt like, I don't know"; "I couldn't vent"), and emotions are experienced as *Beta elements*: i.e. not distinct from bodily sensations ("motor disorders, muscular pains") and/or as if were *things* possible to evacuate ("such a big force, I had to put it outside me").

A similar pattern of discourse that shows alexithymic features associated with the other two valencies (dependence and pairing), will become apparent throughout the rest of the discussion of results.

Conclusion of the conceptual hypothesis

In sum, the quantitative and qualitative data can be seen as concurring and pointing towards a common conclusion: a cognitive deficit in using words to express emotional states (alexithymia) is associated with both strong emotional inhibition and excessive emotional arousal (i.e. rigid and fragmented modes of deficient emotional containment).

In other words, the cognitive incapacity to generate emotional awareness and psychological meaning (i.e. alpha elements in Bion's terms) out of raw emotional experiences is associated with emotional states being experienced at the level of beta elements: "accretions of stimuli", and somatic equivalents of anxiety. These states are dealt with either via impulsive acting out serving as evacuation, or emotional suppression.

Additionally, the interview data (in particular the analysis of theme 3 in the previous chapter) additionally supports the notion that these raw emotional states accompanied by alexithymia are linked to actual interpersonal/social conflicts and pressures and not merely to symbolic and intrapsychic unconscious conflicts. The conflicts are with external objects and are very vivid in consciousness; the "solution" for these conflicts is centred on acting out or inhibition of action, and not through emotional linking, verbalization, fantasies and thinking.

Conclusions of the study

The integration of the qualitative and quantitative testing of the hypothesis leads me to the following conclusions.

A general deficit in the containment of raw emotional states

Although apparently very different at their symptoms' level, the disorders under study seem to be associated with similar emotional containment deficits comprising of two main components in response to stressful interpersonal events,

- 1) A cognitive deficit in translating raw affects into words and symbolic elements
- 2) Oscillation between extremely intense experiences and expression of emotional states and extreme emotional inhibition by means of emotional suppression

The first component manifests in experiencing affects at a bodily and non-symbolical level (to what Bion called *beta elements*); the second component is related to problems in regulating intensities of endogenous emotional stimuli and outwards expression in the context of interpersonal exchanges, more than in dealing with internal ideational conflicts;

Emotional suppression

The intensity of emotional distress is experienced as overwhelming and threatening psychic *fragmentation*. The solution to this fragmented state of emotional distress seems to be compatible with what I have defined in chapter 3 as *emotional suppression*;

- 1) suppression of emotional expression (e.g. by action inhibition and attacks on interpersonal emotional links),
- 2) suppression of speech, (difficulty verbalizing certain emotional topics),
- 3) disavowal and denial of the meaningfulness of certain feelings and ideas.

All of these components of suppression were observed in the qualitative interviews. I have also proposed that the phenomenon of suppression is translated psychometrically in to very low values of the valency scales⁴.

The results are congruent with the proposals put forward in chapter 3, according to which the response of *emotional suppression* allows the stifling of excessive intensity of emotional excitation, which threatens the mind with total disorganization; however this suppressive response is associated with at least two costs a) it hinders the fulfilment of the emotional needs in question (dependence, fight or flight, pairing) and b) it prevents the translation of raw affects into symbolic elements in general and words in particular, i.e., the symbolic elaboration of the emotional states.

Additionally, these two components of containment problems can be seen in the context of *interpersonal conflicts* and of *group dynamics*, either within the families (both in childhood and in adult life), and within the context of other important groups such as school, job, and community.

Specific deficits in different socio-emotional systems (valencies)

Furthermore, although there are similar features common to the different disorders, these containment deficits seem to affect different valencies, or basic socio-emotional systems

⁴ In the WGFS questionnaire, a score of 1 in the valency psychometric scales means that the average of the participant's response to the items composing the scale corresponds to the answer "not any essential". For instance, as can be seen in graphic 5 of appendix 5 ("WGFS psychometric procedures and assessment"), civilian subjects have an average score near 3 on the scale of F Cruelty, whereas military personnel score of almost 4,5 on average on F Cruelty. This can be interpreted as a relative suppression of cruel impulses in civilian people while the same degree of suppression is not present in the army personnel.

2.1) *Addictions*: the results support the idea that the abuse of drugs is linked with deficits in the dependence valency, and represents a search for a chemical substitute for frustrated emotional dependent needs⁵.

2.2) *Psychosomatics*: the results support the idea that the non-communicable somatic symptoms under study are linked with deficits in the emotional containment of fight-flight socio-emotional system. They seem to represent the harmful somatic effect of *suppressing* both i) aggressive and assertive responses to perceived insults from others in the environment and ii) the escape from situations of emotional stress⁶.

2.3) *Para-suicide*: the results support the idea that intentional self-destructive violence is linked with deficits in the emotional containment of pairing socio-emotional system, and can be a response to feelings of isolation and worthlessness in the context of reproductive potential⁷.

⁵ I described elsewhere (Torres, 2003b) a bio-psycho-social model of substance abuse using Bion's concept of dependence basic assumption. I have integrated recent neurobiological research on the functions of the endogenous opioid system in modulating social bonding and also drug addiction. Evidence was presented to support that: a) the endogenous opioid system modulates the socio-emotional subsystems of dependence (suckling, attachment, affiliation, religious belief); b) severe deficits in these subsystems represent well-known risk factors for substance abuse; c) psychoactive substances (opiates, cocaine, cannabis, alcohol, nicotine) exert an effect on the endogenous opioid system. The addictive behaviours are considered to be derived from a biopsychological impasse between a) the pressures of the opioid system to increase social contact (through separation anxiety and helplessness) and b) the motivational pressures for independence and autonomy due to stressful social contact (insecure attachment, affiliation deficits). Substance abuse chemically replaces the effects of emotional dependence.

⁶ The present results suggest that the continued suppression of fight or flight responses, i.e. anger, antagonism, assertiveness, escape, etc, and especially cruelty, when facing detrimental social situations are associated with psychosomatic conditions (skin and respiratory symptoms). I have addressed in the introduction how the concept of *stress* is based on Walter Cannon's discovery of the automatic fight-or-flight response of the body to perceived threats in the environment. As I also addressed in the introduction, the effects of prolonged emotional stress in the determination of psychosomatic illness and disease proneness in general are well established: increased risk of physical illness results from emotional stress as measured by the activity of the HPA-axis (hypothalamic-pituitary-adrenocortical axis) and cortisol levels. Recent research on animal and human subjects has revealed that family context and parental care during childhood affect the reactivity and long-term development of the HPA-axis (Ryff and Singer, 2001).

⁷ As addressed in chapter 4, Decatanzaro's socio-biologic model of self-preservation and self-destruction has been applied to human subjects using questionnaire designs (e.g. Brown et al, 1999). The model suggests that self-sacrifice of certain individuals, who exhibit low reproductive potential and high burden to their kin, is a very primitive socio-biologic response that works in favour of increasing the reproductive fitness of a group of genetically related individuals (Decatanzaro, 1984). Brown and colleagues' (1999) results are similar to the ones obtained in the present study, but, as I have addressed elsewhere (Torres,

A final clarification is in order about the role of the valencies that are not inhibited/suppressed. Bion's initial theorising on basic assumptions' suppression (see chapter 1, section *A biopsychosocial model of hypothesis about protomental diseases*), speculated that the suppression of one valency was synchronic with a dominance of another valency. Some evidence in the interviews is compatible with this speculation and when it became apparent I pointed it out in the analysis and discussion of results. However, the role of the non-suppressed valencies was not a central one in this thesis, since it does not change the reasoning on the dynamics of emotional containment and suppression of specific valences .

Final considerations

In conclusion, it seems reasonable to suggest that, in the clinical conditions under study, the associated emotional containment and problems are:

a) not just a question of *either* emotional inhibition *or* emotional over-excitation, but of an *oscillation* between excessive emotional intensity (fragmentation) and suppression (rigidity).

b) not strictly *individual* problems, but are in fact inextricably enmeshed with the network of relationships in the socio-emotional field; social field in which we should include not only micro-social networks of actual relationships, but also cultural values and norms adopted as rules of behaviour.

c) not just a question of *stressful life events in general meeting inadequate styles of general emotional regulation*, but there are reasons to support that they seem to be a question of life events and emotional regulation deficiencies *affecting different basic socio-emotional systems* (dependence, pairing, fight-flight).

2003c), they were not able to explain adequately the oscillation between high (positive) and low (negative) values of the pairing valency (i.e. *individual reproductive potential*, in their own terms).

These results suggest that there are reasons to further pursue research on Bion's proposals on the *protomental system*, and for integrating it with his theories on emotional containment developed in a later stage of his work, and further developed by Robert Hinshelwood:

1) Firstly, the notions of *rigid* and *fragmented* emotional containment, integrating the energetic-quantitative and cognitive-qualitative dimensions, can be used to advance our understanding a cluster of chronic disorders focused on in this thesis; this might be achieved by fostering connections between three domains of psychoanalytic-inspired research, namely:

- a) the study of the failures in the symbolic verbalization of raw affect states and of the emergence of meaning in the mind; i.e. the deficits of emergence of psychical structures and processes such as internal objects, phantasies and thoughts
- b) The study of the quantitative component of affect deregulation and traumatic states, i.e., emotional arousal/excitation and inhibition/suppression
- c) The study of interpersonal patterns of emotional interaction (parent-child interactions and social interactions in other contexts).

2) Bion's categorization of basic emotional systems and group phenomena into dependence, fight-flight and pairing might be a good way to understand problems of emotional containment and regulation in *different* socio-emotional basic systems. This categorization of socio-emotional basic systems and of protomentalty is compatible on the one hand with psychoanalytic notions of instincts, drives and motivation, and on the other hand with recent findings from the neurosciences on brain processes involved in the generation of raw affect states, or in other words, basic emotions.

Furthermore, the WGFS questionnaire developed as part of this thesis can be a way of quantitatively measuring individual differences on valencies; the notions of rigid and fragmented emotional containment seem to be successfully translated into curvilinear statistical relationships between quantitatively measured variables through questionnaires of emotional processing (the TAS-20 and the WGFS).

Protomentality

The model of protomental disorders developed here, inspired by Bion's theoretical models, can provide a parsimonious conceptual framework to understand chronic health problems of which some of the correlates, and possibly some of the determinants, are emotional containment problems; it can be used as a multidisciplinary framework to compare measures and observations from different methodologies and schools of thought that study emotional regulation and its somatic and behavioural correlates, e.g. psychoanalysis, neurosciences, cognitive psychology and medicine .

Limitations and Avenues of further research

The present study has uncovered *associations* (correlations) between the disorders under study and psychosocial phenomena; it is another matter to uncover and explain the precise mechanisms that link the psychosocial area with the symptoms of disease.

According to the notion of protomentality developed in this thesis, these mechanisms should be located at the socio-biological layers that generate and regulate *raw emotional responses*⁸. This endeavour requires more interdisciplinary research

⁸Again I make use of Jaak Panksepp's (2005, p. 40-43) definition of "raw emotional feelings"; according to this definition, and in congruence with Bion's notion of emotional states springing from the protomental system, raw emotional states emerge from the activity of the limbic system of the brain and are very ancient in evolutionary terms.

among the disciplines studying the mind, group behaviour and biological structures for adaptation to the environment.

Nervous system structures and interfaces

Structures and functions of the nervous system implicated in the generation of raw emotional states, such the ones proposed in the notions of *proto-self* by Antonio Damasio and of *SELF* by Jaak Panksepp, that I have addressed in chapter 3, seem very important in advancing the understanding of disorders of emotional containment and their somatic correlates. The study of the interfaces of these nervous system structures and functions with the internal milieu on one hand and with behavioural responses, mental objects and social interchanges on the other can be of much interest to those seeking to clarify the complex bio-psycho-social causal chains involved.

The flexibility of emotional containment

As this thesis focused on disease and deficits, I have not addressed the healthy side of emotional containment, the *flexibility* dimension (Hinshelwood, 1987, p.217-235). Another avenue of further research on this theme would be to study the interpersonal factors that facilitate the transition from protomentality to mentality; i.e., the emergence, out of primitive raw emotional states of dependence, fight-flight and pairing, of communicable meaning and of interpersonal cooperation. In other words, to understand the means by which the fulfilment of the vital emotional needs of dependence, fight-flight, and pairing, can ever, if at all, be attained by the individual, in while maintaining the higher cultural and intellectual achievements of a “society of psyches”.

As usual in the field of “mental health”, it seems easier to focus on disease and malfunction than on health, sanity and growth (see Phillips, 2005). But in reality, Bion’s aim was to uncover ways for mental and social development; in his group as in his psychoanalytic works, he was preoccupied with finding ways to promote mental and social “growth”, more than to “cure” (e.g. Torres, 2003a).

I would like to end with a quotation from Bion’s 1948 paper “psychiatry in a time of crisis”, where, as chair of Psychological Section of the British Medical Association, Bion laid out his research program. The importance and relevance of this research program seems as great now, almost sixty years later, as it was then:

To me it seems that in so far man has set about the regulation of external relationships by law he has been tolerably successful; the failure arises when it comes to producing any method for dealing with the underlying emotional tensions in human relationships. And yet it is precisely these primitive unconscious tensions which present the fundamental problem in all human relationships. Whenever they obtrude themselves as an intrinsic element in the problem that is being studied men retreat into further exploration of the possibilities of external regulation. These repeated preoccupations with machinery, being themselves nothing more than a by-product of the failure to grapple with the main problem, never achieve any higher level than the technicalities of police operations no matter how magnificent the language in which they are clothed. (Bion, 1948, p.83)⁹.

I hope to have addressed in a clear way some of the complexities of the “primitive emotional tensions underlying all human relationships”; and some of the ways in which they can be a determining factor of a cluster of health problems that represents the

⁹ He continues: “Now this is doubly unfortunate: not only is the main problem shirked but the leaders of communities have, by the nature of the refuge they have found in their failure, ceased to be the creative leaders which Toynbee describes as essential for the healthy growth of civilization and become instead the dominant oppressive minority” (idem).

“biggest challenge to public health in the industrialised world ...now and for the foreseeable future” (WHO, 2000).

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DISORDERS OF EMOTIONAL CONTAINMENT AND THEIR SOMATIC CORRELATES.

**THE PROTOMENTAL NATURE OF ADDICTIONS, SELF-HARM AND NON-
COMMUNICABLE DISEASES**

APPENDIXES

Nuno Torres

**A thesis submitted for the degree of PhD
Centre for Psychoanalytic Studies
University of Essex**

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APPENDIX 1. Issues in QUALITATIVE LIFE STORY INTERVIEWS

Gathering data: Conducting the Interviews

The issues concerning the conduction of the interviews can be divided in three main areas: a) Epistemological issues b) Technical issues and c) Ethical issues

Epistemological issues

According to Snape and Spencer (2003) there are three main epistemological positions in qualitative research: *Positivism*, *Interpretivism*, and a "middle point" that can be called "*subtle realism*" (idem, p.13-21)

Positivism is the dominant stance in the natural sciences, and assumes that the social world can be researched objectively and quantitatively. This means that cognitions and emotional experiences can be assessed objectively, and their 'correct' or truthful evaluation and analysis are "value-free", i.e. independent from the social context in which data are gathered and analysed.

Interpretivism: Most qualitative researchers maintain that, contrarily to the natural world, the social reality is constructed by normative expectations and shared meanings. Hence, people are affected by the process of being studied, and the results of analysis are largely influenced, and "constructed", by the social context of the interaction between researchers and researched. In this case the researcher cannot be objective at all and cannot produce an objective account on the cognitions and emotions of the participant. This position advocates research methods that focus on the production of discourse itself as an object of research (e.g. discourse and conversational analysis [Smith et al, 1999]), instead of focusing on social-psychological facts that supposedly are conveyed language.

Subtle realism. Some authors propose 'empathic neutrality', a position that recognises that research cannot be totally objective and value free (is very dependent on the social context). However, it advocates that cognitions and emotional experiences have a substantive existence of their own right, and are reasonably communicated and accessible through the discourse (see also Smith et al, 1999). This position advocates the search for neutrality as to the impact of research on the participants and in the evidence produced, and the need for reflexivity (researchers should make their assumptions transparent). This position advocates a "pragmatism" in which the researcher tries to gain supposedly objective access to subjective and indirect cognitions and emotional experiences. However, it assumes that this process is not straightforward and requires a process of reflexive interpretation. (e.g. Interpretative phenomenological Analysis [I.P.A.; Smith et al, 1999])

In sum, as to the epistemological position, the one assumed in the present research is the "middle point", or "subtle realism". Hence, the aims of the present methodology are 1) to perform a type of interviewing that maximizes the objective access to the subjective internal realities of the participant (mainly its autobiographical memories of emotional experiences), and 2) a method of analysis that is the most systematic and transparent as possible. This leads us to questions of reliability and validity, which I will address in the next section.

Technical issues

In the following table are presented the general technical features of qualitative in-depth interviews. The most obvious technical issues used in the present research were: a) Face-to-face interviewing in a private setting b) Use of a guide of topics for in-depth exploration c) Use of open, narrative-eliciting, questions (prompts) d) Verbatim recording and transcription of the interview.

Table 1 General Features of Qualitative Interviews (adapted from Spencer, 2003)

| Key features | Appropriate for | Advantages | Disadvantages |
|--|---|--|---|
| <ul style="list-style-type: none"> • face to face individual interviews are conducted • an agenda of topics or topic guide is drawn up so that similar ground is covered in each interview • questions are open-ended • the interviewer probes and follows up leads • responses are recorded verbatim | <ul style="list-style-type: none"> • exploring issues in depth • examining personal or sensitive topics • finding out about individual experiences and decision making | <ul style="list-style-type: none"> • method generates a lot of rich and detailed information • can examine individual experiences and accounts • case studies can be illustrative of broader themes and very persuasive | <ul style="list-style-type: none"> • time consuming to conduct • time consuming to analyse • expensive |

As can be verified in Table 1, the features of qualitative interviews make them an adequate method for the present research questions. Of central importance are the generation of detailed information, the examination of sensitive topics, and finding out about individual experiences.

Reliability and Validity.

Apart from the problems of context and constraints of the research on the part of the researcher (e.g. Thompson, 2000 [see above topic *epistemological problems*]), there are also the constraints of the image that the participants may wish to convey of themselves regardless of "truthfulness" (Plummer, 1995). This problem is even more important in the present research, as far as I am trying to access retrospective data that would reflect actual events in the past and emotional experiences associated with them. This leads us to the issues of *reliability* and *validity* of the interviews.

There are several proposed ways to access and improve the validity and reliability of qualitative interviews. Arksey and Knight (1999) advocate that validity is enhanced by a number of techniques, among which are

a) Interviewing techniques that build rapport, trust and openness, b) Prompts that encourage informants to illustrate, expand and clarify their initial responses, talking in detail c) interview guides that contain questions drawn from the literature and from pilot work with respondents.

Hopefully, features a) and b) were dealt with in the interviewing process itself (see "Techniques for achieving depth" below). The feature c) was also dealt with, namely by supervision with and expert in life-story interviews (Paul Thompson), by a previous extensive literature review on the topics, and a pre-test of the interview guide (see "Interview Guide" and "Pre-test").

Other authors, such as Lewis and Ritchie (2003), address the reliability and validity not only at the level of the data gathering (interviewing), but also at the levels of data analysis and interpretation. According to them, reliability and validity are increased if a) the sample is well constituted, and any features of bias or attrition are known [see point 5.

"Sampling"]; b) the questioning is effective for participants to fully express/explore their views, and allows sufficient opportunities for the respondents to cover relevant ground (portray their experiences) [see "Techniques for achieving depth" below and "Stages of the Interviews" in chapter five]; c) the analysis is systematic and comprehensive, and reflects the original meanings of the participants [see chapter five "Framework of the interview analysis"]; and d) the interpretation is well supported by the evidence - i.e. the actual discourse of the subjects - and transparent as to the analytic constructions that have occurred.

As to the possible *sampling bias*, it is important to emphasize that in all institutions that collaborated with the present research, the contacted participants were chosen among the ones more readily to accept to be interviewed (talkative, expressive, sociable, etc). The simple act of volunteering to be interviewed can be a sign that a person may be a minority in the group under studied. Normally, people that volunteer for research studies were found to be more educated, intelligent, in greater need for social approval and more sociable (Arksey and Knight; 1999, p.58). Although this may be considered a sampling bias, in the present research this can be considered also as a clear advantage to increase validity and reliability, since I am looking for detailed and rich descriptions of personal experiences: these types of subjects are able to explore the questions in depth. This could be difficult to obtain from less cooperative and less verbally articulated participants.

Finally, there is the question of reliability in recalling past events and emotional experiences. As stated above ("Why to choose life-stories interviews"), it seems that eliciting narratives is a good way of accurately recalling the past (Hollway and Jefferson, 2000). Furthermore, there is evidence suggesting that emotionally intense experiences are better remembered (Mathews, 1996; Conway, 1990). Emotional intensity is

Associated with autobiographical memories which are readily accessible for retrieval... the best predictors of memory clarity were motional intensity at the time of the experience and perceived life impact at the time of the experience" (Conway, 1990, p.90-91)

It seems thus that, not only narrative is a good way of retrieving significant memories, but the memories recalled will be of emotionally intense events, and thus very relevant to the present research.

Techniques used for achieving depth

There are some technical aspects of semi-structured interviewing that contribute to the gathering of detailed and in-depth information from the participant. Firstly, clear and open-ended questions were formulated, to invite detailed description or elaboration from the interviewee (e.g. Spencer, 2003).

Another important technique is to probe for detail and clarity in some aspects when the accounts are vague and impersonal: what Legard et al (2003) call "Content mining questions". As an example...

Interviewee: "I was feeling nervous at that time." *Researcher:* "what kind of nervousness?" *Interviewee:* "No, I mean, it was the pressure at work" *Researcher:* "can you tell me what you mean by "pressure"?" (Interview to Tino)

Legard et al (2003) enumerate a series of further techniques for achieving depth, which were also used in the present research, such as *facilitating the relationship with the participant* (expressing interest and attention, establishing that there are no right or wrong answers, being sensitive to non-verbal cues, allowing time to reply, pacing the interview) and *neutrality and avoidance of self-disclosure* (achieve empathy without becoming over-

involved, avoid both favourable and adverse comments, avoiding answer to questions and giving personal details).

Paul Thompson proposed that life-historians had much to learn from psychoanalysis, and that thinking about psychoanalysis has provided a major stimulus for the advances in the understanding of oral memory as evidence (p.174). To Ken Plummer:

The image which perhaps captures this interview method most clearly is that of the non-directive, phenomenologically aware counsellor. All the rules of non-directive counselling come into play here. Central to this view is the uniqueness of the person and the situation, the importance of empathy and the embodiment of "non-possessive warmth" in the interviewer. (Plummer, 1995, pp. 53-54)

Types of Life-story interviews analysis

It is important to describe briefly different possible ways of analysing life-story interviews, in order to clarify the rationale of analysis used in the present research. The way the data were analysed in the present study will be thoroughly addressed later in the text.

According to Paul Thompson (2000), there are broadly 4 ways in which oral history can be put together:

a) *Single life-story narrative*. Can be used to convey an individual biography, and in outstanding cases conveys the history of a whole community, or can be used as a thread around which to reconstruct a complex series of events.

b) *A collection of stories*. Allows to be used more easily in constructing a broader historical interpretation, by grouping the stories around common themes

c) *Narrative analysis*. The focus of this approach is on the interview itself as an oral text and what can be learnt from its language, its terms and repetitions, and its silences. It is above all concerned with how the narrator experienced, remembered, and retold his/her life-story.

d) *Reconstructive cross-analysis*. The oral evidence is treated as a quarry from which to construct an argument about patterns of behaviour or events in the past

In this study the analysis was of the last type, since the aim is to "reconstruct" as much as possible the past of the participants. Some non-systematic form of narrative analysis was used in the analysis of theme 3 of the index (see chapter five); in these cases the analysis of the discourse aimed at finding alexithymic characteristics in the subject's flow of discourse, and in finding signs of emotional suppression in the type of narrative about certain topics.

Ken Plummer (1995) addressed the analysis of life-story research in slightly different terms. He is concerned with the degree of contamination of the participants' accounts imposed by the researcher's assumptions, as depicted in Table 2.

Table 2 "A continuum of contamination" (adapted from Plummer, 1995, p.61)

| 1 | 2 | 3 | 4 | 5 |
|---|---------------------------|------------------------------|-------------------------------------|-----------------------------|
| Participants pure account | | | | Researcher's account |
| e.g. Original diaries, autobiographies, etc | Edited Personal documents | Systematic Thematic Analysis | Verification by anecdote (examplng) | e.g. Psychological Theories |

This continuum locates the extent to which the researcher imposes his or her own analytic devices upon the participant's discourse, or on the contrary, the extent to which the

participant's own world is allowed to stand "uncontaminated" by the researchers' interpretation. In one extreme (5) there is the pure psychological theory, without any incorporation of material from the participant (what Plummer calls "armchair theory"). In the other extreme (1) there is the simple publication of the participants account with no analysis attached (corresponding to the first two points in Thompson's typology). In the middle point there is

a point when the participant is more or less allowed to speak for him or herself but where the researcher slowly accumulates a series of themes - partly derived from the participant's account and partly derived from social scientific theory. This method I would call systematic thematic analysis. (Plummer, 1995, p.61)

This middle point seems to correspond to Thompson's (2000), "Narrative analysis" and "Reconstructive cross-analysis". It is this middle point, or systematic thematic analysis, that I will use in the present research. The objective of my analysis is thus to gather original material from the narratives of people's life, organise and label it in broad themes and categories, and verify in what measure they fit in the theoretical background I am using.

APPENDIX 2. Traditions in Qualitative Analysis

Qualitative Social Policy Research

This tradition of research has a number of features traditionally associated with empirical-quantitative research (Spencer, 2003, p.20). A main characteristic is a striving to be as objective and neutral as possible in the collection, interpretation and presentation of the data. Other tenet relates to trying to achieve reliability and validity.:

We therefore seek to obtain thick description and as much detailed information as possible about people's lives [...] We also see the researcher's interpretations as important provided that these can be clearly delineated from those of the participants. In evolving our interpretations, we adhere as closely as possible to their accounts, but acknowledge that deeper insights can be obtained by synthesising, interlocking and comparing the accounts of a number of respondents (Snape and Spencer, 2003, p.21)

This approach advocates very systematic procedures of analysis. These procedures consist in summarising parts of the discourse, assigning labels to these pieces of discourse, clustering labels in categories, and finding associations and patterns of categories across various subjects and sub-groups of subjects, and finally looking for explanations and interpretation.

Interpretative Phenomenological Analysis (I.P.A.)

The main tenet of IPA is to combine a) a detailed exploration of the participants' discourse about their first person experiences (phenomenology) with b) the use of the researcher's own conceptions and categories about the nature of human nature as a way to access the internal substantive reality of the participants (interpretation):

Access [to the participant's personal world] depends on the researcher's own conceptions and indeed these are required in order to make sense of that other personal world through a process of interpretative activity (Smith et al, 1999)

Grounded Theory

The main tenet of grounded theory is that the abstract categories used to organize and interpret the results must be grounded in data.

The researcher moves from a descriptive classification of events and facts to an abstract theory of the phenomenon that accounts for relationships and processes. [...] The researcher begins with data which relate to specific incidents, facts or events and progressively develops more abstract classifications or categories which integrate and explain the data and organize the relationships between them (Chamberlain 1999)

One of the main objectives of this approach is to avoid jumping too quickly into interpretations in terms of previously formulated theoretical. Instead a series of intermediate steps are taken, from the raw data to more abstract categorisation grounded on data, and only then the data are interpreted according to the theory.

APPENDIX 3. Thematic charts

(Start in the following page)

1. Context of onset and relapses of the disease - THEMATIC CHARTS

| | Life events associated | 1.2 Psychosocial context |
|------------------------|---|---|
| Paul (drug addict) | <p>(1) He was away from home at 14, (2) at 12 years run away from home with his brother run away from home</p> <p>(1) mother's voodoo activities had a very bad influence on him (1) feelings of powerlessness and vulnerability in dealing with the malignant powers of black magic. terror and dread of annihilation at home</p> <p><u>SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</u></p> <p><i>SUICIDAL IDEATION:</i> (7) once he was in a very degraded situation, robbing people with a gun, he pointed the gun to his head. Socially degrading situation/stealing with a gun</p> <p><u>SERIOUS FINANTIAL RUIN</u></p> | <p>(1) at 14 years had already left home and was on his own. Premature autonomy <u>AUTONOMY/INDEPENDENCE, ANGER, REBELLION</u></p> <p>(1) Internal turmoil (depression, complexes, frustrations) due to bad climate at home. relation with siblings was not good, they had quarrels due to bad climate at home, they were nervous and unbalanced, and all took drugs. severe internal distress <u>INTERNAL TURMOIL AND DISTRESS</u></p> <p>(1) Mother worked as a black magic clairvoyant at home, and there was a very bad climate at home, he had to get away from that evil (3) had to run from home to protect him from the evilness. This made him start on drugs. need to escape (flight) from family due to fear and distress <u>INHIBITION OR LACK OF EMOTIONAL DEPENDENCE AND PARENTAL RESPONSIBILITY</u></p> <p>(2) Paired with a woman who also took drugs Attachment to a drug addict partner <u>PEER PRESSURE TO USE DRUGS</u></p> |
| Mario (drug addict) | <p>(1) Run away from home at 14, and started on drugs. Ran away from home</p> <p>(3) At 20 would get drunk when my parents had rows</p> <p>(3) relapsed due to lasting rows and violence between the parents. Intense distress at home due to domestic violence between parents.</p> <p><u>SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</u></p> | <p>(1) Father wanted him to cut hair, he ran away rebelliousness against father</p> <p>(1) Run away from home at 14, and started on drugs. Precocious autonomy/ Escape from home in youth <u>AUTONOMY/INDEPENDENCE, ANGER, REBELLION</u></p> <p>(1) Severe distress, turmoil due to violence at home. (1) Father used to beat up his mother, he got traumatized. severe internal distress <u>INTERNAL TURMOIL AND DISTRESS</u></p> <p>(2) group of fisherman gave him food and shelter when he was homeless. He is grateful They also gave him drugs, that's how he started. Attachment to drug culture group <u>PEER PRESSURE TO USE DRUGS</u></p> <p>(3) "Would keep my suffering for myself". Non-disclosure of suffering <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u></p> <p>(3) Didn't accepted help from girlfriend when relapsed. Refused help from girlfriend</p> <p>(2) When father tells him off he leaves home to drink alcohol to forget <u>INHIBITION OR LACK OF EMOTIONAL DEPENDENCE AND PARENTAL RESPONSIBILITY</u></p> |

| | | |
|-------------------------------|--|--|
| <p>Gina (drug addict)</p> | <p>1.1 Life events associated</p> <p>(1) Started really on drugs on her mother's funeral day. Injected heroin for the 1st time and took loads of benzodiazepines. (4) Since mother died she has always been a drug addict. death of her mother</p> <p>(7) relapsed after 11 months abstinence when favoured brother died (8) her preferred brother died, she had a very close relationship with him death of favoured brother</p> <p>(2) Run away from home at 13,14 years because father abused her repeatedly. run away from home: sexual abuse of father</p> <p><u>SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</u></p> | <p>1.2 Psychosocial context</p> <p>(1) got desperate in her mother's funeral, and that's why she started to abuse hard drugs desperate in mother's funeral</p> <p><u>INTERNAL TURMOIL AND DISTRESS</u></p> <p>(2) Run away from home at 13,14 years because father abused her repeatedly. Escape from home in youth due to sexual abuse of father</p> <p>(5) Always was very autonomous, quick-witted, never showed fear, always exhibited herself as strong. independent/ tough personality</p> <p><u>AUTONOMY/INDEPENDENCE, ANGER, REBELLION</u></p> <p>(7) she cannot uncover her feelings when she's sad. non-disclosure of sadness</p> <p>(7) made a pact with her brother of not crying and instead take drugs if one of them would die pact for repression of sadness</p> <p>(5) Older sister didn't protect her enough. (7) After the funeral each one goes its way, they don't support each other. lack of support/protection from family in bereavement</p> <p><u>INHIBITION OR LACK OF EMOTIONAL DEPENDENCE AND PARENTAL RESPONSIBILITY</u></p> <p>(7) In the drug scene she knows lots of people similar to her and that makes her feel good. attachment to drug culture peer group</p> <p><u>PEER PRESSURE TO USE DRUGS</u></p> |
| <p>Jo (drug addict)</p> | <p>(5) Family had a fight and almost destroyed the house family fight/violence</p> <p>(9) One week before the birth, granny died, it was a big grief (9) Relapsed in the night of birth, she felt unsettled due to granny's death death of favoured granny</p> <p><u>SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</u></p> <p>(6) Had a motorbike accident, broke one foot motorbike accident/hospitalisation</p> <p><u>HEALTH PROBLEMS AND ACCIDENTS</u></p> | <p>(6) The only peaceful and quiet time I had in life was when I spend 6 months with my sister away from my parents very unsettled life in general</p> <p>(5) Got in panic when saw her parents hitting her sister got in panic</p> <p><u>INTERNAL TURMOIL AND DISTRESS</u></p> <p>(5) Had to take some actions that were not supposed to so young, like getting parents out of the house violence against parents</p> <p>(5) Didn't speak with parents for a year, and was prepared to never speak to them again (5) started to have rows with sister (6) Got very angry with sister, until today. They had a wonderful relation that got lost (10) relapsed 2nd time after a row with mother. Angry Detachment from parents and sister</p> <p>(7) Was always very rebellious, and made her own decision to experiment with hard drugs. Rebellious/ self-reliant personality</p> <p><u>AUTONOMY/INDEPENDENCE, ANGER, REBELLION</u></p> <p>(5) Started to smoke and drink more when met a group of people who smoked a lot of dope. I would invite them to our place. Attachment to drug culture group</p> <p><u>PEER PRESSURE TO USE DRUGS</u></p> |

| | | |
|-----------------------------|--|---|
| <p>Jo (drug addict)</p> | | <p>(5) Had to take some actions that were not supposed to so young, like getting parents out of the house (6) Parents didn't want to displease her, so they did everything she wanted. It was a mistake to do that. Lack of parental restrictions/irresponsibility of parents (9) Didn't want to breast-feed the baby, never breast-feed her. denial of her baby's breast feeding <u>INHIBITION OR LACK OF EMOTIONAL DEPENDENCE AND PARENTAL RESPONSIBILITY</u></p> |
| | <p>1.1 Life events associated</p> | <p>1.2 Psychosocial context</p> |
| <p>Mercy (Alopecia a)</p> | <p>(1) When daughter wanted to separate from husband, she vomited, had severe headaches and had to go to the hospital (1) Alopecia started when her daughter left home and send granddaughter to her. Daughter's divorce (7) Once she became very jealous and angry due to husband's relation with female friends. Afterwards she fell ill and went to hospital. Husband flirting around FAMILY STRESSES (WITHOUT SEPARATION) (4) Vomits following nervousness started when she moved to Lisbon, after marriage. Separation from hometown/family <u>SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</u> SUICIDAL IDEATION: (1) daughter of 18 got pregnant and didn't married, married after 4 years and got divorced after 7 years. (1) When daughter got pregnant she tried to kill herself. Become totally isolated and ashamed of people. Teenage pregnancy of daughter/conflict of values <u>SEXUALITY, REPRODUCTION AND MATING PROBLEMS</u></p> | <p>(1) Became ashamed of people. Shame of daughter's pregnancy (1) Knew daughter was going to divorce from boy who she liked a lot. Sister started crying. Easy expression of weep in the family/strong emotional ties (1) M tried to be strong because of the granddaughter. Try to protect children from distress (1) Tried to convince daughter not to divorce, but she didn't listened. Pressured daughter against separation <u>EMOTIONAL DEPENDENCE AND TRADITIONAL PARENTAL VALUES</u> (1) When daughter got pregnant become ashamed of people and would avoid people and get isolated. Social isolation due to shame (suicidal ideation) <u>SOCIAL ISOLATION</u> (4) When gets upset and nervous vomits and has diarrhoea, etc. nervousness <u>INTERNAL TURMOIL AND DISTRESS</u> (4) It was very difficult to adapt to new home and neighbours. Difficulty to adapt to knew group of people <u>INHIBITION OR LACK OF "JOY OF LIFE", AND SOCIAL ISOLATION</u> Everybody seemed to be angry at each other. Difficulty dealing with group aggressiveness (7) When got jealous and angry with husband, the daughters told her to forget and do not care, and she did that Accepted pressure from daughters not to get angry <u>INHIBITION OR LACK OF AGGRESSIVENESS AND REBELLION</u></p> |
| <p>Richard (psoriasis)</p> | <p>(p.1) great responsibility and stress at work... felt sharply the pressure of responsibility ... fear that clients would complain pressure of responsibility <u>STRESS AT WORK OR SCHOOL</u> (p.1) daughter born 2 years before onset of disease young child to care for</p> | <p>(1) great uncertainty due to prolonged health treatments prolonged feelings of uncertainty <u>INTERNAL TURMOIL AND DISTRESS</u> (1) Capable of dealing with responsibility in work, since youth with his parents. conscientiousness not to fail (1) was very careful not to fail, always delivered competent work (1) resignation in face of health treatments acquiescence in face of adversity</p> |

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| <p>Richard (psoriasis)</p> | <p><u>FAMILY STRESSES (WITHOUT SEPARATION)</u> (p.1) uncertainty due to prolonged health treatments war injury and subsequent treatments <u>HEALTH PROBLEMS AND ACCIDENTS</u></p> | <p>(p.1) admiration of the medical team and physician Admiration of Medical caring figures (p.1) boss would understand and accept his absences due to treatments. Thoughtful Relation with Boss (2) very good relation with his parents, visit them many times a month although it would take 5 hours of journey strong ties of affection to parents and hometown <u>EMOTIONAL DEPENDENCE AND TRADITIONAL PARENTAL VALUES</u> (4) told off in a very polite manner the man responsible for his injury, and doesn't have hard feelings for him inhibition of aggression and hard feelings <u>INHIBITION OR LACK OF AGGRESSIVENESS AND REBELLION</u></p> |
| | <p>1.1 Life events associated</p> | <p>1.2 Psychosocial context</p> |
| <p>Tino (psoriasis)</p> | <p>(p.1) The work is very demanding and pressuring in terms of deadlines; Work is not quiet as in the past (p.1) People pressure him very much at work pressure of deadlines <u>STRESS AT WORK OR SCHOOL</u> (4) Psoriasis started in the same period when he left smoking quitting smoke <u>HEALTH PROBLEMS AND ACCIDENTS</u> (2) due to father's problems at work, all family had to move to another city moving city due to father's problems at work <u>FAMILY STRESSES (WITHOUT SEPARATION)</u> (3) Always frequented private colleges, with very rigid discipline (3) If he didn't know the lessons he would get punished, there was no chance (3) Father wouldn't pay the college's monthly fee on time, and he'd be strained for that. It affected him. stressful situations at school (6) his superior sabotaged his work and authority. Make him look like a fool (6) One captain didn't liked his face and started to harass him harassment by a superior <u>STRESS AT WORK OR SCHOOL</u></p> | <p>(p.1) was in a nervous state about 2 years ago; Nervous since he's born Nervousness <u>INTERNAL TURMOIL AND DISTRESS</u> (p.1) Does not jolt things or shouts when nervous inhibition of anger <u>INHIBITION OR LACK OF AGGRESSIVENESS AND REBELLION</u> (3) He feels he became blocked (Due to his oppressive education at home and in the college). (3) He become very reserved, doesn't express emotions, or take initiative in talking to people. emotionally inhibited (3) didn't have much sociability with schoolmates to avoid "bad companies"(6) very reserved, does not speak much, or gossip with others. lack of sociability with colleagues in school and in work <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u> (4) would avoid the bad influences of rebellious kids who'd miss classes to play around. inhibition of truancy (6) couldn't vent anger nor open his heart (3) never had fights with other kids (3) Would totally avoid the fuss, or to steal. inhibition of aggressiveness <u>INHIBITION OR LACK OF AGGRESSIVENESS AND REBELLION</u> (6) superior damaged the product of one year of his work. C got traumatised and out of his mind and out of his mind <u>INTERNAL TURMOIL AND DISTRESS</u></p> |

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| <p>Carla (para-suicidal)</p> | <p>1.1 Life events associated</p> <p>(7) After sister left home, felt very lonely, suffered a lot, felt desperate, despair beloved sister left home SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</p> <p>(5) Knew that probably can't have children about 2 years ago knew that probably cannot have children</p> <p>(8) For the 1st time in her life she allowed a boy to get emotionally and sexually close to her. Initiation in sexual life</p> <p>SEXUALITY, REPRODUCTION AND MATING PROBLEMS</p> <p>(5) Anorexia, nervous breakdown, depression: 2 years ago Nervous breakdown and associated mental problems</p> <p>HEALTH PROBLEMS AND ACCIDENTS</p> | <p>1.2 Psychosocial context</p> <p>(1) Has the idea of dying early since childhood desire for death</p> <p>(4) Only started to get intimate with someone 2 months ago, but avoiding to engage seriously (8) met him before trying suicide. Doesn't want any commitment. Barely knows him. The relationship is based on sex only. He is very immature. Ambivalent beginning of intimate relationship</p> <p>INHIBITION OR LACK OF "JOY OF LIFE", AND SOCIAL ISOLATION</p> <p>(1) Was always a bit shy, introverted, did not show feelings, and keep feelings for her. Since birth until 20 years. Only opened up to doctors. Shyness/introversion</p> <p>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</p> <p>(7) In the 2nd year of graduation suffered a nervous breakdown, would scream and shout, went to hospital several times nervous breakdown</p> <p>(7) After sister left home, felt very lonely, suffered a lot, felt desperate, despair. Despair, loneliness, internal suffering</p> <p>(7) Was engaged in too many activities/tasks at the same time, got exhausted mental exhaustion due to excess of work</p> <p>INTERNAL TURMOIL AND DISTRESS</p> <p>(2) We barely speak now; there was a time when we wouldn't speak to each other. Detachment from sister</p> <p>(3) Left scouts 2 years ago. Backing off from social activities (scouts)</p> <p>(5) Lost faith in god and withdrew from the church 2 years ago withdrew from church</p> <p>SOCIAL ISOLATION</p> |
| <p>Maria (para-suicidal)</p> | <p>(1) First suicidal ideas since Husband died Widowhood SEPARATION FROM LIBIDINAL OBJECTS</p> <p>(p.1) Her son left home Separation from son</p> <p>(p.1) Her father died. Felt very lonely Death of father SEPARATION FROM SUPPORT OBJECTS AND ATTACHMENT PROBLEMS</p> <p>(4) 1.3 after medical discharge realised that had no money. Dreaded misery, got in panic severe lack of money</p> <p>SERIOUS FINANCIAL RUIN</p> <p>(5) fell and broke her head, big headaches, leg paralysis</p> | <p>(p.1) Feels very lonely; doesn't have contacts with no one in the village (1) Son left home, father died, felt very lonely (3) she used to get along well with people, but since husband died she just wants to be alone (5) isolates herself and does not travel with people (5) 1 one year ago she was a joyful and amused person, but now she lost all that and she only wants to get isolated Loneliness-Social isolation</p> <p>SOCIAL ISOLATION</p> <p>(4) after medical discharge realised that had no money. Dreaded misery, got in panic went in panic</p> <p>INTERNAL TURMOIL AND DISTRESS</p> <p>(2) In her place everybody knew he for her happiness, joy, liveliness, she'd be familiar with a lot of people, but now she is the opposite, isolates, closes herself (2) She has to go home because she doesn't feel well with other people uneasiness with others</p> <p>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</p> |

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| <p>Maria (para-suicidal)</p> | <p>(5) Pectoralis angina and cardiac asthma chain of accidents and health problems <u>HEALTH PROBLEMS AND ACCIDENTS</u></p> <p>(4) Some colleagues understand my difficulties, but others tell her off and despise her. It's a bad environment. It makes me think about suicide (4) since CVA she started to have problems at work which contribute to her suicidal ideas conflicts with colleagues at work <u>STRESS AT WORK OR SCHOOL</u></p> | <p>(3) Since her 40's she's feeling a lot of revolt against her life (3) since husband died started to feel a lot of revolt with her live (5) Feels an enormous revolt inside her, against the world, everything feelings of revolt against her entire life and the world <u>AUTONOMY/INDEPENDENCE, ANGER, REBELLION</u></p> <p>(5) She doesn't enjoy life, she has no pleasure nor joy doesn't enjoy life anymore <u>INHIBITION OR LACK OF "JOY OF LIFE", AND SOCIAL ISOLATION</u></p> |
| | <p>1.1 Life events associated</p> | <p>1.2 Psychosocial context</p> |
| <p>Gil (para-suicidal)</p> | <p>(1) his ex-wife had done sex with other men in front of his daughter sexual exhibitionism of ex-wife/sexual jealousy <u>SEXUALITY, REPRODUCTION AND MATING PROBLEMS</u></p> <p>(1) she got all his money, he got broke. got broke <u>SERIOUS FINANCIAL RUIN</u></p> <p>(1) separated from his wife, she got all his money, he got broke Divorce <u>SEPARATION FROM LIBIDINAL OBJECTS</u></p> <p>(1) motorbike accident, and got a cyst in his head motorbike accident</p> <p>(5) many physical pains: belly, head. It's a long time he has these pains many physical pains <u>HEALTH PROBLEMS AND ACCIDENTS</u></p> | <p>"I am someone who doesn't open his heart to no one, since a child. Maybe my problem lies there". emotional detachment <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u></p> <p>(1) Got very disturbed when knew that his ex wife was doing sex in front of his daughter. very disturbed by sexual exhibitionism of ex-wife <u>(1)Nightmares, problems sleeping sleeping disorders INTERNAL TURMOIL AND DISTRESS</u></p> <p>(1) his parents and brother helped him when he got broke got help from parents and brother <u>EMOTIONAL DEPENDENCE AND TRADITIONAL...</u></p> <p>He's becoming more aggressive simultaneously with ideas of suicide. Becoming more aggressive <u>AUTONOMY/INDEPENDENCE, ANGER, REBELLION</u></p> <p>(1) I feel a bit lonely (4) does not have much contact with friends nowadays. He always go out at night to far away feels lonely, doesn't go out with friends Suicidal ideas appear when he thinks that is life doesn't make sense anymore. meaningless life <u>INHIBITION OR LACK OF "JOY OF LIFE", AND SOCIAL ISOLATION</u></p> |
| <p>J C (para-suicidal)</p> | <p>(1) He was divorcing, financial losses, couldn't pay for his car Divorce <u>SEPARATION FROM LIBIDINAL OBJECTS</u></p> <p>(1) The loan company wanted to confiscate his car due to overdue payments (3) was already divorced and he was</p> | <p>(1) Was having quarrels with his parents, due to divorce (1) Always wanted to be independent from his parents (1) was living with his parents after divorce (1) didn't want to ask his father for help, out of pride (2) father scared him saying that JC would be arrested due to a forged cheque (2) Father said "I'll kill myself. Quarrels & lack of communication with his parents <u>INHIBITION OR LACK OF EMOTIONAL DEPENDENCE AND PARENTAL RESPONSIBILITY</u></p> |

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| <p>J C (para-suicidal)</p> | <p>being charged with divorce expenses from the court Financial impairments (1) Stole a cheque from his colleague and forged his signature (2) His colleague complained to Boss about J.C. stole a cheque from his colleague <u>SERIOUS FINANCIAL RUIN</u> (2) Had an accident and was at home on sick leave Health problems (accident, sick leave) <u>HEALTH PROBLEMS</u> (3) Was a forced marriage, because she got pregnant Forced marriage due to unwanted pregnancy and family pressure (5) There was pressure because her girlfriend wants to marry him, but he wants them to live together first (5) Since he's already divorced, he can't marry by the church again. Conflicts over civil status <u>SEXUALITY, REPRODUCTION AND MATING PROBLEMS</u></p> | <p>(2) turned off mobile phone and become inaccessible (...) avoided people, closed himself in his room (2) Stayed alone at home and planned his suicide((2) I closed into myself more and more during 3 or 4 days (8) In that situation one is under such a big pressure that. isolated himself at home <u>INHIBITION OR LACK OF "JOY OF LIFE", AND SOCIAL ISOLATION</u> (6) The problem was that I got closed into myself (8) one forgets of the ones who can help us. emotional detachment <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u> (2) started to feel awful inside...panic (8) In that situation one is under such a big pressure that forgets of the ones who can help us. Emotional Pressure & feeling awful inside (2) Was organising and event for the motor sports association he's a member and forgot the cheque problem Excess of work made him forget the problem <u>INTERNAL TURMOIL AND DISTRESS</u> (2) Started to think that he had humiliated his father, colleagues and is own image, and thought about suicide Feelings of dishonouring his family name <u>EMOTIONAL DEPENDENCE AND TRADITIONAL PARENTAL VALUES</u></p> |
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2. Childhood and Adolescence- THEMATIC CHARTS

2.1 Personality-Temperament

| | 2.1 Personality-Temperament |
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| Paul (Drug addict) | <p>(1) <i>run away from home at age 14</i> precocious autonomy/self-reliance <u>AUTONOMY/INDEPENDENCE,</u></p> <p>(4) Would harass girls and other kids (4) would not submit to other kids and was always fighting (4) Was tall and strong physically belligerent and bold/fearless (5) would escape classes, was a street rogue. (5) Contestant against everything and everyone (3) he's very direct fearless outspoken rebelliousness/contestant <u>REBELLIOUSNESS AND AGGRESSIVENESS</u></p> <p>(5), would not get emotionally close to other kids emotionally distant (5) suspicious and always defensive suspicious/emotionally distant <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u></p> <p>(1) Internal turmoil (depression, complexes, frustrations) (5) felt bad inside severe internal distress <u>INTERNAL DISTRESS (UNDIFFERENTIATED ANXIETY)</u></p> |
| Mario (drug addict) | <p>(1) precocious self-reliance (run away from home ay 14) precocious autonomy/self-reliance <u>AUTONOMY/INDEPENDENCE,</u></p> <p>(1) Was untamed, would behave badly at home undisciplined and untamed (3) Was a rebel, an insurgent rebelliousness/contestant (3) Would beat up other kids and a teacher (3) would take advantage of his greater physical strength to beat up other kids physically belligerent and bold/fearless <u>REBELLIOUSNESS AND AGGRESSIVENESS</u></p> <p>(3) Wanted to be with his parents willingness to be near parents <u>EMOTIONAL DEPENDENCE & ATTACHMENT</u></p> |
| Gina (drug addict) | <p>(1) was jealous of her sisters jealousy of mother's affections with the other siblings (3) good relations with the other kids. Made friends (3) good friendly relations with teachers <u>EMOTIONAL DEPENDENCE & ATTACHMENT</u></p> <p>(2) always liked to walk around with friends until late in the evening extroversion (5) Her older sister asked for Gina's guidance and opinions socially dominant <u>EXTROVERSION/SOCIAL DOMINANCE</u></p> <p>(3) used to get into fights with other girls (4) never felt fear of no-one (4) when would fight with someone and got beaten, had to fight back until win the fight physically</p> |

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| <p>Gina (drug addict)</p> | <p>belligerent and bold/fearless <u>REBELLIOUSNESS AND AGGRESSIVENESS</u></p> <p>(5) Always was very autonomous, and quick-witted, never showed fear, always exhibited herself as strong /precocious autonomy/self-reliance <u>AUTONOMY/INDEPENDENCE</u></p> |
| <p>Jo (drug addict)</p> | <p>2.1 Personality-Temperament</p> <p>(1) at 6 she could not stand to be separated from her mother great longing for and dependence of mother <u>EMOTIONAL DEPENDENCE & ATTACHMENT</u></p> <p>(2) Many of my friends followed my opinions and asked me how they should dress, etc (2) Completed the 9th grade. Always liked school, had lots of friends, never felt inferior (4) After a while people started to follow me, and I got lots of friends socially dominant among other girls <u>EXTROVERSION/SOCIAL DOMINANCE</u></p> <p>(2) At 16 started working because was very rebel and wanted independence.(4) Had to take some actions that was to young to have, like getting parents out of the house precocious autonomy/self-reliance <u>AUTONOMY/INDEPENDENCE,</u></p> <p>(2) very rebellious since a little child, mother says that was against everything and everybody (3) Struggled for many causes that would find fair. Was against the “system” and would rise up against many things rebelliousness/contstant</p> <p>(4) I was doing bodybuilding and I had lots of strength. I smashed a piece of furniture, pushed my parents out of the house, and called the police physically belligerent and bold/fearless <u>REBELLIOUSNESS AND AGGRESSIVENESS</u></p> |
| <p>Mercy</p> | <p>(3) never did anything against their parents wishes, because they were very respectful to the father (5) a rich boy was making a move on her, but she rejected him because mother told her that rich boys only wanted to take advantage of poor girls. compliance to parents/ respect towards father and mother</p> <p>(4) Teacher screamed at her and she started crying. Doesn't like people screaming at her fearfulness of angry people/authority <u>FEARFULNESS AND INHIBITION OF REBELLIOUSNESS</u></p> <p>(7) She considers to have been a good daughter, good sister kindness to mother and sisters <u>EMOTIONAL DEPENDENCE & ATTACHMENT</u></p> |
| <p>Richard (psoriasis)</p> | <p>(2) Missed his mother and his hometown a lot and due to that failed a year in school great longing for and dependence of mother <u>EMOTIONAL DEPENDENCE & ATTACHMENT</u></p> <p>(3) Wanted to quit studies, but mother forced him and he had to abide by her (3) never did anything against parents rules compliance to parents/ respect towards father and mother_(3) Was afraid of the consequences if he would do naughty things fearfulness of authority</p> |

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| <p>Richard (psoriasis)</p> | <p><u>FEARFULNESS AND INHIBITION OF REBELLIOUSNESS</u> (4) Always liked to hunt, since a little child. Liked to hunt, chase birds <u>SANCTIONED EXPRESSION OF AGGRESSIVENESS/NAUGHTINESS</u></p> |
| <p>Tino (psoriasis)</p> | <p>2.1 Personality-Temperament</p> <p>(1) Nervous since is born nervousness <u>INTERNAL DISTRESS (UNDIFFERENTIATED ANXIETY)</u></p> <p>(1) He'd sometimes do pranks, he was no saint, just as any other kid unexceptionally naughty <u>SANCTIONED EXPRESSION OF AGGRESSIVENESS/NAUGHTINESS</u></p> <p>(2) would sometimes fight with other kids, but it was uncommon, "I don't know I don't remember" inhibition of aggressiveness (2) Older brother would dominate him, and he had to abide by him most of the times submissive to older brother <u>FEARFULNESS AND INHIBITION OF REBELLIOUSNESS</u></p> <p>(2) Sometimes would have to ask somebody older for help in some practical problem, it was not like the kids today that know how to do everything would ask for help <u>EMOTIONAL DEFENDENCE & ATTACHMENT</u></p> |
| <p>Carlos (Vitiligo and somatization)</p> | <p>(3) Due to his oppressive education at home and in the college he feels he became blocked (3) He become very reserved, doesn't express emotions, doesn't take initiative in talking to people. (3) didn't have much sociability with school mates (3) didn't have much sociability with schoolmates (3) Lonely and reserved. Shy-introverted-cagey <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u></p> <p>(3) never had fights with other kids (3) Would totally avoid the fuss, or to steal inhibition of aggressiveness (4) would avoid the bad influences of rebellious kids who'd miss the classes to play around Inhibition of truancy <u>FEARFULNESS AND INHIBITION OF REBELLIOUSNESS</u></p> <p>(3) wouldn't feel at ease uneasiness <u>INTERNAL DISTRESS (UNDIFFERENTIATED ANXIETY)</u></p> <p>(3) decided to leave school and start to work at 12 headstrong/independent <u>AUTONOMY/INDEPENDENCE,</u></p> |
| <p>Carla (para-suicidal)</p> | <p>(1) Has the idea of dying early since childhood pessimist/hopeless <u>INTERNAL DISTRESS (UNDIFFERENTIATED ANXIETY)</u></p> <p>(1) Was always a bit shy, introverted, did not show feelings, kept feelings for her. Since birth until 20 years. Only opened up to doctors. (2) Wouldn't share her deep feelings with no one, would keep them for herself (4) In adolescence become more closed into herself. Wouldn't disclose feelings, emotions, but would cry a lot alone in</p> |

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| Carla (para-suicidal) | <p>bed sometimes without knowing why I felt alone, suffer from solitude Shy-introverted- cagey</p> <p>(3) She's a very suspicious person by nature. Suspicious</p> <p>(8) She'd keep feelings for herself, she feels she should have exploded and moan inhibition of sadness and of negative feelings <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u></p> <p>(2) Always submitted to mother without a word (7) Never disappointed father, always behaved well, in contrast with sister compliance to parents/ respect towards father and mother <u>FEARFULNESS AND INHIBITION OF REBELLIOUSNESS</u></p> <p>(7) Has always had the obsession of being elegant obsession with being elegant <u>EXTROVERSION/SOCIAL DOMINANCE</u></p> |
| | <p>2.1 Personality-Temperament</p> |
| Gil (para-suicidal) | <p>(2) He'd have good relations with colleagues, but once got angry with a girl and pushed her, she got hurt outbursts of aggressiveness</p> <p>(2) "Once a teacher wanted to hit me but I said that if she would do that I would lose my mind and abandon school" boldness facing authority/contestant <u>REBELLIOUSNESS AND AGGRESSIVENESS</u></p> <p>(4) Parents would get angry with him rightly, in order only to get respect from him, childhood was good acceptance of parent's authority <u>FEARFULNESS AND INHIBITION OF REBELLIOUSNESS</u></p> <p>(4) I wouldn't ask no one for help, wouldn't ask for help <u>AUTONOMY/INDEPENDENCE</u></p> <p>Wouldn't open my heart with no one (4) I am someone who doesn't open his heart to no one, since a child. Maybe my problem lies there. (5) Very unspoken person Shy-introverted- cagey</p> <p>(5) Never told to parents his most serious problems inhibition of disclosing problems with parents <u>INHIBITION OF EMOTIONAL EXPRESSION-LINKING</u></p> |
| Maria (Para-suicidal) | <p>(1) Rejected her mother's visit when child (2) When she was 12 mother visited her, she refused to kiss mother saying she didn't had one Rebelled against mother's visit <u>REBELLIOUSNESS AND AGGRESSIVENESS</u></p> <p>(4) She always wanted to go away from the place her family was because she was very angry with them. She managed to do what she wanted headstrong/independent thought <u>AUTONOMY/INDEPENDENCE</u></p> |
| JC (para-suicidal) | <p>(6) Would have normal misbehaviours normal misbehaviours <u>SANCTIONED EXPRESSION OF AGGRESSIVENESS/NAUGHTINESS</u></p> |

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| <p>JC (para-suicidal)</p> | <p>(6) He'd sulk and shut up t if he'd have a problem (7) since little child, when he had problems we wouldn't open up with parents, closed person, haughty inhibition of disclosing problems</p> <p>(6) I am a bit of a closed person, I've never been extroverted Shy-introverted- cagey</p> <p>Inhibition of emotional expression-linking</p> <p>(6) He would deviate from parents' rules as much as he could, and they'd give him reprimands (8) would miss classes to play pool / flippers. They'd make teams and he'd play all day long headstrong/independent thought (6) Would go camping with his friends at 15, 16 extroversion (7) 2.0 I wouldn't ask father for money, never had a character of asking (7) wouldn't ask parents for help wouldn't ask for help</p> <p>AUTONOMY/INDEPENDENCE</p> |
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2.2 Father

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| <p>Paul (drug addict)</p> | <p>2.2 Father</p> <p>(3) drank too much alcoholic</p> <p>(2) would not abide by father's punishments and would escape home. escape from father's punishments</p> <p>(3) the relation with parents was very upsetting, and there were violent physical punishments Upsetting relation/violent punishments</p> <p><u>BAD FATHER (ABUSIVE, DEVIANT) AND REBELLIOUSNESS</u></p> <p>(3) Was autocratic and arrogant (3) was very direct fearless outspoken (2) was active in the Union, and was arrested. autocratic and bold</p> <p>(4) Father saved his life when he was 2 saved his life</p> <p>(3) are poor people, without education poor and uneducated man</p> <p>(2) Father would beat up mother violent husband</p> <p>(3) drank too much, and would beat us with a belt (arbitrary) (3) Father would vent aggression in all family, due to alcohol (arbitrary) arbitrary violent punishments</p> <p>(3) father spoke to him calmly, without violence capable of giving support</p> <p><u>INCONSISTENCY IN THE IMAGE AND RELATION TO</u></p> |
| <p>Mario (drug addict)</p> | <p>(1) Father wanted him to cut hair, he ran away with money at 14 (1) At 17/18 Had a fight with father and beat him up, and father stopped hitting mother rebelliousness</p> <p>(2) Sometimes would not abide by father's orders and would escape home not to be punished physically escape from father's punishments</p> <p><u>BAD FATHER (ABUSIVE, DEVIANT) AND REBELLIOUSNESS</u></p> <p>(1) taught Mario all he knows about work. Learned a lot with his father. (1) father forced him to work since child to help father. He didn't like that, but was for his own good (2) father incited autonomy and self-reliance Learned a lot from father</p> <p>(1) wanted to beat father to stop him beating mother, it was upsetting Felt fear and hate for the father</p> <p>(2) Father was fond of me, but he had bad temper and was violent to me. Violent and fond</p> <p>(2) Mother would undermine father's strong authority to pamper and protect Mario weakness of paternal authority due to mother's "sabotage"</p> <p>(1) Father would rightly buy him things and took him to travel only of he behaved well rationality in rewarding children</p> <p><u>INCONSISTENCY IN THE IMAGE AND RELATION TO</u></p> |
| <p>Gina (drug addict)</p> | <p>(1) Was a very bad man. Was bad tempered. An alcoholic alcoholic and bad man</p> <p>(5) Never had a fixed job Irregular jobs</p> <p>(3) Tried to sexually abuse her sister (3) Sexually abused her neighbour. Sexual abuser of children</p> <p>(2) He was the worst man she ever met in life. Extremely bad man</p> |

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| | <p>(3) Feared her father feared the father <u>BAD FATHER (ABUSIVE, DEVIANT) AND REBELLIOUSNESS</u></p> |
| <p>Jo (drug addict) Jo (drug addict)</p> | <p>(1) Father used to beat up mother and had lovers bad husband <u>BAD FATHER (ABUSIVE, DEVIANT) AND REBELLIOUSNESS</u></p> <p>(2) Jo was 14, father made a good deal and got loads of money, they changed house good in businesses and making money</p> <p>(4) Parents should have been more mature and should have found the correct solutions for the family immature person</p> <p>(2) Father was a cold person coldness</p> <p>(7) Father used to walk around and go on picnics with her when child cheerful</p> <p>(7) My childhood was fantastic, my parents always supported me supportive-fantastic <u>INCONSISTENCY IN THE IMAGE AND RELATION TO</u></p> |
| | <p>2.2 Father</p> |
| <p>Mercy (alopecia)</p> | <p>(3) She was very respectful to father. He didn't drink alcohol respectful and sober man</p> <p>(3) They never did anything against their parents' wishes, because they were very respectful to the father. Strict obedience</p> <p>(3) Father would open his eyes and they'd get scared. He never needed to beat or scold them (3) father would threaten children that he'd beat them up, and they would do the house tasks in order to avoid it (4) They'd do everything to prevent the father from getting angry awe and fearfulness towards the father's authority</p> <p>(4) She used to speak with a lot of parents about everything, except sex (4) None of the sisters had sex before married, due to deference towards father father put strong limits to sexuality <u>STRONG TRADITIONAL FATHER</u></p> <p>(3) Father was an 100% man totally good image</p> <p>(4-5) She had a very happy childhood. In the end of the harvest Father would buy presents for children with the money. Generosity towards children</p> <p>(3) Parents would not scold us, or beat us (4) She used to speak with a lot of parents about everything, except sex friendly closeness with father <u>BENEVOLENT IMAGE OF AND RELATION TO FATHER</u></p> |
| <p>Rich (psoriasis)</p> | <p>(2) Was an exceptional person, greatly responsible. Exceptional person</p> <p>(2) Richard assimilated that in his personality. Assimilated his capacities</p> <p>(2) Very good relation with his parents, very good relation</p> <p>(2) Father would frequently visit him, pay the bills and stay with him financial and emotional support</p> <p>(3) Parents tolerated well his failure in school tolerance towards son's failures in school <u>BENEVOLENT IMAGE OF AND RELATION TO FATHER</u></p> <p>(2) Father was too exigent, and sometimes that created conflicts too exigent, conflicts</p> <p>(2) He had to oblige by father demands of perfectionism in work. Chief is chief (2) sometimes he'd not agree but father probably was the one who was right (3) father gave him a "well-deserved" reprimand when he failed 1 year in school compliance with father's authority</p> <p>(2) Never got angry with his father, was much respectful towards him</p> |

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| | <p>Awe and fearfulness towards the father's authority (3) never did anything against parents rules strict obedience <u>STRONG TRADITIONAL FATHER</u></p> |
| <p>Tino (psoriasis)) Tino (psoriasis))</p> | <p>(2) Parents would rule without much dialogue autocratic <u>STRONG TRADITIONAL FATHER</u></p> <p>(4) Was an emigrant, was away most of the time intermittent presence at home (emigrant) <u>EMOTIONAL DISTANCE/ ABSENT FATHER</u></p> <p>(4) Would rarely get mad, but when it happens it'd be seriously mad. Generally calm man capable of getting angry <u>STRONG TRADITIONAL FATHER</u></p> |
| | <p>2.2 Father</p> |
| <p>Carlos (psychomatic)</p> | <p>(1) Father was very severe, prohibited him from playing and forced him to study all day (1) there were many dissensions due to my lack of study He was the more punished one among the brothers too exigent, conflicts <u>STRONG TRADITIONAL FATHER</u></p> <p>(1) Father forced him to study, would punish him physically (1) oppressed him a lot, was much ill-treated physical punishments (1) Father would disapprove mannish playfulness among boys. Repression of boys' playfulness (1) When we would break something at home, father would beat us with a whip. Physical punishments with a whip (2) He would try to avoid being at home when father was there, he would run away. Would avoid father <u>BAD FATHER (ABUSIVE, DEVIANT) AND REBELLIOUSNESS</u></p> <p>(1) Was away most of the time for work intermittent presence at home (2) 212/211 was most of the time absent from home absent father (3) Father wouldn't pay the college's monthly fee on time, and he'd be strained for that. It affected him. (4) Would complain that older men would smack him in the workplace, and father would tell him to bear it. Lack of support and negligence <u>EMOTIONAL DISTANCE/ ABSENT FATHER</u></p> |
| <p>Carla</p> | <p>(1) Father is a bit introverted, does not shows his feelings. Emotional distant relation due to Introversion (2) Was more affectionate than mother, but he's introverted so "there's no way". Affectionate but introverted 1) Never had an open relationship with the parents. (2) Never had an open relationship with father, both of them are introverted. Emotional distant relation due to Introversion <u>EMOTIONAL DISTANCE/ ABSENT FATHER</u></p> <p>(1) Father used to protect and pamper her and sister. Pamper and protection (2) Father almost never beat us generally calm man <u>BENEVOLENT IMAGE OF AND RELATION TO FATHER</u></p> |

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| <p>Gil (para-suicidal)</p> | <p>(4) Reasonable relation with parents, Sometimes there was a row, but that was normal. They have been good parents (4) Parents would get angry with him rightly, in order only to get respect from him, childhood was good. Compliance with father's authority rationality in rewarding/punishing children <u>STRONG TRADITIONAL FATHER</u></p> <p>(4) Father normally wasn't at home due to work. Intermittent presence at home due to work</p> <p>(4) Father would be absent a lot, working intermittent presence</p> <p>(4) When he arrived home he'd go to feed the animals, He'd rarely speak with me would rarely speak to him</p> <p>(5) Never told to parents his most serious problems Emotional distant relation <u>EMOTIONAL DISTANCE/ ABSENT FATHER</u></p> |
| <p>2.2 Father</p> | <p>(1) Abandoned by father, placed her in orphanage. Abandoned by father (absent father) <u>EMOTIONAL DISTANCE/ ABSENT FATHER</u></p> |
| <p>Maria (Para-suicidal)</p> <p>JC (para suicidal)</p> | <p>(1) Father never had a flaw in his reputation Flawless reputation</p> <p>(6) Parents were a bit strict and he had to toe the line (6) parents would force him to study hard, against threats to restrict his holidays and his pocket money (7) he was rigid in curfew and JC never failed it. Strict discipline (6) He would deviate from parents' rules as much as he could, and they'd give him reprimands rationality in rewarding/punishing children <u>STRONG TRADITIONAL FATHER</u></p> <p>(6) Would threaten him but they would not carry out their threats (7) Father would say he wouldn't give JC money but in the end, at last minute he'd give him. Inconsistency of parental discipline <u>INCONSISTENCY IN THE IMAGE AND RELATION TO</u></p> <p>(7) Parents were too good, although they were rigid, never failed to give him <i>things</i> (??) He'd give me pocket money but I'd spent it and needed more Materially Generous</p> <p>(7) Parents would intuit his problems and would help him (7) wouldn't ask him for money, I never had a character of asking, but he would intuit that I needed and would give me money parents would intuit his problems <u>BENEVOLENT IMAGE OF AND RELATION TO FATHER</u></p> <p>(7) Since little child, when he had problems we wouldn't open up with parents, closed person, Emotional distant relation</p> <p>(7) Wouldn't ask parents for help wouldn't ask parents for help <u>EMOTIONAL DISTANCE/ ABSENT FATHER</u></p> |

2.2 Mother

| | 2.2 Mother |
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| Paul (Drug Addict) | <p>(3) Was not naturally violent (3) mother was more calm than father (3) mother was more calm, but suffered a lot and would vent on us (arbitrary) (3) mother vent aggression (arbitrary). Incongruence between non-violent calmer person and violent INCONSISTENCY IN THE IMAGE AND RELATION TO</p> <p>(1) Mother have had several nervous breakdowns mother had nervous breakdowns</p> <p>(3) Mother was confused confused person</p> <p>(3) Are poor people, without education poor uneducated person</p> <p>(3) The relation with parents was very upsetting upsetting relation</p> <p>(3) Negative events with mother demoralised him demoralising relation to mother</p> <p>(3) Would force him to do homework. Extreme rigidity. Would hit him severely to force him to study rigidity-force him to study</p> <p>(1) Mother's voodoo activities had a very bad influence on him voodoo activities</p> <p>BAD IMAGE/UPSETTING RELATION</p> |
| Mario (drug addict) | <p>(2) Wonderful relation with mother, was pampered by her, would protect him very much pampered by mother</p> <p>(2) Mother would undermine father's strong authority to pamper and protect Mario mother's protection against father's authority</p> <p>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</p> <p>(5) Mother would take them to church since a little child would take him to church</p> <p>CONVENTIONAL MOTHER/OBEDIENCE</p> |
| Gina (drug addict) | <p>(1) Was the opposite of the father. She would excuse the father, and asked the sons to understand him merciful, the opposite of father</p> <p>(1) Was very good. Never smacked Gina. She always explained the good and bad side of things. Very good and impartial person</p> <p>(4) Explained things very well and clearly rational and comprehensible person</p> |

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| | <p>(1) She was more a friend than a mother. She would not told me off more a friend than a mother</p> <p>(1) Gina was jealous of her sisters' relation to mother. Object of jealousy among sisters</p> <p>(4) Mother would support her if she had any kind of worries, including drugs and boyfriends (4) Could talk with her about any issue. (1) Was very good. Never smacked Gina. She always explained the good and bad side of things. Unconditionally supportive</p> <p><u>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</u></p> |
| <p>Jo (drug addict)</p> <p>Jo (drug addict)</p> | <p>(1) Mother was arrested for blank cheques during 6 months when Jo was 9. It was very complicated for Jo, she remembers it very vividly. Mother was arrested for blank cheques</p> <p>(1) Mother was arrested for blank cheques during 6 months when Jo was 9. It was very complicated for Jo, she remembers it very vividly (1) when mother went to prison, and separation from mother was traumatic. She was not there for Jo's birthday (1) At 6 went to school, left home for the first time, it was very tough. She even had fevers, because she could not stand to be separated from her mother. Traumatic separation distress from mother</p> <p><u>BAD IMAGE/UPSETTING RELATION</u></p> <p>(1) Mother was a housewife (1) Mother was extravagant and spent lots of money. (3) Mother was very liberal and ahead of her times. Incongruence between housewife and Extravagant/ahead of times</p> <p>(1) Mother was always very sweet to children, and took care of many children. But when they reached 2-3 years she would become cold. Incongruence between sweetness and coldness</p> <p>(4) Mother was full of herself, even when she wasn't right (4) Parents should have been more mature and should have found the correct solutions for the family</p> <p>(7) My childhood was fantastic, my parents always supported me incongruence between supportive-fantastic+ arrogant/ immature</p> <p>(1) Mother was very sweet to me. (2) Mother is too overprotective, puts her nose on everything, and tries to control everything. (2) Parents approved my rebelliousness very much. (2) Mother gave a lot of freedom to Jo and brothers. (3) Mother incited her rebelliousness and freedom a lot. (3) Parents did no want her to have a motorcycle, but she didn't obey them, worked to buy one without telling them. They got mad but Jo got away with it. Incongruence between overprotective/bossy and inciting to rebellion and freedom</p> <p><u>INCONSISTENCY IN THE IMAGE AND RELATION TO</u></p> <p>(3) Mother always covered up my schemes. She had more power than father and defended Jo against father's orders. Mother's protection against father's authority</p> <p><u>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</u></p> |
| | <p>2.2 Mother</p> |
| <p>Mercy</p> | <p>(3) When they started to go out with boys, mother would tell them to return home by sunset, and they would always obey (4) after leaving Scholl, at 13, mother instructed her to all the house/work (washing up, taking care of sister, etc). She loved to do the tasks. Instruct her in house tasks</p> <p>(4) She used to speak with a lot parents about everything, except sex. (5) A rich boy was making a move on her, but she rejected him because mother told her that rich boys only wanted to take advantage of poor girls. Mother incited conventionalism/ strong limits to sexuality</p> <p><u>CONVENTIONAL VALUES/OBEDIENCE</u></p> <p>(3) Parents would not scold us, or beat us (5) She would talk a lot with mother friendly closeness</p> <p>3) Once father beat up her brother, and mother threatened to complain to his bosses protect siblings from father's punishments</p> |

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| | <p>(4) Mother was more tranquil than father tranquiller than father <u>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</u></p> <p>(2) Mother was very conscientious and hard working, fair, was gentler than father conscientious and gentle (2) Very good relation with his parents, good relation (2) Parents tolerated well his failure in school. Tolerant with his failure in school (3) Mother explained very beautifully him why he should go back to school. Rational and comprehensible person <u>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</u></p> <p>(3) Wanted to quit studies, but mother forced him and he had to abide by her. Demanding with school (3) Never did anything against parents rules obedience to mother (2) Parents decided him to go to study in other to have a better education (2) He's thankful to his parents for their guidance in childhood good guidance <u>CONVENTIONAL VALUES/OBEDIENCE TO MOTHER</u></p> |
| | <p>2.2 Mother</p> |
| Rich (psoriasis) | <p>(1) Was a housewife housewife (2) The amount of dialogue with parents was "normal" (2) Parents would rule without much dialogue normal amount of dialogue <u>CONVENTIONAL VALUES/OBEDIENCE TO MOTHER</u></p> <p>(2) Does not know how to explain his relation with parents</p> |
| | <p>(2) She's a simple-minded person simple person <u>CONVENTIONAL VALUES/OBEDIENCE TO MOTHER</u></p> <p>(2) Mother would hide from father some Carlos' wrong doings to protect him. (2) She'd try to hide things from father to avoid him punishing Carlos Protect from father's harshness (2) He had a close relation with his mother close relation (2) Never had problems with mother no problems with mother <u>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</u></p> |
| Carlos | <p>(1) Mother is an explosive and nervous person explosive and nervous (1) Her and mother's characters are incompatible. Mother speaks a lot, she speaks little. Incompatible characters (2) There were times when repressed crying and tried to get numb, to be stronger that mother passive-aggression towards mother (2) Mother was very tough with Carla and sister, she was very rigid. She would beat them severely harsh and rigid in punishments (8) Mother was very demanding with school marks, it was never enough, she'd be normally disappointed with her marks too demanding with school <u>BAD IMAGE /UPSETTING RELATION</u></p> <p>(2) Would submit to mothers punishment without a word mute submission to mother's punishments</p> |
| Carla | |

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| | <p>(1) Never had an open relationship with the parents. (2) In adolescence I completely cut off from relationship with mother and affectively gave up</p> <p>(2) Would speak only the basics, never about Carla's personal things and school issues extreme emotional distance</p> <p>(5) wouldn't want to do the same mistakes of parents with her own children. The Lack of affection and openness lack of affection</p> <p><u>EMOTIONAL DISTANCE/ABSENCE</u></p> |
| <p>Gil (para-suicidal)</p> | <p>(4) Reasonable relation with parents, Sometimes there was a row, but that was normal. They have been good parents. (4) Parents would get angry with him rightly ,</p> <p>in order only to get respect from him, childhood was good. Fair strictness</p> <p><u>CONVENTIONAL VALUES/OBEDIENCE</u></p> <p>(4) It was Mother who would told him off, sometimes a lot told him off a lot</p> <p><u>BAD IMAGE /UPSETTING RELATION</u></p> <p>(5) Never told to parents his most serious problems emotional distance</p> <p><u>EMOTIONAL DISTANCE</u></p> |
| | <p>2.2 Mother</p> |
| <p>Maria (Para-suicidal)</p> | <p>(1) Abandoned by her mother when baby abandoned by mother in childhood</p> <p>(5) Only her father visited her in the orphanage. He'd always take her a bag of sweets mother wouldn't visit her</p> <p><u>EMOTIONAL DISTANCE/ABSENT</u></p> <p>(1) rejected her mother's visit when child rejection towards mother</p> <p>(1) Distressful image of mothers upsetting relation</p> <p><u>BAD IMAGE /UPSETTING RELATION</u></p> |
| <p>JC (para-suicidal)</p> | <p>(6) Parents were a bit strict and he had to toe the line (6) He would deviate from parents' rules as much as he could, and they'd give him reprimands (7) Parents were too good, although they were rigid, never failed to give him <i>things</i> Fair strictness</p> <p>(6) Parents would force him to study hard, against threats to restrict his holidays and his pocket money (6) parents insist only that he'd studied and didn't do silly things demanding with school</p> <p><u>CONVENTIONAL VALUES/OBEDIENCE</u></p> <p>(7) Wouldn't ask parents for help (7) since little child, when he had problems he wouldn't open up with parents, closed person, haughty emotional distance</p> <p><u>EMOTIONAL DISTANCE/ABSENT</u></p> <p>(7) Parents would intuit his problems and would help him would intuit his problems</p> <p>(7) Mother would forgive anything (6) Would threaten him but they would not carry out their threats mother would forgive anything</p> <p>(7) Mother was rigid in front of the father, but on his back would give money to JC. It was the same with my brother mother's protection against father's authority</p> <p><u>BENEVOLENT/PROTECTIVE AGAINST FATHER'S DISCIPLINE</u></p> |

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2.3 Family-as-a-whole

| 2.3 Family-as-a-whole | |
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| Paul (drug addict) | <p>(1) We were poor poverty <u>POVERTY OR ECONOMIC INSTABILITY</u></p> <p>(1) Bad climate at home, no stability, forced children to avoid being at home (1) bad unhealthy climate at home (3) relation with siblings was not good, they had quarrels due to bad climate at home, they were nervous and unbalanced, all took drugs bad climate at home</p> <p>(2) Remembers rows and that the Father would beat up mother (3) mother was more calm, but suffered a lot and would vent on us (3) Father would vent aggression in all family, due to alcohol (arbitrary) domestic violence <u>BROKEN HOME/ DOMESTIC VIOLENCE/HOUSING INSTABILITY</u></p> <p>(2) Father was active in the Union, and was arrested by the political police, that caused lots of suffering father arrested by political police <u>URBAN DEGRADED ENVIRONMENT/ CRIMES</u></p> |
| Mario (drug addict) | <p>(1) Father used to beat his mother, he got traumatized and upset felt helpless and undefended as a child (3) relapsed due to lasting rows and violence between the parents domestic violence</p> <p>(1) Had a fight with father and beat him up, and father stopped hitting mother (1) Beat father up to protect mother fight with father to protect mother <u>BROKEN HOME/ DOMESTIC VIOLENCE/HOUSING INSTABILITY</u></p> <p>(1) Parents were very poor poverty <u>POVERTY OR ECONOMIC INSTABILITY</u></p> <p>(2) Mother would undermine father's strong authority to pamper and protect Mario; Father would get furious with that incongruence between parents' discipline</p> |

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| | <p><u>INCONGRUENCE BETWEEN PARENTS</u></p> <p>(1) Was raised in a degraded neighbourhood degraded neighbourhood (3) Social Environment was extreme, lots of violence urban violent/dangerous environment (2) Older brother also had addiction problems, was convicted to 12 years in prison siblings are robbers and thugs <u>URBAN DEGRADED ENVIRONMENT/ CRIMES</u></p> |
| <p>GINA drug addict</p> | <p>(2) Father died she was 16 father died (4) Mother died of an ulcer in the stomach (Gina was 16/17) mother died (4) Since mother died the brothers split apart, and isolated from each other brothers split up (3) She could not take friends to the house because the father would do wrong things father would harass her friends (4) Father used to say that all the sons would turn out to be bandits and disgraceful people (2) Father used to beat up mother. Used to wake her up late to cook for his friends and tell her off and beat her when he didn't like the food Father beat up and psychologically abused mother <u>BROKEN HOME/ DOMESTIC VIOLENCE/HOUSING INSTABILITY</u></p> <p>(1) They were 9 siblings. They were very poor people (1) There was no money to buy new things. Clothes passed from sibling to sibling poverty <u>POVERTY OR ECONOMIC INSTABILITY</u></p> <p>(2) Siblings used to unite to beat up other people (3) Once the brothers destroyed a house where hippies used to be and they got the nickname of "the feet" (4) brothers would scorn her if other kids would beat her up (3) People in the school were very afraid of her father and brothers. Violent gang- culture among brothers</p> <p>(5) After parents died, they got money only from stealing (4) some months after mother's death she was arrested due to drugs (5) older brothers were arrested for stealing food siblings are robbers and thugs <u>URBAN DEGRADED ENVIRONMENT/ CRIMES</u></p> <p>(1) Mother used to give cookies and milk to children without the knowledge of the father incongruence between parents' discipline Mother was the opposite of father incongruence between father and mother characters <u>INCONGRUENCE BETWEEN PARENTS</u></p> |
| <p>Jo Drug addict</p> | <p>2.3 Family-as-a-whole</p> <p>(4) Parents had a big argument and decided for separation Parents' divorce (2) at 14 Father made a good deal and got loads of money, they changed house (2) Between 14 and 18 we changed house a lot (5 times in year). It was very unstable; sometimes the house got too big, there was no money for the rent, other times the house got too small (3) It was very tough when changed home. I stayed most of the time in the house, it was a big detachment changing houses a lot (1) Many rows due to lack of money Many Rows about money (1) Father used to beat up mother and had lovers (4) We had a fight and we almost destroyed the house (4) I was doing bodybuilding and I had lots of strength. I smashed a piece of furniture, pushed my parents out of the house, and called the police (4) Parents furtively took everything from the house, and left it empty, without anything to eat domestic violence</p> |

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| <p>Jo drug addict</p> | <p><u>BROKEN HOME/ DOMESTIC VIOLENCE/HOUSING INSTABILITY</u></p> <p>(3) Father did not approve so much my freedom. He did not agree that Jo would leave school, but it was mother who decided things. Incongruence between father and mother discipline</p> <p>(2) When life got better, the power at home shifted to mother, father would do everything she would tell him (3) ...it was mother who decided things power shifted to mother</p> <p><u>INCONGRUENCE BETWEEN PARENTS</u></p> <p>(1) Many rows due to lack of money Rows about money</p> <p>(1) Before the revolution their parents were wealthy but then things got much worse (1) family went through many financial difficulties economic descend</p> <p><u>POVERTY OR ECONOMIC INSTABILITY</u></p> <p>(1) Mother was arrested for blank cheques during 6 months when Jo was 9. (1) The fact that mother was arrested is taboo, no ones speaks about that at home Mother arrested</p> <p>(2) Brother came out of jail, returned home, and caused the same problems, it reached a degrading point (1) Older brother got addicted to drugs she was 5. Would steal things at home. He was arrested many times (2) Brother came out of jail, returned home, and caused the same problems, it reached a degrading point. Siblings are robbers and thugs</p> <p>(2) They lived in a poor quarter, with lots of drug problems. Lived in neighbourhood with lots of drug problems</p> <p><u>URBAN DEGRADED ENVIRONMENT/ CRIMES</u></p> |
| <p>Mercy (alopecia)</p> | <p>2.3 Family-as-a-whole</p> <p>(3) Parents worked in the fields rural environment</p> <p><u>RURAL ENVIRONMENT</u></p> <p>(4) They were poor people, had few money poverty</p> <p><u>POVERTY OR ECONOMIC INSTABILITY</u></p> <p>(3) there was a lot of respect and harmony in the family, there was no noise. Harmony and respect</p> <p>(3) Children had to do the school homework and the housework (get water, etc). clear rules</p> <p>(3) siblings would cooperate to perform all the house tasks before parents arrive home, so that they wouldn't tell them off. cooperation in housework</p> <p>(3) We'd go to the church on Sundays, do the dishes and go for a walk. church and walk on Sundays</p> <p>(4-5) She had a very happy childhood. In the end of the harvest Father would buy presents for children with the money. happiness and generosity</p> <p>(4) Parents wouldn't let them travel because they missed each other greatly great attachment and separation distress</p> <p><u>CONVENTIONAL HOME /STABILITY</u></p> |
| <p>Rich (psoriasis)</p> | <p>(2) Greatly attached to his childhood village rural environment/stability (all childhood)</p> <p><u>RURAL ENVIRONMENT</u></p> |

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| | <p>(2) It was violent the farewell of home to go to school in other city (2) Loved his homeland a lot. Great attachment and separation distress</p> <p>(4) Attachment to grandparents and uncles and aunts attachment to grandparents and uncles/aunts</p> <p>(3) Parents tolerated well his failure in school tolerance and understanding</p> <p>CONVENTIONAL HOME /STABILITY</p> |
| <p>Tino (psoriasis)</p> | <p>(1) He's from a little village in the interior, spent all his childhood there rural environment/stability (all childhood)</p> <p>RURAL ENVIRONMENT</p> <p>(2) Life was hard, wouldn't get toys, had to make them from wood & cork financial hardship</p> <p>POVERTY OR ECONOMIC INSTABILITY</p> <p>(3) Separation from parents when went to army was "normal" no separation distress</p> <p>(3) There is a lot of sociability and closeness in his hometown sociability in hometown</p> <p>(1) Had timetables to follow at home. Could not go out at night. (1) There were strict timetables at home to play and to do school homework. (1) Sometimes there were little punishments, like staying at home or smacks, for breaking the rules. Clear rules and sanctions</p> <p>(2) Parents would rule without much dialogue strong discipline</p> <p>(3) The family would go to church on Sundays, have a lunch together with grand parents. Church and visit grandparents on Sundays</p> <p>(3) Lived with parents he was until 21 and went to the army. Lived with parents until adulthood</p> <p>CONVENTIONAL HOME /STABILITY</p> |
| | <p>2.3 Family-as-a-whole</p> |
| <p>Carlos (vitiligo)</p> | <p>(2) Mother would hide from father some Carlos' wrong doings to protect him incongruence between parents</p> <p>(2) she'd try to hide things from father to avoid him punishing Carlos. protect from father's harshness</p> <p>INCONGRUENCE BETWEEN PARENTS</p> <p>(2) father would beat mother, due to jealousy or doesn't know why. domestic violence</p> <p>(2) with 18 family left Angola and came to PT (1) family had to move home to the capital when he was 9 (2) Changing home and city was not very influential to him. (2) due to father's problems at work, all family moved to another city(4) He enjoyed his 2nd work, but had to leave to PT because of the revolution. (4) 244 there was the revolution and family had to leave the colony to go to the metropolis, there was gunfire everywhere. (5) It was complicated to leave his land to go to the metropolis; they've left everything they owned. Housing instability</p> <p>BROKEN HOME/ DOMESTIC VIOLENCE/HOUSING INSTABILITY</p> |
| <p>Carla (para-suicidal)</p> | <p>(1) Parents characters are completely different; mother has the power in the house. (2) Mother was very tough with Carla and sister, she was very rigid. She would beat them severely...Father almost never beat us. Incongruence between parents</p> <p>(1) Father used to protect and pamper her and sister mother blames him disagreements between parents as to upbringing</p> <p>INCONGRUENCE BETWEEN PARENTS</p> |
| <p>Gil</p> | <p>(1) His parents home is the same since he's born stable home</p> <p>(4) Reasonable relation with parents, Sometimes there was a row, but that was normal. They have been good parents good parents</p> |

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| <p>(para-suicidal)</p> | <p><u>CONVENTIONAL HOME /STABILITY</u> (4) / 212 Father would be absent a lot, working, when he arrived home he'd go to feed the animals, He'd rarely speak with me. It was Mother who would told him off (<i>the father is absent</i>), sometimes a lot incongruence between parents <u>INCONGRUENCE BETWEEN PARENTS</u></p> |
| <p>Maria (Para-suicidal)</p> | <p>(1) Abandoned by her mother when baby (1) Raised in orphanage from 4 to 21. Aunt, who took care of her died at 4. Abandoned by father, placed her in orphanage abandoned by father and mother/divorce (3) They would punish her by beating her, and by placing her for long times in a room full of mice. (3) She was very often punished via the "mice house" because she would throw up milk. Severe punishments and abuse <u>BROKEN HOME/ DOMESTIC VIOLENCE/HOUSING INSTABILITY</u></p> |
| <p></p> | <p>2.3 Family-as-a-whole</p> |
| <p>JC (Para-suicidal)</p> | <p>(6) Parents were a bit strict and he had to toe the line (6) He would deviate from parents' rules as much as he could, and they'd give him reprimands. (6) Parents would force him to study hard, against threats to restrict his holidays and his pocket money clear rules and sanctions (6) Would threaten him but they would not carry out their threats benevolence (7) Parents had always a good relation, was normal, were very attached parents were very attached <u>CONVENTIONAL HOME /STABILITY</u> (7) Mother was rigid in front of the father, but on his back would give money to JC. It was the same with my brother. Incongruence between parents' discipline <u>INCONGRUENCE BETWEEN PARENTS</u></p> |

2.4 Troubles (Friends/Mates, School, Health)

| 2.4 Troubles (Friends/Mates, School, Health) | |
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| Paul (drug addict) | <p>(3) Mother would force him to do homework. Extreme rigidity. Violence. Pressures to study hard <u>DISTRESSING PRESSURES TO STUDY FROM PARENTS</u></p> <p>(4) was expelled out of the school at 14 years due to repeated misbehaviours expelled from school due to misbehaviour <u>PROBLEMS WITH AUTHORITY (POLICE/SCHOOL) FOR MISBEHAVIOUR</u></p> <p>(4) when he was 2, needed a blood transfusion needed blood transfusion</p> <p>(4) Crossed the road without looking and was run over by a car, father took him o hospital run over by car <u>SOMATIC PROBLEMS AND ACCIDENTS</u></p> <p>(5) wouldn't trust no one in school, kids or teachers, was always defensive. (5) felt bad inside, would not get emotionally close to other kids <u>close to other kids</u> <u>DIFFICULTY GETTING OR MAINTAINING FRIENDS</u></p> |
| Mario (drug addict) | <p>(2) was caught by police in train without ticket problems with police</p> <p>(3) had disciplinary problems in school because would beat up other kids and a teacher (3) would be physically punished by teacher <u>disciplinary problems at school due to misbehaviour</u></p> |

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| | <p><u>PROBLEMS WITH AUTHORITY (POLICE/SCHOOL) FOR MISBEHAVIOUR</u></p> <p>(3) first serious girlfriend at 15, very strong relationship, they loved each other a lot. She moved to another place, lost contact love disappointment due to changing home</p> <p><u>DIFFICULTIES IN INTIMATE/ROMANTIC RELATIONS or SEXUALITY</u></p> <p>(5) it has been difficult to have friends. I only one big friend but I've spoiled it difficulty getting friends</p> <p><u>DIFFICULTY GETTING OR MAINTAINING FRIENDS</u></p> |
| <p>Gina (drug addict)</p> | <p>(6) Boyfriends would avoid her due to fear of her brothers boys had fear of her family/difficulty getting friends</p> <p>(3) She could not take friends to the house because the father would do wrong things father would harass her friends</p> <p><u>DIFFICULTY GETTING OR MAINTAINING FRIENDS</u></p> <p>(6) Always had difficulties with sex due to her previous abuse by her father (6) She felt disgusted with the boys who tried sex with her. Had a happy romantic relationship for 5 years(15-20) but she was ashamed of sexual intimacy with partner. Separated from partner when relation started to be sexual difficulties with sex</p> <p><u>DIFFICULTIES IN INTIMATE/ROMANTIC RELATIONS or SEXUALITY</u></p> |
| | <p>2.4 Troubles (Friends/Mates, School, Health)</p> |
| <p>Jo (drug addict)</p> | <p>(1) At 6 went to school, left home for the first time, it was very tough. She even had fevers, because she could not stand to be separated from her mother had fevers due to separation distress from mother</p> <p><u>SOMATIC PROBLEMS AND ACCIDENTS</u></p> <p>(4) after changing school, she would isolate herself. Isolated herself when changed house and school</p> <p><u>DIFFICULTY GETTING OR MAINTAINING FRIENDS</u></p> <p>(4) I was very attracted to a boy who lived beside me, we changed house and I had a big disappointment, and did not leave the house for almost a year love disappointment</p> <p><u>DIFFICULTIES IN INTIMATE/ROMANTIC RELATIONS or SEXUALITY</u></p> |
| <p>Mercy</p> | <p>(4) At 17 I had severe colic, went to the hospital had to be hospitalised due to colics</p> <p>(4) Had a sight problem and had to be medically treated, lost one year in school had sight problems, medical treatment</p> <p><u>SOMATIC PROBLEMS AND ACCIDENTS</u></p> <p>(5) Had a good relation with friends, but once bite one of her best friends due to a dispute about a game. They split up ever since. outburst of disproportionate aggression towards best friend</p> <p><u>DIFFICULTY GETTING OR MAINTAINING FRIENDS</u></p> |

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| | <p>(4) failed the exam of the primary school because the got very nervous and the professor shout at her. ... terrified with teacher at the exam FEARFULLNESS OF TEACHERS</p> |
| Richard (psoriasis) | <p>Was forced by parents to go to school away from home it was a chock forced by parents to go to study in other city DISTRESSING PRESSURES TO STUDY FROM PARENTS</p> <p>(1) had...super-demanding teachers, terrifying teachers that destroyed many peoples' life super-demanding teachers FEARFULLNESS OF TEACHERS</p> |
| Carlos (vitiligo) | <p>(1) couldn't play enough, was forced to study all day forced to study all day by father DISTRESSING PRESSURES TO STUDY FROM PARENTS</p> <p>(2) Had many friends and neighbours that left behind when moved left friends behind when moved city DIFFICULTY GETTING OR MAINTAINING FRIENDS</p> <p>(3) was very punished in school (3) Always frequented private colleges, with very rigid discipline. (4) Due to his oppressive education at home and in the college he feels he became blocked. He become very reserved, doesn't express emotions, doesn't take initiative in talking to people. (4) Had to obey teachers otherwise would get severe physical punishments (4)If he didn't knew the lessons he would get punished, there was no chance. Oppressive and traumatising discipline at school FEARFULLNESS OF TEACHERS</p> |
| | <p>2.4 Troubles (Friends/Mates, School, Health)</p> |
| Tino (psoriasis) | <p>(2) Failed one year (8th), because didn't study enough. Doesn't know how to explain why it happened. Does not remember</p> |
| Carla (para-suicidal) | <p>(3) Boys would make a move on me, but I'd refuse. Maybe due to insecurity, and because close relations confused me. (3) Never had a corresponded affection difficulty getting close to boys</p> <p>(3) she'd felt attracted but she'd back away, in order to spare them from suffering avoidance of romantic relationships DIFFICULTIES IN INTIMATE/ROMANTIC RELATIONS or SEXUALITY</p> <p>(8) Parents were very demanding with school marks, it was never enough, and they'd be normally disappointed with her marks. parents pressured her too much to study DISTRESSING PRESSURES TO STUDY FROM PARENTS</p> |
| Gil (para-suicidal) | <p>(2) epilepsy in childhood epilepsy</p> <p>(2) Suffered a serious accident, resulted in chronic problems in one leg and in the column. Can't stand heavy work work serious accident SOMATIC PROBLEMS AND ACCIDENTS</p> <p>(2) he'd have good relations with colleagues, but once got angry with a girl and pushed her, she got hurt and I ran away to the mountain hit colleague and</p> |

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| | <p>run away from school</p> <p>(2) Once a teacher wanted to hit me but I said that if she would do that I would lose my mind and abandon school threatened a teacher of hitting her PROBLEMS WITH AUTHORITY (POLICE/SCHOOL) FOR MISBEHAVIOUR</p> <p>(5) I had some special friends but I don't remember them now doesn't remember special friends DIFFICULTY GETTING OR MAINTAINING FRIENDS</p> <p>(4) First girlfriend at 18, she was 15. Friends told him that she was under aged , and he jilted her jilted first girlfriend due to peer pressure</p> <p>(4) Never had girlfriends in school, only after leaving school (6) Doesn't get along with the girls/women his area. Has been like that all his life difficulty getting close to girls DIFFICULTIES IN INTIMATE/ROMANTIC RELATIONS or SEXULITY</p> <p>(5) Never had a good relation with brother, they weren't good brothers</p> |
| <p>Maria (Para-suicidal) Maria (Para-suicidal)</p> | <p>(3) The orphanage was a girls-only, it was closed as a prison girls-only orphanage</p> <p>(3) Never had any boyfriends at all (before husband). She equates boyfriends in childhood and adolescence with paedophilia never had boy friends DIFFICULTIES IN INTIMATE/ROMANTIC RELATIONS or SEXULITY</p> <p>(1) They would punish her by beating her, and by placing her for long times in a room full of mice physical abuse of authority</p> <p>(2) She had to do everything they told her in the orphanage (2) she was very often punished via the "mice house" because she would throw up milk. Oppressive and traumatising discipline FEARFULNESS OF TEACHERS</p> <p>(4) she always wanted to go away from the place her family was because she was very angry with them</p> |
| <p>JC (Para-suicidal)</p> | <p>(6) parents would force him to study hard, would threaten him Pressures to study hard DISTRESSING PRESSURES TO STUDY FROM PARENTS</p> <p>(8) failed one year because started to go out with colleagues and parents gave him much freedom and money to spend</p> |

3. Emotional expression inhibition

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| <p>Paul (Drug addict)</p> | <p>3.1 Work Group Function</p> <p>(3) Mother would force him to do homework. Extreme rigidity forced to do homework with extreme rigidity (5) started working at 14 in the construction. started to work in adolescence <u>BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</u></p> <p>(6) Always worked and managed to organize his own life self-sufficiently. efficacious in work <u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> | <p>3.2 Suppression</p> <p>(3) felt bad inside, would not get emotionally close to other kids. would not get emotionally close to other kids <u>SUPPRESSION OF EMOTIONAL LINKING</u></p> <p>(1) spent some time in his parents' home, and it was very negative, unhealthy climate (2) can't stand his mother's mental illness, must avoid his parents home, because there he gets very distressed(6) achieved some stability when back away from his parents to forget the past voluntary separation from parents (better without parents) (7) concluded that was better to be separated from the woman he loves (partner) voluntary</p> | <p>3.3 Alexithymia</p> <p>(4) when asked about support in childhood worries, answers only about health physical problems confusion between emotional worries and physical health problems <u>DIFFICULTY DISTINGUISHING BETWEEN FEELINGS AND BODILY SENSATIONS</u></p> <p>(5) when something would bother him he would discharge on violent actions. discharge on violent action when emotionally upset <u>EXTERNALLY-ORIENTED THINKING.</u></p> |
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| | | <p>separation from partner (better without partner) (7) never had another stable-affective relation with another woman, only one night stands no stable affective relations, only one night stands <u>SUPPRESSION OF DEPENDENCE OF SIGNIFICANT OTHERS</u></p> | |
| <p>Mario (drug addict)</p> | <p>(1) Started working as blacksmith around 15, then changed to gardening. Started to work in adolescence BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE (4) 1st work was great, unforgettable, had good moments, good boss and impeccable colleagues (4) Worked as gardener almost 3 years, enjoyed that, learned a lot of things. Enjoyable experience at working Likes to be always working, doesn't like to be unoccupied. Likes to work, doesn't like to be unoccupied <u>WORK TASKS FELT AS ENJOYABLE</u> (4) I am a very good worker Considers himself a very good worker <u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> | <p>(3) <u>Would keep my suffering for myself keep suffering for himself</u> <u>SUPPRESSION OF EMOTIONAL LINKING</u> (3) Wanted to be with parents but when stoned he just want to be away from parents and goes to the beach alone voluntary separation from parents (3) Didn't accepted help from girlfriend when relapsed (3) didn't respect a girl whom he liked very much. It affected his life, since they broke up (3) after a recovery he didn't looked for her dear girlfriend ever. Despised and didn't accepted help from girlfriend he respected and loved (4) Doesn't want to know about romantic relations anymore, he was badly affected (4) he's open to one night stands but not to lasting relations, he become very hurt in his heart No stable affective relations, only one night stands <u>SUPPRESSION OF DEPENDENCE OF SIGNIFICANT OTHERS</u></p> | <p>(3) Doesn't understand his reactions of despising everyone while on drugs (4) Doesn't understand why he disrespected his girlfriend Doesn't understand his feelings and reactions <u>DIFFICULTY DESCRIBING FEELINGS</u></p> |
| | <p>3.1 Work Group Function</p> <p>(3) She had to leave school in 6th year, because she had to clean the family house. Forced to work at home by family in childhood (5) First worked nursing an old lady at around 16 Started to work in adolescence <u>BOUND TO SERIOUS WORK TASKS IN</u></p> | <p>3.2 Suppression</p> <p>(7) She cannot uncover her feelings when she's sad cannot disclose sadness (8) Made a pact with her brother of not crying and instead take drugs if one of them would die pact for not crying and take drugs instead <u>SUPPRESSION OF EMOTIONAL LINKING</u></p> | <p>3.3 Alexithymia</p> <p>(4) When father died could not decide if she was sad or happy Inability to differentiate sadness from happiness <u>DIFFICULTY DESCRIBING FEELINGS</u></p> |
| <p>Gina (drug addict)</p> | | | |

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| | <p><u>CHILDHOOD/ADOLESCENCE</u></p> <p>(5) She enjoyed working. She alone did everything in the bar. (6) Enjoyed a lot and was very good in the cleaning job. Was soon promoted. Enjoyable experience at working</p> <p><u>WORK TASKS FELT AS ENJOYABLE</u></p> <p>Was fast and smart (competent) the boss appreciated her work fast and smart at work</p> <p>(6) Enjoyed a lot and was very good in the cleaning job. Was soon promoted. Efficacious in work</p> <p><u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> | <p>(8) After the funeral each one goes its way, they don't support each other no support between brothers in bereavement</p> <p>(7) After separation he wanted to restart relationship, but she didn't, although she liked him (8) They love each other but they cannot stay together because she causes him to abuse drugs.</p> <p>Voluntary separation from partner</p> <p><u>SUPPRESSION OF DEPENDENCE OF SIGNIFICANT OTHERS</u></p> | |
| <p>Jo (drug addict)</p> | <p>(2) At 16 started to work because was very rebel and wanted independence. (3) At 14 worked as a volunteer in a shelter for children, and against drugs. She loved that. Started to work in adolescence</p> <p><u>BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</u></p> <p>(3) Partied a lot but always had her limits, she worked for her money. Was able to pay her partying with her money from work</p> <p><u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> | <p>(9) Didn't want to breast-feed the baby, never breast-feed her refused to breast feed her baby</p> <p>(10) Separated from husband because knew that he'd use more drugs when he was with her; in order not to harm him voluntary separation from partner</p> <p><u>SUPPRESSION OF DEPENDENCE OF SIGNIFICANT OTHERS</u></p> | <p>(5) After fighting & splitting with parents, worked a lot. Describes the external things they bought, minute details. Minute descriptions of details after an emotionally upsetting situation</p> <p><u>EXTERNALLY-ORIENTED THINKING.</u></p> <p>(10) She doesn't understand why she preferred drugs when she should breast-feed her baby.</p> <p><u>DIFFICULTY DESCRIBING FEELINGS</u></p> |
| | <p>3.1 Work Group Function</p> | <p>3.2 Suppression</p> | <p>3.3 Alexithymia</p> |
| <p>Mercy</p> | <p>(4) Was the best student in her class, but failed the exam of the primary school because she got very nervous. Best pupil at her class</p> <p>(5) Was very hard-working, loved to work, was used to work. Hard-working</p> <p>(6) She's very dutiful at her work, respectful, is respected by others. Conscientious at work</p> <p><u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> <p>(4) She'd like very much going to school loved school.</p> <p>(4) After leaving Scholl, at 13, mother instructed her to</p> | <p>(2) They spend weeks, once 8 months, without speaking to each other. Because he spend all their savings in alcohol spent 8 months without speaking to husband due to anger with him</p> <p>(2) She used to tell husband off, but now she can only cry cries instead of telling husband off</p> <p>(2) She stopped screaming and verbally abuse him, because the neighbours would hear stopped screaming due to shame of neighbours</p> <p>(6) Yarns for going to work, to get away from husband and avoid getting mad ay him loves to</p> | <p>(1) <i>Explains meticulously every detail of the conversations, with exact dates, etc of daughter's divorce</i></p> <p>Minute descriptions of details after an emotionally upsetting situation</p> <p><u>EXTERNALLY-ORIENTED THINKING.</u></p> <p>(5) When visits hometown and gets ready to return feels sick: doesn't eat, feels something in the stomach, loses her voice. Sisters cry a lot too</p> |

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| | <p>all the house/work (washing up, taking care of sister, etc). She loved to do the tasks loved housework task</p> <p>(6) She only feels good when goes to work in the morning, always dlying to go to work. (6) Yearns for going to work, to get away from husband and avoid getting mad ay him. Enjoyable experience at working WORK TASKS FELT AS ENJOYABLE</p> <p>(3) At the age of 13 she had to leave school to work at home.</p> <p>Started to work in adolescence Do the cooking, take the food to her parents in the fields, washing up, clean the house</p> <p>Forced to work in house tasks by family in childhood BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</p> | <p>go to work to avoid getting mad at husband</p> <p>(7) Once she decided not to get angry with husband anymore, and told that to her daughters. Decided not to get angry anymore</p> <p>(7) Once she become very jealous and angry due to husband's relation with female friends, daughters told her to forget and do not care. (Afterwards she fell hill and went to hospital) accepted advice from daughters not to get angry with husband</p> <p>(7) She wishes she didn't got mad to her husband wishes not to get mad with husband SUPPRESSION OF FIGHT-FLIGHT</p> | <p>No words for separation, undifferentiated from bodily symptoms</p> <p>(1) Cannot explain what were the feelings about her daughter's pregnancy. Instead tells that wouldn't eat, and would cry.</p> <p>No words for rage and shame, undifferentiated from bodily symptoms</p> <p>DIFFICULTY DISTINGUISHING BETWEEN FEELINGS AND BODILY SENSATIONS</p> |
| <p>Rich (psoriasis)</p> | <p>3.1 Work Group Function</p> <p>(1) Capable of dealing with responsibility in work, since youth working with his parents. Forced to work in house tasks by family in childhood BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</p> <p>(1) Was very careful not to fail, always delivered competent work. Efficacious and conscientious at work</p> <p>HIGH PERCEIVED EFFICACY IN WORK TASKS</p> | <p>3.2 Suppression</p> <p>Father was too exigent, and sometimes that created conflicts. He had to oblige by father demands of perfectionism in work. Chief is chief. Sometimes he'd not agree but father probably was the one who was right. Never got angry with his father, was much respectful towards him. Father was too demanding but never got angry with him</p> <p>(4) Told off the man responsible for his injury in a very polite manner, and says doesn't have hard feelings for him. Denial of hard feelings SUPPRESSION OF FIGHT-FLIGHT</p> | <p>3.3 Alexithymia</p> <p>(1) <i>Minute peripheral details speaking about the birth of daughter. No emotional words for daughter's birth; minute peripheral details</i></p> <p>EXTERNALLY-ORIENTED THINKING.</p> |

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| <p>Tino (psoriasis)</p> | <p>(1) Never felt bad at work, but there are times when one gets more nervous than usual. Never felt bad at work <u>WORK TASKS FELT AS ENJOYABLE</u></p> | <p>(1) Does not jolt things or shouts when nervous does not jolt things or shout when nervous. Does not give vent to anger when nervous <u>SUPPRESSION OF FIGHT-FLIGHT</u></p> | <p>(1) After prompt describes his childhood as normal, "as any other kid". (2) The amount of dialogue with parents was "normal". (2) <i>Do you remember having any problem in childhood?</i> [...] Sometimes would have to ask somebody older for help in some practical problem, it was not like the kids today that know how to do everything focus on external-concrete reality problems instead of emotional ones <u>EXTERNALLY-ORIENTED THINKING.</u></p> <p>(2) Does not know how to describe his relation with parents Does not know how to describe his relation with parents</p> <p>(3) Can't explain the differences between village and Lisbon. Refers that one has to move to places with better conditions. (3) Does not find words to explain what are the differences between people from the village and people from the big city Does not find words to describe people's characteristics <u>DIFFICULTY DESCRIBING FEELINGS</u></p> |
| <p>3.1 Work Group Function</p> | <p>(1) as answer to the question "how was your infancy replies I remember studying until 4th year of primary school, and then started working at 12 (1) couldn't play enough, was forced to study all day. Forced to do homework with extreme rigidity (4) At 12 started as a mechanical until 14; at 14 started as blacksmith until 18. Started to work in childhood <u>BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</u></p> <p>(6) He would manage to organize the alimentary section alone, he'd everything able to organize and entire section alone</p> | <p>3.2 Suppression</p> <p>(3) Due to his oppressive education at home and in the college he feels he became "blocked". (3) He become very reserved, doesn't express emotions, doesn't take initiative in talking to people. (6) Very reserved, does not speak much, or gossip with others. Does not express emotions, very reserved <u>SUPPRESSION OF EMOTIONAL LINKING</u></p> <p>(1) Father would disapprove mannish playfulness among boys. When we would break something at home, father would beat with a whip. He was the more punished one among the brothers father</p> | <p>3.3 Alexithymia</p> <p>(1) "Sometimes I feel like...a bit... how can I explain... it's not depressed, it's...how should I say this" can't explain what are his feelings about people looking at his skin disease (3) can't find words to explain the closed environment of the colleges. (3) Can't find words to explain his feelings amongst other children. (6) Does not find words to explain the animosity between him and the captain. Can't explain what are his feelings about unpleasant social situations <u>DIFFICULTY DESCRIBING FEELINGS</u></p> |

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| <p>Carla (para-suicidal)</p> | <p><u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> <p>(8) Parents were very demanding with school marks, it was never enough, and they'd be normally disappointed with her marks. Parents were very demanding with marks</p> <p><u>BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</u></p> <p>(6) Doesn't admit failure. Working with children is a big responsibility. Conscientiousness in work</p> <p>(7) Feels professionally fulfilled, the personal relations with the colleagues are not important. Efficacious in work.</p> <p>(7) Very demanding with her since started to work. Even in school she felt she was not allowed to fail. Very demanding with herself</p> <p><u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> <p>(5) Started to work at 18 taking care of children. She liked the work she was doing. Liked the work</p> <p><u>WORK TASKS FELT AS ENJOYABLE</u></p> <p>(7) Was engaged in too many activities/tasks at the same time, got exhausted</p> <p>(3) Deepened relationships with colleagues from the scouts, because they'd have many meetings and she was required to talk. Now they lost contact</p> | <p>prohibited and punished mannish playfulness</p> <p>(6) Couldn't vent anger nor open his heart because of the army's hierarchy couldn't vent anger due to hierarchy</p> <p>(6) Takes things very personally but doesn't bother others with that, swallows, ruminates, doesn't open heart with spouse. Does not give vent to anger when nervous</p> <p><u>SUPPRESSION OF FIGHT-FLIGHT</u></p> <p>(1) Was always a bit shy, introverted, did not show feelings, and keep feelings for her. (2) Wouldn't share her feelings, only daily events without great relevance (2) wouldn't share her deep feelings with no one, would keep them for herself (3) always had friends, but never disclosed feelings. Never trusted totally in friends (3) never revealed her most intimate feelings about affections to friends. (4) In adolescence become more closed into herself. Wouldn't disclose feelings, emotions, (2) There were times when voluntarily repressed crying and tried to get numb, to be stronger that mother. Voluntary non-expression of suffering (2) in adolescence I completely cut off from relationship with mother and affectively gave up (2) would speak to mother only the basics, never about Carla's personal things and school issues. Gave up and cut off affectively from mother</p> <p><u>SUPPRESSION OF EMOTIONAL LINKING</u></p> <p>(2) Would submit to mother's punishment without a word. Would submit to punishments without word</p> <p>(3) Wouldn't reveal feelings of affection in order to avoid rivalries and conflicts avoid rivalries and conflicts</p> <p>(8) She'd keep feelings for herself, she feels she should have exploded and moans. Should have exploded and moan</p> | <p>(1) <i>As answer to the question "how was your infancy replies I remember studying 33 studied until 4th year of primary school, and then started working at 12 (2) <i>When asked "what have you felt when you moved", answers I never went back there. Focus on external-concrete reality problems instead of emotional ones</i></i></p> <p><u>EXTERNALLY-ORIENTED THINKING.</u></p> <p>(2) Would speak to mother only the basics, never about Carla's personal things and school issues (2) Had a more close relationship with sister, but wouldn't share her feelings, only daily events without great relevance Would speak to mother and sister only irrelevant daily events, without emotional relevance</p> <p><u>EXTERNALLY ORIENTED THINKING.</u></p> <p>(4) In adolescence become more closed into herself. Wouldn't disclose feelings, emotions, but would cry a lot alone in bed sometimes without knowing why cries a lot without knowing why</p> <p><u>DIFFICULTY DESCRIBING FEELINGS</u></p> |
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| | | <p><u>SUPPRESSION OF FIGHT-FLIGHT</u></p> <p>(4) Boys would make a move on me, but I'd refuse. Maybe due to insecurity, and because close relations confused me would refuse boys' moves no her</p> <p>(4) She'd felt attracted but she'd back away, in order to spare them from suffering attracted but backed away on boys</p> <p>(5) Never had considered having children, because always lived her own loneliness. Afraid of not being able to raise a child never considered having children</p> <p>(8) She doesn't consider him a boyfriend doesn't consider her boyfriend a boyfriend</p> <p><u>SUPPRESSION OF PAIRING</u></p> | |
| <p>Gil (para-suicidal)</p> | <p>(3) Was 14 when started to work as a mechanical with father & brother (3) worked in a supermarket, worked in the construction, but had to leave because couldn't handle the job. Started to work in adolescence</p> <p><u>BOUND TO SERIOUS WORK TASKS IN CHILDHOOD/ADOLESCENCE</u></p> <p>(3) Enjoyed all his jobs. Enjoyable experience at working</p> <p>(3) Good relation with colleagues, they were always playing around. With the boss they would play around</p> <p>(3) had a very good relation with the superiors but if they weren't fair he would told them off good relations to colleagues and superiors</p> <p><u>WORK TASKS FELT AS ENJOYABLE</u></p> | <p>(4) I am someone who doesn't open his heart to no one, since a child. Maybe my problem lies there. (5) chats with everybody, but doesn't open his heart to no one. Does not disclose feelings with no one</p> <p>(5) I had some special friends but I don't remember them now. Doesn't remember special friends</p> <p><u>SUPPRESSION OF EMOTIONAL LINKING</u></p> <p>(4) Does not know many girls. He's afraid of them because he suffered once. He is very jealous. Afraid of women</p> <p>(6) Doesn't get along with the girls/women his area. Has been like that all his life. Lack of links with women</p> <p>I am probably a bit shy. Shyness with women</p> <p><u>SUPPRESSION OF PAIRING</u></p> | <p>(5) These Ideas come to my mind, I don't understand it. Doesn't understand why the suicidal ideas come to mind</p> <p><u>DIFFICULTY DESCRIBING FEELINGS</u></p> <p>Sometimes I think that the suicidal ideas are due to my many physical pains: belly, bladder, and head. It's a long time I have these pains explains suicidal ideas with his physical pains</p> <p><u>DIFFICULTY DISTINGUISHING BETWEEN FEELINGS AND BODILY SENSATIONS</u></p> |
| | <p>3.1 Work Group Function</p> | <p>3.2 Suppression</p> | <p>3.3 Alexithymia</p> |
| <p>Maria</p> | <p>(3) works since husband died. She didn't work before he</p> | <p>(3) she used to get along well with people, but</p> | <p>(3) does not now why she lost pleasure and</p> |

| | | | |
|--------------------------|---|---|--|
| <p>(Para-suicidal)</p> | <p>went sick. (2) Used to go to night life with much younger colleagues, but nowadays she doesn't want to do those things (4) Some colleagues understand my difficulties, but others tell her off and despise her. It's a bad environment. It makes me think about suicide</p> | <p>since husband died she just wants to be alone (5) one year ago she was a joyful and amused person, but now she lost all that and she only wants to get isolated was joyful and amused but now lost it and wants to be isolated <u>SUPPRESSION OF PAIRING</u></p> | <p>joy in being with people (5) doesn't know why she lost joy in life Doesn't understand why lost joy in life <u>DIFFICULTY DESCRIBING FEELINGS</u></p> |
| <p>JC (para-suicide)</p> | <p>(6) Was fairly good in school, studied until 17, only lost 1 year (8) School days were wonderful, lost one year but in general had good marks, liked to study liked to study, was a fairly good student (10) Excellent relations with superiors, they are much understanding; they are more friends than bosses. Enjoyable experience at working <u>WORK TASKS FELT AS ENJOYABLE</u> (1) He is manager of a big factory, important job, big responsibility important job (7) Haughty. Boss complaints of his stubbornness, even when JC's wrong. (9) Excellent relations at work, but sometimes he's stubborn and haughty and does not admit he's wrong self confident in his work issues <u>HIGH PERCEIVED EFFICACY IN WORK TASKS</u></p> | <p>(5) would avoid sex with wife. Avoided sex with wife (5) Doesn't want to marry again, had enough with his first wedding doesn't want to marry again <u>SUPPRESSION OF PAIRING</u> (6) He'd sulk and shut up t if he'd have a problem Does not disclose feeling/problems with no one <u>SUPPRESSION OF EMOTIONAL LINKING</u></p> | <p>(1) <i>Doesn't find words to describe how he felt when the car problem occurred.</i> (2) <i>does not find words to explain how he felt when father said was going to kill himself.</i> Doesn't find words to explain what are his feelings about unpleasant social situations (4) Does not find words to explain what was the relation with the woman, to whom he was in love with simultaneously with dating future ex-wife. (4) Does not find words to explain how he felt when had 2 relations simultaneously. Doesn't find words to explain his feelings about messy intimate relationships <u>DIFFICULTY DESCRIBING FEELINGS</u></p> |

Appendix 4. Descriptive Accounts

Sub-theme 1.1. Life events previous to the onset of symptoms

1. Descriptive accounts.

I have categorised the key-phrases detected in the thematic chart into 5 clusters. The first 2 clusters are composed by events that encompass the *separation* from important objects, differentiated if they are support/attachment objects (1st cluster) or libidinal objects (2nd cluster). The 3rd and 4th clusters address “customary” events (problems with health, work-school, family). The last cluster address financial issues.

Cluster 1. Separation from support objects and attachment problems Comprises the separation from objects of emotional support and attachment, non sexual objects. This includes separation from family objects to which the subject was previously emotionally attached. It is theoretically based in the concepts of Attachment, and of Dependence Basic Assumption.

Cluster 2. Separation from libidinal objects and Sexuality problems Comprises events that represent problems in the subject’s mating and reproductive area of live: separation from objects with which the subjects had a libidinal link (spouses, boyfriend-girlfriend), conflicts over the civil status (e.g. forced marriage), and problems in the sexual/reproductive domain (e.g. ambivalent initiation of sex life). This cluster is theoretically based on the concept of Pairing basic assumption.

Cluster 3. Stresses in the Family, work or school Comprises stresses imposed on the subject due to problems in the conventional institutions of family, school and workplace; in this cluster none of the life events represents a rupture of the subject with these institutions

Cluster 4. Health Problems and Accidents. Includes health problems, hospitalisations and accidents

Cluster 5. Serious financial ruin. Comprises serious financial problems, in which the subject has to resort to financial support from others, or to stealing.

Sub-theme 1.2 Psychosocial context of onset/relapse of symptoms

1. Descriptive accounts.

I have categorised the key-phrases in 8 clusters. The first 2 clusters address the area of general emotional experience (internal distress and emotional inhibition). The 3rd, 4th, 5th, 6th and 7th clusters are organized around the idea of activation and inhibition of the 3 socio-emotional basic assumptions: a) dependence-attachment-, b) fight-flight, c) Pairing–hopefulness; the 8th cluster addresses the peer pressure to use of drugs.

Cluster 1. Internal turmoil and distress Comprises pervasive traits of internal turmoil and nervousness rather undifferentiated (ex: “when I get upset I start to vomit”, “I was feeling nervous at that time. *what kind of nervousness?* Nervous in general, that’s all”), and phenomena of mental failure (“I got completely out of my mind”). It is theoretically based on the concept of fragmented emotional containment.

Cluster 2. General Inhibition of Emotional expression-linking Comprises personality traits of emotional inhibition in general when is unspecific as to what particular emotional state is inhibited from expression (ex: “I would keep my suffering for myself”), or in the form of emotional detachment from people (“I am very shy”). It is theoretically based in the concept of rigid emotional containment.

Cluster 3. Emotional dependence and traditional parental values Comprises a strong emotional attachment and its counterpart of separation distress, and also the correlated importance of assimilation of traditional parental values. For instance, traits of conscientiousness assimilated from a powerful father and strict teachers, or intense shame due to a failure to live up to conservative/strict parental values. Is theoretically based on the concept of Dependence basic assumption.

Cluster 4. Autonomy/Independence, anger and Rebellion Comprises dominant traits of autonomy and self-reliance (“At the age of 14 I was already on my own”), and of rebellion/anger against parents and family members to which the person used to be emotionally attached. Is theoretically based in the concept of Fight-flight basic assumption.

Cluster 5. Inhibition or lack of Emotional Dependence and parental responsibility This cluster is the inverse of cluster 3; comprises personality traits and interpersonal situations in which there is a deficit in the establishment of emotionally dependent connections, deficits in the ability to accept help and express separation distress (“I didn’t accept help”; “I don’t cry”), or deficits in the responsibility of the parents or the family in the well-being, support or growth of the dependent members (“my parents were irresponsible and immature”). Is theoretically based on the concept of suppression of dependence basic assumption.

Cluster 6. Inhibition or lack of aggressiveness and rebellion This cluster is the inverse of Cluster 4.; it comprises personality traits and key situations in which aggressiveness and/or rebellion are inhibited or avoided, frequently when it would be adequate to have an aggressive, assertive or rebellious response (ex: when she knew that husband was flirting around, complied to family pressure not to get angry) Is theoretically based on the concept of suppression of fight-flight basic assumption.

Cluster 7. inhibition or lack of “Joy in life”/social isolation This cluster comprises situations of social isolation (“I wished to see no-one, I wouldn’t answer the phone) an attitude of hold back to engagement with new people or a lack of enthusiasm with the future. Is theoretically based on the concept of suppression of pairing basic assumption.

Cluster 8. Peer pressure to use drugs This cluster comprises the influence of peers in drug use. Is theoretically based on the notion of peer pressure.

Sub-theme 2.1 Personality and temperament

1. Descriptive accounts.

I have assembled 8 clusters. The first two clusters are related to problems in unspecific emotional linking and containing, the 3rd and 4th with autonomy and extroversion, 5th 6th and 7th with containing and expressing aggressiveness, and the 8th with emotional dependence.

Cluster 1. Inhibition of emotional expression-linking. This cluster comprises personality traits of emotional inhibition in general (ex: “I am someone who doesn’t open his heart to no one, since I’m a child”), or in the form of emotional detachment from people (“I would not get emotionally close to other kids”). It is theoretically based in the concept of rigid emotional containment

Cluster 2. Internal distress (undifferentiated anxiety). This cluster comprises pervasive traits of internal turmoil and nervousness, rather undifferentiated (ex: “I am nervous since I was born”), It is theoretically based on the concept of fragmented emotional containment.

Cluster 3. Autonomy/independence. This cluster comprises traits of autonomy and independence of thought, not linked with aggressiveness and intimidation towards others (ex: “At 12 I decided to stop going to school and start working”).

Cluster 4. Extroversion/social dominance. This cluster comprises traits of extroversion and social dominance (ex: “all my friends in school asked me advice on how to get dressed”)

Cluster 5. Rebelliousness and Aggressiveness. This cluster comprises traits of aggressiveness and rebelliousness, and the tendency to intimidate others, be it peers or authority figures (ex: “I was always getting into fights and beating up other kids”)

Cluster 6. Sanctioned expression of aggressiveness/naughtiness. This clusters comprises the channelling of destructive impulses into socially accepted or normative ways of expression (ex: “I was normally naughty, as any other kid”)

Cluster 7. Fearfulness and Inhibition of Rebelliousness. It comprises personality traits in which aggressiveness and/or rebellion are inhibited or avoided. (ex: “I would always avoid the company of rebellious kids, I’d avoid the fuss”) Is theoretically based on the concept of suppression of Fight-flight basic assumption.

Cluster 8. Emotional Dependence. This cluster comprises a strong emotional dependence and its counterpart of separation distress. (ex: “I couldn’t stand being away from my mother”). Is theoretically based on the concepts of Dependence basic assumption.

Sub-theme 2.2 Father

1. Descriptive accounts.

I have assembled 5 clusters:

1. Bad Father (abusive, deviant) and rebelliousness This clusters comprises descriptions that convey a bad image of the father (ex: “he was an alcoholic”) and an upsetting relation with him due to his violent and abusive character (ex: “he would beat up my mother”), and responses of disobedience and rebelliousness against the “bad” father (ex: “I would not abide by father’s punishments and would escape home”)

2. Strong Traditional father /Obedience comprises an image of a solid and strong father, very demanding, capable of using physical force to punish, though not using it

arbitrarily (ex: “father would get angry with me rightly , in order only to impose respect”) and descriptions of strict obedience to him (ex “I had to oblige by father’s demands of perfectionism”)

3.Benevolent Image of and relation to father comprises descriptions of an understanding, generous, caring and possibly idealised father (ex “he was an exceptional person, greatly responsible”; “father used to protect and pamper me”)

4.Inconsistency in the image and relation comprises descriptions of inconsistency in the image of the father (ex: “he was very violent to me, I’m not saying the he’s not found of me”)

5. Emotional distance/ absent father comprises descriptions of an emotionally distant or absent father (ex: “My father was rarely at home”; “My father placed me in an orphanage when I was little”)

Sub-theme 2.3 Mother

1. Descriptive accounts.

I have assembled 5 clusters:

1. Bad Image/Upsetting relation. Comprises descriptions that convey a bad image of the mother (ex: “she is an explosive and nervous person”) and an upsetting relation with her due to violence and abuse (ex: “mother’s voodoo activities had a very bad influence on me”).

2. Conventional mother /Obedience comprises an image of a conventional mother, (ex “she was a housewife”; “mother instructed me to all the house/work”), and descriptions of obedience to her.

3.Benevolent/Protective against father’s discipline comprises descriptions of an understanding, generous, caring and possibly idealised mother (ex “she was more a friend than a mother. She would not tell me off”), who would protect the child from father’s harsh discipline (ex: “she’d try to hide things from father to avoid him punishing me”).

4.Inconsistency in the image and relation. Comprises descriptions of inconsistency in the image of the mother (ex: “mother was more calm, but suffered a lot and would vent on us”).

5. Emotional distance/ absent Mother comprises descriptions of an emotionally distant or absent mother (ex: “I wouldn’t open up with my mother”)

Sub-theme 2.4 Family-as-a-whole

1. Descriptive accounts.

I have assembled 6 clusters:

1. Conventional home/Stability Comprises descriptions of a rather traditional home, (“there was a lot of respect and harmony in the family, there was no noise”), associated housing stability (“my parents’ home is the same since I’m born”), with an

emotional tone of safeness, understanding and emotional attachment (“my Parents had always a good relation between them, they were very attached”)

2. Broken Home/Domestic violence/Housing instability It is the opposite of cluster 1; Comprises descriptions that express instability and insecurity in the home, such as domestic violence, the need to change home several times, etc

3. Incongruence between parents Comprises descriptions of strong incongruence between the parent’s personalities and educational standards (ex: “mother was the opposite of father”; “Mother was rigid in front of the father, but on his back would give me money”)

4. Rural environment Comprises descriptions of childhood life in rural areas

5. Urban degraded environment/illegalities comprises descriptions of childhood life in an urban degraded environment (ex: “we lived in a poor quarter, with lots of drug problems”) and the pervasiveness of illegalities or problems with the law in the family (ex: “my father was arrested”)

6. Poverty or economic instability Comprises descriptions of economic difficulties (ex: “my parents were very poor, and there was lack of money at home”).

Sub-theme 2.5 Troubles (Friends/Mates, School, Health)

1. Descriptive accounts.

I have assembled 6 clusters. The first two clusters have to do with problems related to school, the 3rd cluster with behaviours that clashed with the non-parental authority, the 4th and 5th with troubles in relationships with mates, and the 6th has to do with health problems.

1. Fearfulness of teachers comprises descriptions of fear related to the teachers and the school system (ex: “professor Z was a terror, he ruined many people’s life”)

2. Distressing pressures to study from parents comprises descriptions of upsetting pressures to study or obtain high school marks from parents (ex: “My Parents were very demanding with school marks, my marks were never enough for them”)

3. Problems with authority (police/school) for misbehaviour. comprises disciplinary problems at school (ex: “I was expelled out of the school at 14 years due to repeated misbehaviours) or been in trouble with the police (ex: “I was caught in train without ticket and I was taken to the police station”)

4. Difficulty getting or maintaining friends. Comprises difficulties getting or maintaining friendships and close non-sexual relationships (ex: “I felt bad inside, so I would not get emotionally close to other kids”)

5. Difficulties in intimate/ romantic relations or sexuality. Comprises difficulties in girlfriend/boyfriend relationships, such as strong disappointments (ex “I was very attracted to a boy who lived beside me, we changed house and I had a big disappointment”), or getting and maintaining close sexualised relationships (ex: “I felt disgusted with the boys who tried sex with me”).

6. Somatic problems and accident comprises somatic problems and accidents

Sub-theme 3.1 Work-group-function

1. Descriptive accounts.

I have assembled 3 clusters. The first one comprises the early start (in childhood or adolescence) of serious work tasks. The 2nd and 3rd comprise descriptions of high ability to work tasks.

1. Compelled to serious work tasks in childhood/adolescence. Comprises descriptions of a) being compelled by family to study very hard (e.g. *I was forced to study all day*) or to b) work hard at home tasks, or having started full-time working in infancy or adolescence

2. High perceived efficacy in work tasks comprises descriptions of self-satisfaction regarding the performance in work tasks (e.g. *I was very good in the job, I was soon promoted*)

3. Work tasks felt as enjoyable comprises reports in which the interviewee shows signs of taking pleasure and having good time doing work tasks (e.g. *I enjoyed all my jobs*)

Sub-theme 3.2 Emotional suppression

1. Descriptive accounts.

I have assembled 4 clusters. The first one addresses emotional suppression in general (non valency specific). The other 3 clusters are organized around the idea of suppression of the 3 socio-emotional valencies: a) Dependence, b) Fight-flight, c) Pairing

1. Suppression of emotional linking Comprises the non-expression of emotional linking in general, such as disclosing suffering, getting emotionally close to others, unspecific of what kind of emotion is suppressed (e.g. *I'd keep feelings for myself*).

2. Suppression of dependence towards significant others (parents, children, partner, brothers, etc) Comprises the non-expression of the dependence valency and emotional attachment to important objects (e.g. *I adored my baby, but I didn't want to breast feed her*)

3. Suppression of fight-flight Comprises the non-expression/inhibition of anger, hostility (*I don't keep hard feelings*), or of the urge to escape a dangerous/harming situation

4. Suppression of pairing Comprises the non-expression /inhibition of the pairing valency, as manifested in its various components: erotic attraction, sex, marriage, having babies, cheerfulness in social contacts and hopefulness in the future.

Sub-theme 3.3 Alexithymia

1. Descriptive accounts.

In the categorisation in clusters it was possible to use the 3-factor structure of alexithymia proposed by Taylor et al (1997). Hence, I've assembled 3 clusters that can

contain all the key-phrases in the thematic chart, and are correspondent to the 3 factors of the Toronto Alexithymia Scale (idem).

1. Difficulty distinguishing between feelings and bodily sensations (e.g. *I felt like... I wouldn't eat*)

2. Difficulty describing feelings to others (e.g. *When my father died I could not understand if I ought to be sad or happy*)

3. Externally-oriented thinking (e.g. *Had a more close relationship with my sister, but wouldn't share my deep feelings with her, only daily events without great relevance*).

Appendix 5.

WGFS 1.02 Psychometric procedures and assessment

Three steps composed the procedures for construction of the WGFS. First the writing down of items, secondly the items' selection and the reliability assessment of the scales, and third the assessment of the scale's validity.

Producing the items

The initial 18 items were build from the thematic analysis of semi-structured interviews to professionals and students of various fields, focused on the beliefs, values and attitudes about working groups (Barbosa, 1999). I described briefly this process in chapter 4.

A new pool of 32 items was added after a systematic literature review, to increase content validity and reliability. The detailed matching of each item of the questionnaire with the various domains of each valency is presented in appendix 6).

The response scale

The type of response scale can be included in the general category of the continuous judgement scales (Steiner and Norman, 1989). It is assumed that the variables being measured are continuous, as in most personality tests.

It is not essential 1.....2.....3.....4.....5.....6 It is absolutely essential

It is a bipolar continuous scale, with adjectival characteristics (two poles of the adjective *essential*: "it is absolutely essential"/it is not essential"),

It consists of six categories for the reason that according to psychometric studies of reliability the minimum number of categories should be between 5 and 10 in order not to reduce reliability; on the other hand it seems that people are unable to discriminate much beyond seven levels (Steiner and Norman, 1989, p. 35). In this questionnaire six categories were used Instead of seven, because I wanted to avoid the middle point of the scale, due to a series of problems with the middle category pointed out by Foddy (1993).

Factor analysis and item analysis of WGFS version 1.02

There are two main ways of constructing tests: *Factor Analysis* (FA) and *Item Analysis* (IA) (e.g. Kline, 1994). Both methods intend to guide the construction of psychometric scales that increase reliability of the test (idem), which is a necessary condition for its validity. Both FA and IA methods assess the degree to which a group of items is measuring an underlying common psychological attribute (e.g. Dependence Valency, Alexithymia, Intelligence, etc).

Factor analysis estimates how many underlying attributes (factors) a pool of items is measuring. On its hand, Cronbach's Alfa assess how reliably or consistently a pool of items is measuring one single underlying attribute (for more details see Kline, 1994; 2000).

A series of exploratory factor analyses were conducted separately with the items pertaining to each pool of valencies (Dependence, Pairing, and Fight/flight)¹. Before proceeding, it is important to describe the general procedures used, in terms of preliminary assessment of the items, factor rotation, factor extraction, factor interpretation and scale construction using Cronbach's alpha methods.

Statistical characteristics of the items in this sample

None of the items presents a normal distribution. For that reason the "unweighted least squares" method, which does not require any distributional assumptions (Pevalin, 1998; Jöreskog, 2003), was the extraction method used in the factor analyses.

Measure of sampling adequacy (MSA)

The measure of sampling adequacy (MSA)² for all the factor analysis performed was adequate (Hair et al, 1995). The exact value for each analysis is given below in the appropriate sections.

Homogenous latent structure

One of the assumptions of factor analysis is that the correlation matrix should be homogenous (Hair et al, 1995; Kline, 1994); hence in general we should avoid heterogeneous samples in terms of gender, social group, intelligence, etc, as well as outliers.

Gender differences

It is recommended to check if there are gender differences in the answers to the items before proceed with the factor analysis (Hair et al, 1995; Kline, 1994).

Only seven items (14%) out of the 50 showed gender differences significant at $p < .01$. At a 0.01 level of significance, Men scored higher on: V50 (Angry with undecided), V38 (solidarity of the leader) and V30 (flirts). Women scored higher on V27 (look to the future), V8 (will be better next time), V4 (empathy) and V3 (joker).

Some authors advocate that items shouldn't have gender differences (Hair et al, 1995, Kline, 2000). However, according to Kline (2000, p.169), if there are theoretical reasons for the differences, items should be maintained. These differences can be acknowledge by the higher scores on "social agreeableness" by women, found in other studies using big five personality inventories (e.g. Marusic and Bratko, 1998).

¹ A question may arise as to whether one factor analysis should have been made instead on the whole pool of 50 items. This was performed as well. The results were not substantially different from the separate factor analysis for each pool of items; also a 9-factor solution was rotated (based on the scree-test). However, the subscales did not attain such theoretical clarity. As the present sample is not too big and does not represent the population, it was decided to go for greater theoretical clarity and as such to use the factorial analysis of the 3 separate pools of items instead of the factor analysis with all the items.

² The statistic used was the default in SPSS, the KMO (Keiser-Meyer-Olkin's MSA)

Multivariate outliers

The multivariate outliers were calculated using Hadi distances, available in the program Stata 7.0 by the command "hadimvo". The significance level for detecting outliers was 0.01 (99%), as proposed by Hair et al (1995). Only eight multivariate outliers were detected, and these observations were taken out of the factor analyses.

Different sub-samples (clinical-non-clinical)

All factor analyses were performed in the two sub-groups (clinical conditions group, non clinical condition). The factorial structure was compared to check for consistency in both samples. Then, a factor analysis with the entire sample was conducted to check if the structure was "stable"

Rotation method

As there is still controversy about the methods of rotation, orthogonal and oblique, (e.g. Nunally, 1978) both rotations were performed to check for factorial structure. The oblique one seems to be the most adequate since it is expected that the sub-scales in each valency be correlated.

Construction of the scales

As said before, more than one factor emerged per each pool of items: the Pairing pool of items revealed 3 factors, the Dependence 2 factors and the Fight-Flight 4 factors. An interpretation of the various factors was then performed, and each factor gave rise to a psychometric scale.

Using Cronbach's Alpha to get the best possible scale

The reliability of each scale as measured by the method of Cronbach's Alfa was assessed for each scale, and the items were included in the scale if they increased the value of the alfa. After that I have factor analysed again each scale to check for consistency, and took out the new item if it caused a multifactor scale

Additionally, a General scale for each valency was built, based on item selection by analysis of the Cronbach's alpha values of the complete pool of items. The general scales, although being multifactor and thus not very refined (Kline, 1994, 2000), were used for practical reasons of economy of analysis. Hence, in the end there are a total of 12 psychometric scales: 3 general valency scales (D, P, and F) and 9 scales that differentiate subtleties within each valency:

Pairing: 1) *Excitement*; 2) *Open-mindedness*; 3) *Good Humour*

Fight/flight: 1) *Victory*³; 2) *Cruelty*; 3) *Paranoia*; 4) *Flight/Avoidance*

Dependence: 1) *Peer-solidarity*; 2) *Leader-dependency*

Pairing scales.

The Measure of Sampling Adequacy value was .81. A three-factor structure was the one that most satisfactorily yielded "simple structure" (Kline, 1994) of clearly

³ Another possible name would be *Triumph*.

interpretable factors⁴ (see Table 1). The separate analysis of the non-clinical and protomental sub-samples supported also the simple structure of a 3-factor structure. In the clinical group 47,1% of variance was explained, and in the non-clinical 43,1% was explained. In the next table are presented the factor loadings of the items.

Factor 1. "Excitement" Scale

The items with higher loadings on this factor express "libidinal excitation" combined with "intellectual excitation" (brilliant ideas, innovation). It was decided to call it "Excitation" to convey this flavour. This factor echoes characteristics of Pairing described in the literature such as "premonition of sex that obtrudes as hope" (Bion, 1961), "Atmosphere of sexual passion" (Meltzer and Harris, 1976), "eroticisation of work relationship that may increase the level of aspiration to an extraordinary extent" (Kernberg, 1978), "behavioural pairing between members" (Hinshelwood, 1989) and "shared belief that some great new idea (or individual) will emerge" (idem).

Table 1 three-factor solution of Pairing Items: Structure Matrix of Oblimin Rotation

| | Factor | Factor Loadings | | |
|--|--------|-----------------|--------------|---------------|
| | | 1 | 2 | 3 |
| V14 That the group produces brilliant ideas | | 0,561 | 0,269 | -0,312 |
| V17 That there are flirtatious people in the group | | 0,551 | -0,149 | -0,325 |
| V30 Flirtation, on occasions, can increase interest and enthusiasm | | 0,533 | | -0,148 |
| V22 That everyone's aim in a work group is to achieve innovation | | 0,524 | 0,317 | -0,233 |
| V41 that there are members from both sexes, who may complement each other | | 0,501 | | -0,194 |
| V47 that the group can achieve radical change and innovation | | 0,407 | 0,400 | -0,141 |
| V39 that the group's atmosphere is permissive and easy-going | | | 0,623 | -0,331 |
| V34 that the creativity and spontaneity of the people can flow freely | | 0,108 | 0,561 | -0,278 |
| V44 achieve consensus in the group without imposition from the leader | | | 0,350 | -0,177 |
| V11 That people don't feel satisfied/content with what is done/completed, and always look for further achievements | | | 0,318 | |
| V01 To have humour since then we can achieve anything | | 0,269 | | -0,642 |
| V03 To have a joker in the group | | 0,495 | | -0,609 |
| V06 That someone can sustain an atmosphere of hope in the group | | 0,379 | 0,222 | -0,575 |
| V08 Everyone bears in mind that if things go badly, they are likely to go better next time | | | 0,271 | -0,559 |
| V25 That each member needs someone special for intimate personal contact | | 0,419 | 0,158 | -0,460 |
| V27 To escape into planning the future when the present is difficult and morale is low | | 0,157 | 0,294 | -0,382 |
| Eigenvalues | | 3,76 | 1,82 | 1,41 |
| % variance explained | | 23,47% | 11,35% | 8,79% |
| Cronbach's Alfa of the scale | | .69 | .56 | .69 |
| General Scale's Cronbach's Alfa | | .75 | | |

Note: Boldface loadings represent the items chosen for each scale. Extraction Method: Unweighted least Squares. Rotation Method: Oblimin with Kaiser Normalisation.

⁴ The Kaiser criterion of eigenvalues bigger than 1 was on the border between 3 and 4 factors. However, the 4-factor structure was not clearly interpretable. It was decided to change the extraction criterion to Eigenvalues 1,1 in favour of obtaining a simple structure.

Factor 2. Open-mindedness Scale

The items with the highest loadings express a mix of informality, spontaneity, permissiveness, and a messianic/leaderless attitude. This seems to be a sophisticated facet of pairing described by Bion as “new-ideas that would entail development and threaten the status quo” (Bion, 1961). It corresponds to characteristics described in the literature such as “claims of innovation and partnership” (Darlington, 1998), “goals to create a better world” (Moxnes, 1998), “encouragement of others to interact, to express themselves and give opinions, friendly, through sociable and informal approaches, values of egalitarian connection” (Lion, Gruenfeld 1993), and “focus on creative leadership, and on change/renewal” (Gould, 1997)

Factor 3. “Good Humour” Scale

The items with the highest loadings of this factor express good humour, hope, playfulness, and optimism. This corresponds to characteristics described in the literature such as Friendly contact, Optimistic ideas (Bion, 1961), Denial of difficulties (Gustafson and Hartman, 1978), Joyfulness that almost reaches euphoria (MacNamara, 1982) hope in the future, whatever the evidence of the present (Darlington, 1998)

Pairing General Scale

It was constructed by item analysis. All the items were introduced initially. They were taken out one by one, until a maximum Cronbach’s alpha (.7539) was reached. The items in this scale are V01, V08, V06, V27, V03, V25, V39, V34, V14, V22, , V17, and V41.

Fight-flight scales.

The Measure of Sampling Adequacy value was .81 A four factor structure was the one that most satisfactorily yielded “simple structure”⁵ (Kline, 1994) of clearly interpretable factors. The separate analysis of the non-clinical and protometal sub-samples supported also the simple structure of a 4-factor structure⁶. In the clinical group 52,1 % of variance was explained, and in the non-clinical 53,1 % was explained

Table 2 Four-factor solution of Fight/flight items: Structure Matrix of Oblimin Rotation

| | Factor Loadings | | | | |
|---|-----------------|--------------|-------|--------|-------|
| | Factor | 1 | 2 | 3 | 4 |
| V20 That the group is motivated towards success or victory | | 0,743 | 0,103 | -0,411 | 0,171 |
| V16 That the group achieves more than any other group | | 0,652 | 0,285 | -0,282 | 0,149 |
| V35 to try hard to achieve high levels of speed and effectiveness in the actions | | 0,592 | | -0,202 | 0,105 |

⁵ The items 5. (“That everyone is completely truthful”) and 48. (to be able to do things as if all the members were one single head) were taken out of the analysis, because they were contributing to important differences between the factorial structures of the two separate sub-samples. This two items seem to be measuring “lack of individuality” and are not directly related to aggressiveness.

⁶ In both the sub-samples, the Kaiser criterion of eigenvalues bigger than 1 was on the border between 4 and 5 factors. However, the 5-factor structure was not clearly interpretable. It was decided to change the extraction criterion to Eigenvalues 1,2 in favour of obtaining a simple structure.

| | | | | |
|---|--------------|--------------|---------------|--------------|
| V31 That all the members are selflessly committed to victory over competitors | 0,590 | | -0,287 | 0,120 |
| V37 to be able to take courageous and drastic measures when the group is threatened | 0,400 | 0,328 | -0,212 | 0,145 |
| V40 to leave behind those who cannot keep up with the group's pace | 0,705 | | 0,301 | 0,705 |
| V50 to get angry with the difficult or uncommitted members who hinder the group | 0,163 | 0,651 | -0,156 | 0,285 |
| V23 The group rebels against members who try to oppress others | 0,131 | 0,591 | -0,282 | 0,276 |
| V26 To follow the decisions/resolutions of the stronger and more ambitious members | 0,310 | 0,431 | -0,312 | 0,350 |
| V18 The group should beware of suspicious members | 0,268 | 0,377 | -0,748 | 0,341 |
| V10 That everyone bears in mind that there will always be destructive people in the group | 0,221 | | -0,692 | |
| V45 to be able to identify our enemies | 0,421 | 0,284 | -0,592 | 0,239 |
| V07 That members should be aware of destructive and suspect elements in the group | 0,271 | | -0,567 | 0,203 |
| V28 To find out who is responsible for the problems in the group | 0,394 | 0,147 | -0,538 | 0,142 |
| V13 that the group gives up when things get too difficult | | 0,280 | -0,124 | 0,620 |
| V43 to be realistic about succeeding or failing | 0,228 | | -0,248 | 0,576 |
| V36 to keep an emotional distance and avoid getting over-involved with things | 0,131 | 0,221 | -0,166 | 0,392 |
| V32 that the people can get distracted with stuff not relevant to the group's objective | | 0,197 | | 0,265 |
| | 4.27 | 2.03 | 1.54 | 1.28 |
| <i>Eigenvalue</i> | | | | |
| % variance explained | 23.75 | 11.29 | 8.56 | 7.15 |
| Cronbach's Alfa of the sub-scale | .72 | .71 | .76 | .59 |
| General Scale's Cronbach's Alfa | | | | |

Note: Boldface loadings represent the items chosen for each scale. Extraction Method: Unweighted least Squares. Rotation Method: Oblimin with Kaiser Normalisation.

Factor1. Victory Scale

Is composed by items that express willingness to win over competitors, and to succeed. This seems to be a non-sadistic aggressiveness, more to do with triumph if used as a manic defence. This corresponds to characteristics described in the literature such as "The welfare of the individual is of secondary importance". "The paramount need is for the group to survive", "demand for courage and self-sacrifice" (Bion, 1961), "strategic focus on efficiency and control" (Schneider, Shrivastava 1988) "competitive or hostile environment", "Combativeness to succeed" (Atherton, 2001), "fight against the day-to-day challenges" (Palmer, 2001), "Competition for scarce resources" (Rosen, D 2001).

Factor2. Cruelty Scale

Is composed by items that express rage, lack of compassion, and irritation. This corresponds to characteristics described in the literature such as "Anger and hate are the cement that joins all the emotions", "being extremely irksome to some individuals",

“sense of incapacity for understanding and love” (Bion, 1961), “aggressive outbursts of rebellious behaviour” (Kernberg, 1978), “criticism of others, fighting among group members” (Lion, Gruenfeld 1993), “conflicts around aggressive control, readiness to fight” (Kernberg, 1980, p. 6), “members attacked for not doing their duty for the group” (Karterud, 1990)

Factor 3. Paranoia Scale

Is composed by items that express attention to hidden persecutors, suspiciousness and scapegoating. It corresponds to characteristics described in the literature such as “the first requisite is to recognize the existence of an enemy”, “The leader usually someone with paranoid trends” (Bion, 1961), “scapegoating” (Brown, 1985), “suspiciousness, and dread of annihilation” (Kernberg, 1980, p. 6), “leader carefully scrutinizes the environment for signs of danger” (Schneider, Shrivastava 1988), “fear of persecution by powerful enemies”, “Sensitivity to danger and threat” (Gould, 1997).

Factor 4. Flight/Avoidance Scale

Is composed by items that manifest escape from difficulties, anticipation of failure and emotional avoidance. This corresponds to characteristics described in the literature such as “running away from the neurosis” (Bion, 1961) “withdrawal, talking about an unrelated subject”, “not accepting the task”, “passive resistance” (Lion, Gruenfeld 1993), “avoidance of the problem or withdrawal from participation” (Karterud, 2000), “day-dreaming, talking about irrelevant material, failing to turn up, Avoid problems and back off from conflicts it may be not able to win” (Atherton, 2001).

As the flight scale has a very low alfa value, I tried to find more items to add to it. Firstly I did correlations of the flight score with all the items that were congruent with the flight component described in the literature. The items V42 (to avoid conflicts that may cause people to feel unsafe) that had been discarded from Dependence pool was included. Also included was the item V25 (That each member needs someone special for intimate personal contact), from the Pairing pool, but which also conveys the idea of flight from task described in the literature.

| Item | Factor Loading |
|---|----------------|
| V43 to be realistic about succeeding or failing | .667 |
| V13 that the group gives up when things get too difficult | .654 |
| V25 That each member needs someone special for intimate personal contact | .597 |
| V36 to keep an emotional distance and avoid getting over-involved with things | .522 |
| V42 to avoid conflicts that may cause people to feel unsafe | .504 |
| V32 that the people can get distracted with stuff not relevant to the group's objective | .405 |
| V40 to leave behind those who cannot keep up with the group's pace | .397 |
| Cronbach's Alfa | .59 |

Fight/Flight General Scale

All the items were introduced one by one, until a maximum Cronbach's alpha (.8004) was reached. The items in this scale are V20, V16, V35, V31, V37, V26, V45, V28, V18, V07, V10, and V50.

Dependence Scales

The Measure of Sampling Adequacy value was .88. A two-factor structure was the one that most satisfactorily yielded “simple structure”⁷ (Kline, 1994) of clearly interpretable factors. The separate analysis of the non-clinical and protometal sub-samples supported also the simple structure of a 2-factor structure. In the clinical group 53,1 % of variance was explained, and in the non-clinical 46,8 % was explained

Table 3 Two-factor solution of Dependence items: Structure Matrix of Oblimin rotation

| | Factor Loadings | | |
|---|--|--------------|--------------|
| | Factor | 1 | 2 |
| V29 That the group is very helpful to those who are less able and most in need | | 0,743 | 0,506 |
| V15 That everyone listens to, and understands, each other | | 0,625 | 0,295 |
| V33 To listen carefully to the more experienced members and to learn from them | | 0,695 | 0,324 |
| V12 To enjoy each other's company because it will make the group more productive | | 0,677 | 0,554 |
| V09 Members are totally available to help each other | | 0,639 | 0,364 |
| V19 Members need each other to achieve their learning | | 0,571 | 0,362 |
| V21 That everyone's aim in a work group is to increase the maturity of group members | | 0,563 | 0,390 |
| V02 That everyone learns from those with more experience in the group | | 0,481 | 0,434 |
| V38 to obtain support and solidarity from the group's leader | | 0,311 | 0,604 |
| V46 to entrust the responsibility to someone wise and more able | | 0,375 | 0,597 |
| V24 the group members' aspire to be good, generous and saintly people | | 0,364 | 0,452 |
| | | 4.17 | 1.22 |
| <i>Eigenvalue</i> | | | |
| | % variance explained | 37.95 | 11.13 |
| | Cronbach's Alfa of the scale | .79 | .66 |
| | General Scale's Cronbach's Alfa | .83 | |

Note: Boldface loadings represent the items chosen for each scale. Extraction Method: Unweighted least Squares. Rotation Method: Oblimin with Kaiser Normalisation.

Factor 1. Peer solidarity Scale

Is composed by items that express inter-help between members and compassion towards people's difficulties and need for maturation. This corresponds to characteristics described in the literature such as “the individual is attempting to get help for his problem” (Bion, 1961), “attitude expectant of benevolence, generosity, peace and good will” (Meltzer, Harris, 1976). “considering oneself immature” (Kernberg, 1978) “longing for a permanent and comprehensive support” (Sutherland, 1985) “members feel united by a common sense of needfulness, helplessness” (Kernberg, 1980, p. 6) “inclination to depend on others for help and direction”, “members are submissive and friendly, tend to trust and identify with others, wanting to help others and hopes to be helped and protected”, “identifying with those in need” (Lion, Gruenfeld 1993), “expressions of weakness, helplessness, and fear of initiative” (Karterud, 2000, p. 120).

⁷ The items 42. (to avoid conflicts that may cause people to feel unsafe) and 49. (to observe meticulously the established rules, customs and procedures) were taken out of the analysis, because they were contributing to important differences between the factorial structures of the two separate sub-samples. This two items seem to be measuring “conformism” and are not directly related to dependence.

Factor 2. Leader dependency Scale

Is composed by items that express some idealisation of the leader, projection of responsibility to the leader, and need of support from a leader. This corresponds to characteristics described in the literature such as “providing security for the immature organism”, “worshipful devotion to the leader” (Bion, 1961) “leader represents thought, planning and carrying responsibility” (Meltzer, Harris, 1976), “efforts to extract knowledge, power and goodness from the leader” (Kernberg, 1978), “projections of omnipotent fantasies on the group leader”, “appeals for support, direction, approval, or undue attention from the leader” (Karterud, 2000).

Dependence General Scale

All the items were introduced one by one, until a maximum Cronbach's alpha (.8346) was reached. The items in this scale are V02, V33, V21, V19, V12, V29, V09, and V15.

Some Indicators of the scales' Validity

The term *Validity* means that a test actually measures what it claims to measure (e.g. Kline, 1993). Unlike reliability, there is no single figure that indicates test validity; instead it is a subjective issue, which cannot be settled by the production of some clear statistic (Kline, 1993, p. 13-15). There are many operational definitions in the literature, such as “face validity”, “concurrent validity”, “predictive validity” and “construct validity”.

It is claimed that the valency scales measure the activation and containment/regulation of 3 socio-emotional systems in the individual. The validity was tested using the idea of “Construct validity”⁸ (Cronbach and Meehl, 1995; Kline, 2000) a in two steps of hypothesis.

1st Group of validation Hypothesis. As the 3 psychometric valency scales are intended to measure 3 different socio-emotional systems (D, P, and F), hence they are expected to be associated with other data from the participants that have a logical connection to the specific emotional field of each valency, namely:

1. Fight/flight valency scores should be associated with a) being a military and with b) the participants' self-report of “driving very fast”.
2. Pairing valency scores should be associated with a) self-report of sexual/erotic interest and with b) having a “creative-humanistic” profession.
3. Dependence valency scores should be associated with a) being a non-autonomous dependent member (e.g. being a housewife) instead of having a professional career, and with b) being married instead of being single.

2nd Group of validation Hypothesis As the valency scales claim to measure emotional containment/regulation, hence they are expected to be associated with a standard measure of deficits in emotional containment (Alexithymia). We expect a curvilinear relation of the valency General Scales with alexithymia scores (i.e. the higher

⁸ Construct validity is usually the chosen approach for personality tests, because it is difficult to establish its validity by means of any of the other methods (Kline, 1993). It consists in “setting up a number of hypotheses, derived from the nature of the measured variables, and putting them to test” (Kline, 2000, p.25-29).

and lower extremes of valency scores are associated with a decrease in emotional containment/regulation corresponding to an increase in Alexithymia).

Validity criteria

In order to have some indication of the scales' validity, some information gathered in the 2nd and 3rd part of the WGFS questionnaire was used as validation criteria. These questions concern demographic variables (age, sex, gender, professional activity, marital status, geographical origin), and also concern the self-report of behavioural tendencies such as questions about driving speed and sexual interest.

Differences in clinical and non-clinical groups

The validity criteria can be different in healthy or psychologically ill people: in healthy people, a linear and clear correspondence is expected between feelings, thinking and behaviour, so that the professional activity, behaviour tendencies and other overt manifestations of a person's life are congruent with their internal emotional life (valencies). On the other hand, in non-healthy people it is expected to find distortions in these relations.

For example, it is expected that in the healthy sample the people that are more sexually aroused reply according to it openly in answering both to the question about sexual interest and to the Pairing Excitation valency scale questions, (which do not ask openly about sexuality); Contrastingly, in sexually traumatised and/or inhibited patients, the experience of intense sexual feelings can be strongly repressed and displaced in unconsciously eroticised behaviours (e.g. Williams, 1994). In this case, if people are trying to deny or they repress strongly their sexual impulses, the pairing valency could be negatively, instead of positively related with the direct question about sexual interest. Hence the negative relation should be interpreted as a correct sign of psychopathology in the sexual domain, thus contributing to the validity of the test.

To overcome this problem the total sample was split in two: 1) clinical condition subjects (psychosomatic, addictions and para-suicide) and 2) non clinical condition subjects (non-clinical group and the non-psychosomatic skin condition subjects). The validity analyses were made separately for each sub-sample, and interpreted accordingly.

Validity of Pairing Scales

The pairing valency is supposed to be positively related to overt sexual feelings; according to Bion (1961, p.151) Pairing characteristic feelings are "itself both a precursor of sexuality and part of it". Hence we used the question 2.9 of the questionnaire "do you lack sexual interest?" as a validity criterion⁹.

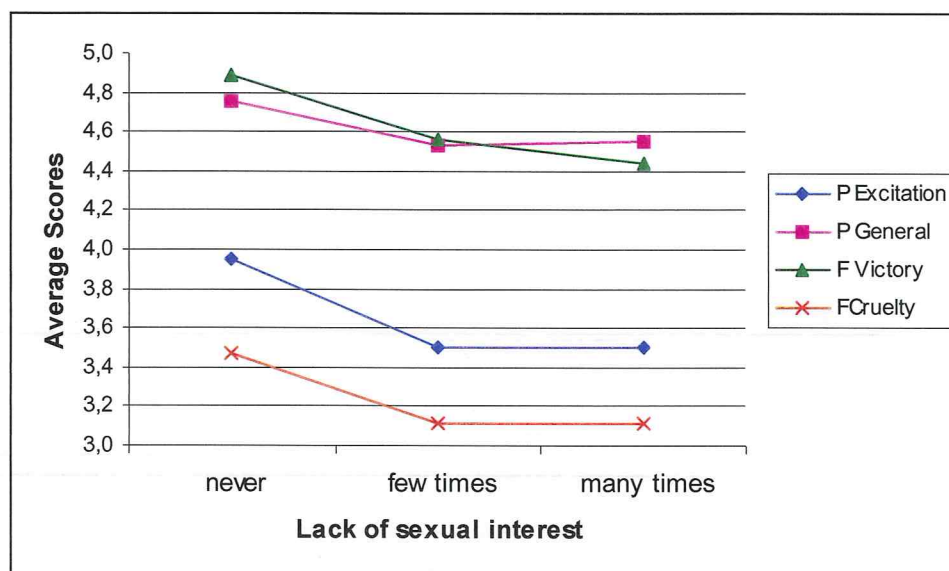
⁹ It is known that the frequency of sexual intercourse is greater in younger people than in older people (Deeks and McCabe, 2001), and is greater in males than females (Walsh, 1995). It was verified that question 2.9 ("lack of sexual interest") cannot be ruled out as valid measure of sexual interest, since it shows a significant positive correlation with age ($r_s=.259$; $p<.001$) and female gender ($r_s=.281$; $p<.001$).

Non-clinical subjects

In the non-clinical condition sub-sample, this question is negatively correlated with the scale of Libidinal Excitation ($r_s = -.217$; $p = .012$). This means that the less the subjects refer “lack of sexual interest”, the more they score in this scale.

However, significant correlations were also found (although slightly weaker) with the scales of F General ($r_s = -.211$; $p = .014$) F Victory ($r_s = -.203$; $p = .017$) and F Cruelty ($r_s = -.176$; $p = .034$), whereas none of the other scales’ correlations reached statistical significance.

Graphic 1 Average Scores on P Excitation, P General, F Victory and F Cruelty Scales by Lack of Sexual interest



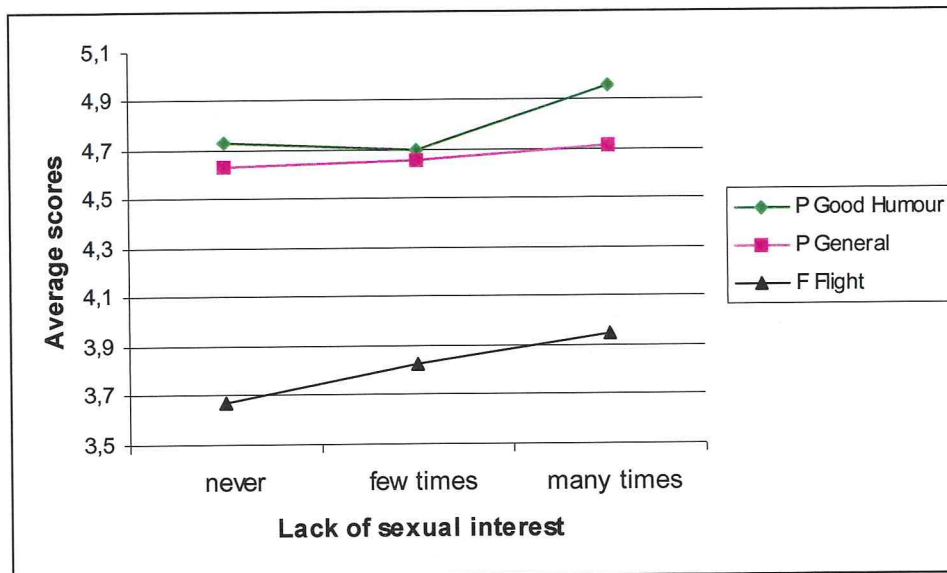
For these results to be indicators of validity, some evidence should exist that *sexual interest* is related also with aggressiveness (supposedly measured by the F scales). This seems to be the case: the close association between sexual interest, aggressiveness and libido has been pointed out by psychoanalysis, in particular kleinian, namely in the notions of sadism and epistemophilic drive (e.g. Hinshelwood, 1989). Moreover, while on the one hand studies have so far demonstrated a relationship between measures of testosterone and aggression both in males and females (Ehlers et al, 1980; Olweus et al, 1988), on the other it was found that sexual stimulation increase testosterone levels (Krussman et al, 1986), which confirms the biological association between sexual interest and aggressiveness.

In this case the correlations of the scales P Excitation, F Victory and F Cruelty with the question 2.9 not only contributes to the validity of the P excitation scale but accidentally also the two mentioned F scales.

Clinical groups

In the clinical conditions sub-sample, however, there is a positive correlation of the same question 2.9 (“lack of sexual interest”) with the scale P Good Humour ($r_s = .115$; $p = .046$) and also with the scale F Flight ($r_s = .141$; $p = .020$), as illustrated in the next graphic (the average scores of P general are also presented for illustrative reasons only). None of the other scales correlations’ achieved statistical significance.

Graphic 2 Average Scores on P Good Humour, P General and F Flight by Lack of Sexual Interest (Proto-mental sub-sample)



The correlation of P Good Humour with lack of sexual interest in the clinical sub-sample can be interpreted as the phenomenon of repression and displacement of sexual interest into a hysterical/histrionic cheerfulness, social agreeableness and seductiveness (Williams, 1994).

The correlation with F flight requires some existing evidence that *lack of sexual interest* is related with anticipation of defeat and failure and emotional avoidance. There are claims that stress induced by defeat naturally depresses testosterone levels (Christiansen et al, 1985).

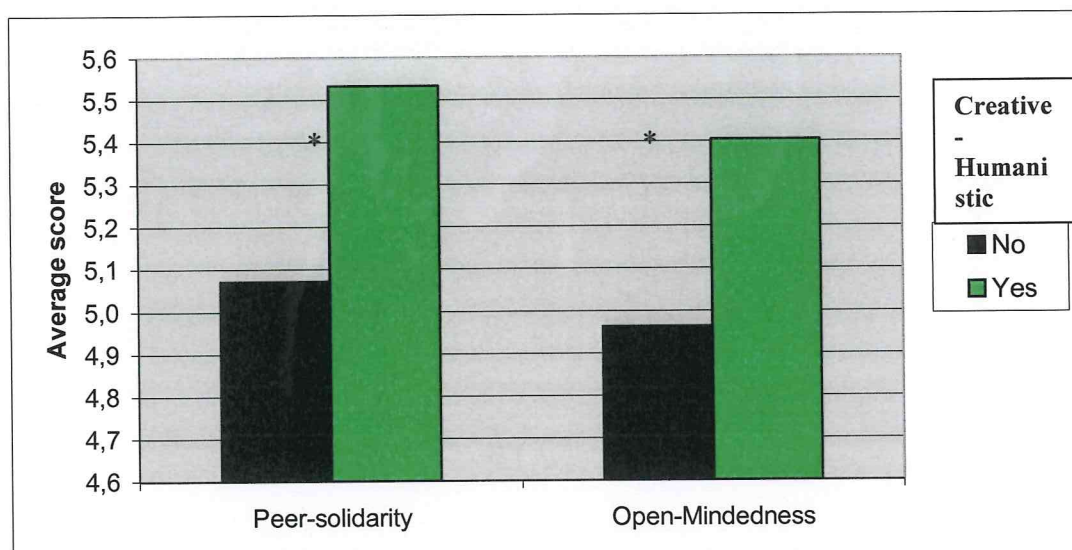
Bion describes pairing basic assumption as based on friendly contact, and where discussion of individual problems becomes possible. Lion and Gruenfeld add similar characteristics such as encouragement of others to interact, to express themselves and give opinions, friendly, through sociable and informal approaches, values of egalitarian connection (Lion, Gruenfeld 1993). Therefore it is expected that people with higher Pairing valency would choose professions of the creative-humanistic more than the bureaucratic and mechanical professional activities.

By "creative-humanistic" it is meant the engagement with people in a positive atmosphere, flexible, expressive, by opposition to engagement in bureaucratic, mechanical or managerial tasks. Considered as creative-humanistic were professor, occupational therapist, football player, psychologist, and tourism staff. Non creative-humanistic professions were considered administrative tasks such as clergy, and concrete tasks: sales, electrician, housewife, military, and informatics. Tasks that can be considered in between, such as public relations, architect, as well as students, were taken out of the analysis.

Non-clinical subjects

In the non clinical condition sub-sample, the subjects who have creative-humanistic professional activities (N=20) have higher scores on the scales of P Open-mindedness ($z=-2,5$; $p=.010$) and Peer-solidarity ($z=-2,19$; $p=.028$) than subjects with non-creative-humanistic professional activities (N=23). Furthermore, there are no significant differences in any of the other D, F or P valency scales. These results are illustrated in Graphic 3

Graphic 3 Average Scores on *Open-mindedness* and *Peer-solidarity* scales, by *Creative-Humanistic* profession



Legend: mean differences significant at level * $p < .05$

In the clinical sub-sample this hypothesis was not tested due to the huge difference of numbers on the two groups (17 in the creative-humanistic against 121 in the non-creative-humanistic)

Validity of Fight/Flight Scales

The Fight/flight scales are supposed to be related to overt aggressive (Fight) or fearful/avoidant (flight) behaviours. Firstly we used the question “do you like to drive fast in cars or motorbikes?” as a criterion¹⁰. In Portugal, the fast driving is commonly called “aggressive driving”. A renowned association of road users even calls the alarming road accidents’ phenomena in Portugal a “civil war”.

Healthy subjects

In the non clinical condition sub-sample, the question “do you like to drive fast in cars or motorbikes?” is positively correlated with the scales of FVictory ($r_s=.193;p=.02$), and F Cruelty ($r_s=.164;p=.042$) and negatively correlated with the scale of Flight/Avoidance ($r_s=-.150;p=.056$). These correlations contribute to the validity of the F scales: while the active aggressiveness scales (Cruelty and Victory) are associated with increased pleasure in “aggressive driving”, the fearful/avoidant scale (Flight/avoidance) is associated with decrease in the same item. None of the correlations with other valency scales achieved statistical significance.

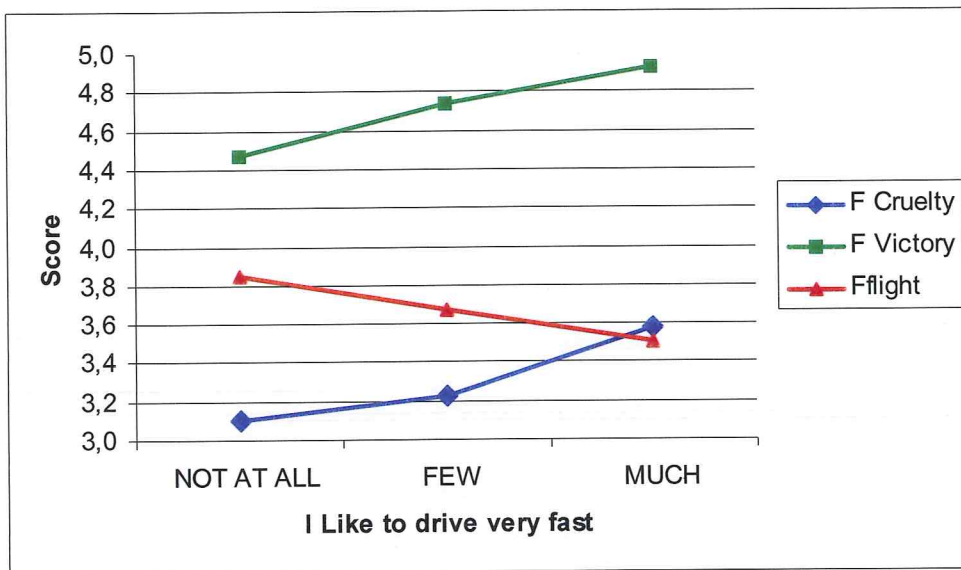
¹⁰ It is known that driving speed and road accidents are greater in younger than in older people, and greater in males than females (Palamara and Stevenson, 2003). . It was verified that question 2.1 (“I like to drive very fast”) cannot be ruled out as valid measure of fast/dangerous driving, since it shows a significant negative correlation with age ($r_s=-.322;p<.001$) and female gender ($r_s=-.319;p<.001$).

Clinical groups

As to the protometal sub-sample, the negative correlation with F Flight/avoidance was also significant ($rs=-.178$; $p=.004$), but negative correlations with D Leader-dependency ($rs=-.144$; $p=.017$) and P Good-Humour ($rs=-.173$; $p=.006$) were also found.

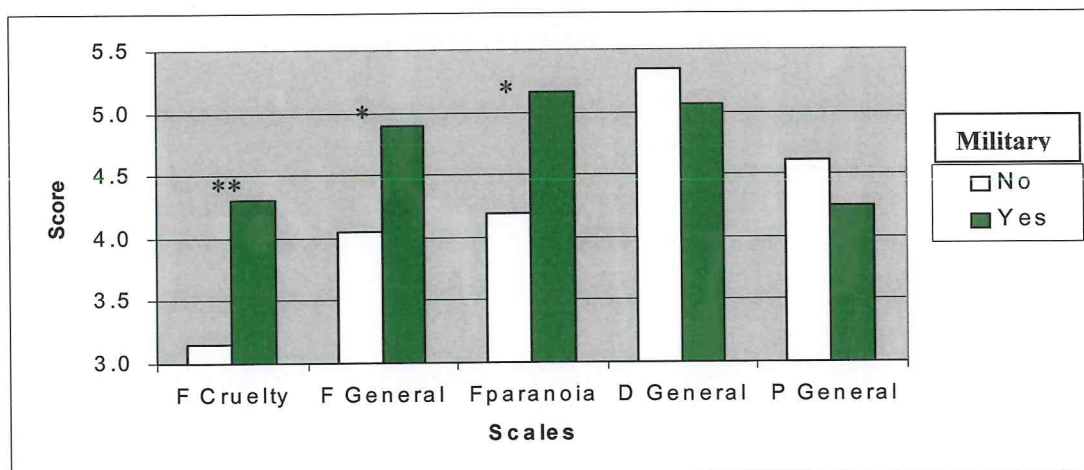
In this sub-sample, fast driving seems not to be related to aggressiveness, but instead as an expression of “bad humour” (negative correlation with “P Good-Humour”) and of “rebelliousness” against established rules (negative correlation with D Leader-dependency). In a study of 5080 drivers in an effort to find out what factors contributed to them speeding in the first place, it was found that among the many causes of “speed variation” there were psychological factors (risk tolerance, social deviance, thrill-seeking) and mood states (Quimby et al, 1999). In other study it is stated that subjects who demonstrate a high disposition for violating formal and informal road rules are more likely to report committing speeding traffic offences (Palamara and Stevenson, 2003, p.15).

Graphic 4 Average scores on F General, Fvictory and F Flight by Drive very Fast



In addition, Fight/flight basic assumption is supposed to be related to the army culture (e.g. Bion, 1961). Therefore, we used the military professional activity (yes or no) as a validity criterion, since people with higher Fight-flight valency are expected to be in the army.

Graphic 5 Scores on several valency scales, by military professional activity



Legend: mean differences significant at level * $p < .05$; ** $p < .01$

In the non-clinical conditions sub-sample, the subjects who are professional military personnel have higher scores on the scales of General Fight-flight ($z = -2,4$; $p = .014$), F Paranoia ($z = -2,0$; $p = .045$) and F Cruelty ($z = -2,0$; $p = .045$) than subjects with non-military professions. Furthermore, there are no significant differences in any of the other D or P valency scales. These results are illustrated in Graphic 5. The scales general D and P scales are depicted also for comparative reasons.

In the clinical sub-sample there were no significant differences in any of the scales.

Validity of Dependence Scales

The decision to marry and stay married is normally under an oath, and an effort for maintenance, of fidelity, inter-help and solidarity, and represents a regulation of gender relationships by traditional rules, in most of the cases religious commandments. These same values are also characteristic of the Dependence valency. It is therefore expected that married people would have higher scores in the Dependence scales by contrast with people who are not married.

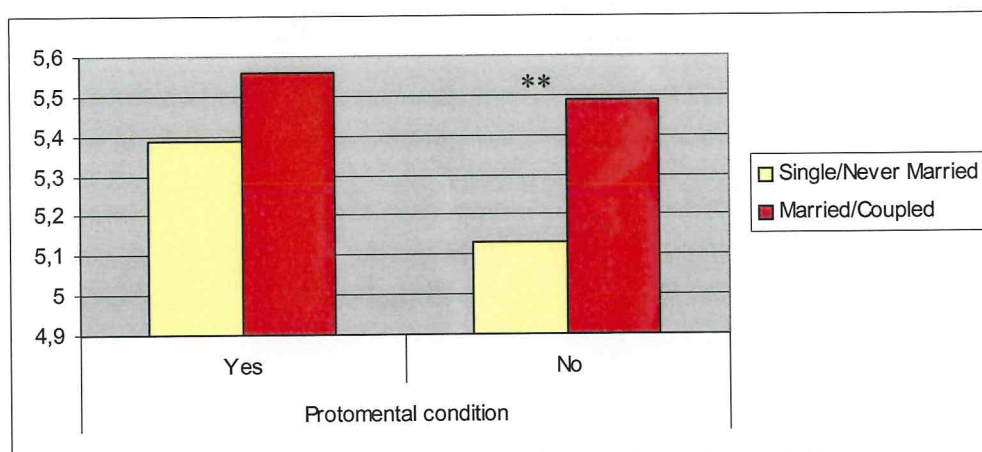
Non-clinical subjects

In the non clinical sub sample, married/coupled people have significantly higher scores on the scales of *General Dependence* ($F[1,154] = 9.49$; $p = .003$), *Leader-Dependency* ($F[1,154] = 5.039$; $p = .027$) and *Peer Solidarity* ($F[1,154] = 9.92$; $p = .002$) than single/never-married people. There are no significant differences in the other scales

clinical groups

In the clinical conditions sub-sample, married people also have higher scores on the *Leader-Dependency* ($F[1,154] = 8.99$; $p = .003$) scale, but not on the other D scales. Furthermore, married people score higher on all the Fight/flight scales except F Paranoia.

Graphic 6 Scores on D General, by Civic Status and Protomental condition

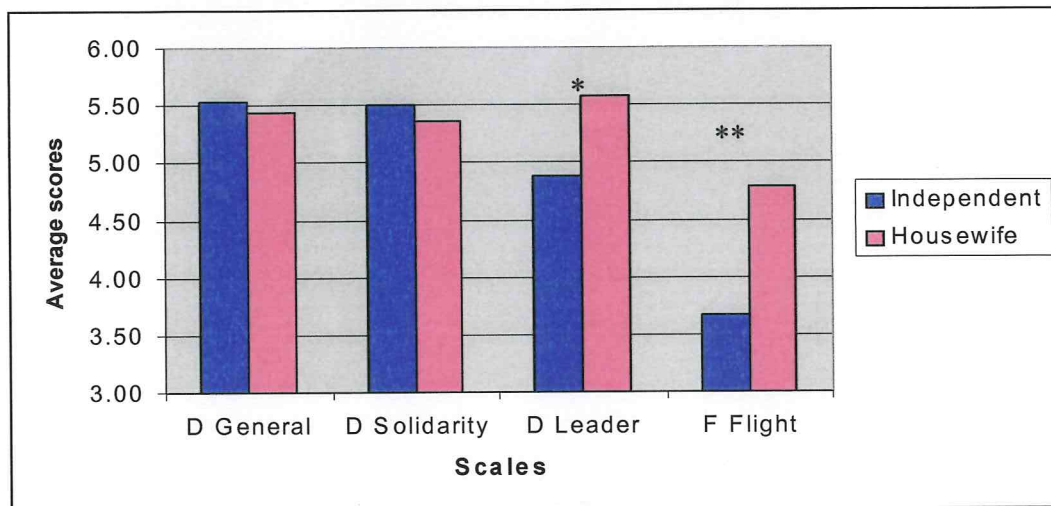


Legend: mean differences significant at level ** $p < .01$

It is also expected that Dependence valency should be higher in women whose occupation is homemaker (and hence are economically dependent from their partners) by contrast with women that have their independent professional activity. As is illustrated in Graphic 7, again in the non-clinical sub-sample, homemakers have greater scores on D

Leader-Dependency than women with careers ($z=-2.11$; $p=.038$), while there are no significant differences in all the other scales (except for the F Flight Scale, where homemakers score higher than women with careers [$z=-2.49$; $p=.008$]).

Graphic 7. Female Scores on *D Scales* and *F Flight*, by *Professional activity*



Legend: mean differences significant at level * $p < .05$; ** $p < .01$

In the next two tables are summarised the relations found between the scales and the validity questions

Table 4 non clinical sub-sample. Validity indicators of WGFS scales

| | <i>Lack of Sexual interest</i> | <i>Humanistic-creative profession</i> | <i>Speed driving</i> | <i>Army Profession</i> | <i>Married versus Single</i> | <i>Housewife versus independent career</i> |
|----------------------------|--------------------------------|---------------------------------------|----------------------|------------------------|------------------------------|--|
| Pairing General | | | | | | |
| P Excitation | - | | | | | |
| P Open-mindedness | | + | | | | |
| P Good-Humour | | | | | | |
| F General | - | | + | + | | |
| F Victory | - | | + | | | |
| F Cruelty | - | | | + | | |
| F Paranoia | | | | + | | |
| F Flight/ Avoidance | | | - | | | + |
| D General | | | | | + | |
| D Peer-solidarity | | + | | | + | |
| D Leader-dependency | | | | | + | + |

Table 5 Clinical groups sub-sample. Validity indicators of WGFS scales

| | <i>Lack of Sexual interest</i> | <i>Speed driving</i> | <i>Army Profession</i> | <i>Married versus Single</i> | <i>Housewife versus independent career</i> |
|----------------------------|--------------------------------|----------------------|------------------------|------------------------------|--|
| Pairing General | | | | | |
| P Excitation | | | | | |
| P Open-mindedness | | | | | |
| P Good-Humour | + | - | | | |
| F General | | | | + | |
| F Victory | | | | | |
| F Cruelty | | | | + | |
| F Paranoia | | | | | |
| F Flight/ Avoidance | + | - | | + | |
| D General | | | | | |
| D Peer-solidarity | | | | | |
| D Leader-dependency | | - | | + | |

Appendix 6. Matching of valency domains with Items of the WGFS 1.02 questionnaire.

1. Pairing

| Author | PAIRING: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
|---------------------------------|--|----------|--------------------|
| Bion, 1948-51, Schermer 1985 | Messianic hope, Air of hopefulness and expectation, Optimism Messianic myths; The birth of the hero | 6, 8 | |
| Bion, 1948-51 | Divert attention to some supposedly future event | 6 | 27 |
| Sherwood, 1967 | Great emphasis on future happiness and achievements | 8 | 27 |
| Neri, 1995 | Problems will be solved by a future event | 8 | 27 |
| Gould, 1997 | Realistic future orientation | 8 | 27 |
| Darlington, 1998 | Hope in the future, whatever the evidence of the present ... | 8, 6 | |
| Moxnes, 1998 | Futuristic fantasies | | |
| Bion, 1948-51 | It is essential that the leader should be unborn The messianic hope must never be fulfilled The messiah is notable only in being one with the rest of us (i.e., not being the messiah) | | 11, 27 |
| Sherwood, 1967 | Leader is unborn individual or idea | | |
| Meltzer, Harris, 1976 | Leaderless | | 44 |
| Karterud, 1990) | The group as self-sufficient, seemingly needing no leader | | 44 |
| Gould, 1997 | Leader must remain unborn Repression and denial of one's sexuality | | 44 |
| Moxnes, 1998 | If anybody endeavours leadership will be ostracized | | 44 |
| Bion, 1948-51 | Feeling of hope is itself a precursor of sexuality and part of it Premonition of sex that obtrudes as hope The impulse to pair may be derived from primitive oedipal conflicts Marriage seen as the solution to neurotic disabilities Atmosphere of sexual passion | | 30 |
| Meltzer, Harris, 1976 | Oedipal sexual temptations | | 30 |
| Kernberg, 1978 | "Sexual teasing" among staff Eroticisation of work relationships may be enhancing Exhilarating experience of men and women who work together Something sexual and wonderful | | 30 41 |
| Gustafson Hartman, 1978 | Magical sexual union Intimacy and sexual union as a protection | | |
| Kernberg, 1980 | Genital character Condensation of oedipal and pre-oedipal object relations | | 41 |
| Schermer 1985 | Abundant with sexual metaphors | | 41 |

| | | | |
|--|---|--------------------------------|--|
| Karterud, 1990 Gould, 1997 Karterud, 2000 Lion, Gruenfeld 1993 Moxnes, 1998 | Libidinal excitement Metaphors or loaded symbols may stimulate sexual fantasies Sexually extroverted Fertilization symbols | | 17, 41 17, 25 30 |
| Author | PAIRING: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| Bion, 1948-51 Meltzer, Harris, 1976 Hoggett, 1992 | The enjoyment of the sexual feeling is justified by an outcome supposed morally unexceptionable Equation of natural and kindly Removal of locus of instinctual prohibition All kinds of reprehensible acts in the name of its ideal | | 30 34 30, 39, 34 |
| Kernberg, 1978 Atherton, 2001 | Increases the level of aspiration to an [extraordinary] extent The expectations of a solution can be very high | 1 | 11, 47 47 |
| Karterud, 1990 Gould, 1997 | Creative experience Creative group Recognition of a pair as a source of creativity Creative leadership | 14 14 | 34 34 25 |
| (MacNamara, 1982) Karterud, 1990 Gould, 1997 Darlington, 1998 Karterud, 2000 Lion, Gruenfeld 1993 | Joyfulness which almost reaches euphoria Exalted euphoria of the fusion Lively, hopeful, joking, and euphoric group Vicarious pleasure Maintenance and promotion of feelings of good will Context is light and cheerful Idyllic flavour socially extroverted, friendly, informal approaches others as equals, values egalitarian connection | 3, 1 3, 1 3 3, 1 1 | 17 30 17 17, 34 39, 44 39, 34 39, 34, 44 |
| Bion, 1948-51 Gustafson Hartman, 1978 Kernberg, 1980 Hishelwood, 1989 | Person or idea that will save the own or another group of feelings of hatred, destructiveness and despair Group will be saved from the conflicts Saving idea to protect the group Create the wherewithal for salvation Share the belief that some great new idea (or individual) will emerge | 3, 6 8 14 | 27 27 27, 47 |
| Gustafson, Hartman, 1978 Gould, 1997 Darlington, 1998 | Denial of difficulties Denial of despair Repressed or denied rivalry, competition, and sexual jealousy Repression and denial of one's sexuality Denial of death | | |
| Bion, 1948-51 Brown, DG, 1985 Gould, 1997 Darlington, 1998 | New-ideas that would entail development and threaten the status quo Group therapy would revolutionize society Revolutionary zeal Change, renewal Claims of innovation | 22 | 47 47 47 47 |

| | | | |
|---|---|-----------------|--------------------------------|
| Moxnes, 1998 Billow, 2001 | Goals are to create a better world Exaggerated curiosity | | |
| Author | PAIRING: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| Bion 1948-51 Brown, DG, 1985 Gould, 1997 Darlington, 1998 Karterud, 2000 Schneider, Shrivastava 1988 | Friendly contact without divulging the anxiety against which wishes to be reassured Wishes for merging Recognizing and supporting special relationships (pairings) Claims of partnership Intimacy, friendliness and unusual interest or responsiveness intimacy should have a messianic flavour of hope and optimism individually, members do not have the capacity together will create the necessary synergy to create and innovate | | 25, 30 25 25 25 30 |
| Bion, 1948-51 Hinshelwood, 1989 Gould, 1997 | Group would sit in attentive silent to the pair Behavioural pairing Mobilization, Idealization, Identification and maintenance of the pair in order to sustain hope | | 25, 30 25, 30, 41 25 |
| Karterud, 1990 | Occur at those times when the group is most in danger of ending and dissolving | 8 | 27 |
| Gould, 1997 Brown DG | Recognition of separateness and fear of exclusion Jealous for being excluded (from the pair) | | 44 44 |
| Bion, 1948-51 Lion, Gruenfeld 1993 | Discussion of individual problems becomes possible Encourages others to interact, express themselves and give opinions | | 25 |

2. Dependence

| Author | DEPENDENCE: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
|--|---|----------|----------------------------|
| Bion(1961) Karterud, 1990 Karterud, 2000 Billow, 2001 | Guilt depression major affective disorders and neuroses had a high valency for dependency Major depressions have a strong tendency to react with dependency melancholic worry and guilt | 4 | |
| Bion 1961 Sherwood, 1967 (Gustafson, Hartman, 1978) Hirschhorn, 1988 Schneider, Shrivastava 1988 Gould, 1997 | There is little overt contact between the individuals (peers)... Inefficiency in group relationships Communication between members (peers) is considered out of place and ineffectual Overt devaluation of other group members People treated one another as siblings Clones, created in the image of the boss Levelling of peers | | 33 46 33, 46 |
| Bion 1961 Hirschhorn, 1988 Gould, 1997 Karterud, 2000 Moxnes, 1998 Harrison, 2000 Billow, 2001 | Worshipful devotion to the leader, awe Derive power only from the reflected glory of their boss or product Thralldom/Awe Projections of omnipotent fantasies on the group leader The organization finds an Almighty, Leader closest to the fantasy of King and God Endow the group with phantasised characteristics of their idealised parents Immature idealized love | | 33 46 24, 33 |
| (Greene, 1967) (Meltzer, Harris, 1976) (Karterud, 1990) Gould, 1997 Hirschhorn, 1988 Schneider, Shrivastava 1988 | Defence against ... envy Envy and enmity of the group (tribe) was held in check Hostility is feared and forbidden Denial and repression of aggressive and destructive impulses toward the leader Sexuality and sexual tension severely inhibited Dissention is rarely tolerated | | 42 42 42 |
| (Meltzer, Harris, 1976) Hinshelwood 1989 (Kernberg, 1978) | Needs of the group were fulfilled through the wisdom of the leaders Hanging...on the words of wisdom of a group leader Extract knowledge, power and goodness from the leader | 2 2 | 33, 46 33, 46 33 |

| | | | |
|---|---|---|--|
| Gould, 1997 | Disciple-like relations with the leader, Learning from authority, Ability to learn from others, | 2 | 33 |
| Karterud, 2000 (Atherton, 2001) (Hinshelwood, Chiesa, 2001) Atherton, 2001 | Appeals for support, direction, approval, from the leader respectful attention to the leader leader supplies comfort, wisdom, correct decisions Rapt attention to the leader | 2 19 2 | 33 38, 46 33 33, 46 33 |
| Author | DEPENDENCE: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| (Meltzer, Harris, 1976) (Gustafson, Hartman, 1978) Schneider, Shrivastava 1988 Atherton 2001 Hoggett (1992) Symington, 1996 | Leader represent thought, planning and carrying responsibility Efforts of a deified leader decision making is highly centralized The leader giving more and more a deity...completely in the thrall of the group members leadership experiences...intense pressure coming from below the selected person relieves the rest from the need to be responsible, think and work out things the group believes it has the right to expect the leader to behave in the way which it wants | 2 9 9 46 46 38 46 46 | 46 46 38 46 46 |
| Bion, 1961, pp 122 Meltzer, Harris, 1976) Sutherland, 1985 Gould, 1997 Sutherland, 1985 Hirschhorn, 1988 Lion, Gruenfeld 1993 Rosen, D et al, 2001 | It is as necessary to have someone who is dependent as it is to have someone on whom to depend (interdependence)...particular concern for the individual's welfare...the individual is attempting to get help for his problem Benevolence, generosity, peace, good will Leader is felt to be helpful Capacity for dependent relationships Ability to collaborate (mutual dependence), Realistic gratitude Longing for comprehensive support hungry for support and explanation inclination to depend on others for help and direction...tend to trust and identify with others wanting to help others and hopes to be helped and protected Members being available to each other | 12 9 15 4 | 29 42, 24 29, 38 29 29 38 38 29 29 29 |
| Bion, 1961 (Meltzer, Harris, 1976) (Kernberg, 1978) (Kernberg, 1980) Gould, 1997 Karterud, 2000 Rosen, D et al, 2001 | Immaturity in individual relations Fearfulness is the supreme virtue of the member Inadequacy of the recessive sex, Historic inferiority Considering themselves inadequate, immature and incompetent Common sense of needfulness, helplessness Helplessness Powerlessness Emptiness, Anxieties around abandonment, Weakness and fear of initiative Fear of loss, Yearning for a caring, maternal response | 21 9 | 42 |
| Bion1961 | To provide security for the immature organism...provide that no | | |

| | | | |
|----------------------|--|-----------------|---------------------------|
| MacNamara, 1982 | untoward events will follow | | 42 |
| | Obtain security from one individual in the group | | 29 |
| Sutherland, 1985 | One person is there to provide security by gratifying the group's longings | | 29 |
| Brown, DG, 1985) | Safety requires a succouring leader | | 29 |
| Schermer 1985 | Leader as 'container-breast' | | |
| Hirschhorn, 1988 | the group functioned as a protective womb for its members | | 42 |
| Author | DEPENDENCE: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| Bion (1961) | Sustaining and nourish the leader, Treating the leader as a baby... A whole people is exhausted to provide for one individual (<u>dual of baD</u>) | | |
| Schneider, | bad news may not be reach the top for fear of disturbing the leader | | |
| Shrivastava 1988 | Emergence of feelings of guilt about...being greedy in demanding more than his fair term of parental care...feeling that the psychiatrist is some kind of parent | | |
| Bion, 1961 | Infantile demanding and greed, | | |
| | Members seek the centre of attention for themselves | | 38 |
| Sutherland, 1985 | Childishness, | | |
| | Appeals for undue attention from the leader | | 38 |
| Gould, 1997 | Oral needs, clinging behaviour | | |
| Karterud, 2000 | | | |
| Bion (1961) | Dogmata...opposition to new ideas | | |
| | Stifling of independent thought | | 49 |
| (Kernberg, 1980) | Calming, reassuring, simplifying doctrine | | 49 |
| | "yes-men" lacking individuality, | | |
| Schneider, | Difficulty in innovating | | 49 |
| Shrivastava 1988 | | | |
| Scheidlinger, 1982 | Submissiveness | | 46, 49 |
| Gould, 1997 | Appropriate submission to authority | | 33 |
| Lion, Gruenfeld 1993 | Members are submissive and friendly | | |
| Moxnes, 1998 | Submission to authority | | 33, 46 |
| | Members expected to be loyal and dedicated in return for being taken care for | | |
| Schneider, | | | |
| Shrivastava 1988 | | | |
| Bion, 1961 | Group pegged onto a mature structure | | 49 |
| | Strict discipline, establish a sense that the situation is familiar and unchanging | | 49 |
| | The group expects the leader to act with authority | | 46 |
| | Appeals to the authority of a 'past' leader... | | |
| | Bible-making, the place of the leader may be filled by the history of the group, keeping records of the past | | 49 |
| | Fruitfulness of tradition | | 49 |
| Brown, DG, 1985 | Ask for rules and norms., ... | | 33, 46 |
| Karterud, 2000 | reliance on structure, procedure, tradition | | 33 |

| | | | |
|---|--|-----------------|-------------------------------|
| Gould, 1997 Atherton 2001 | Hierarchical, non-symmetrical relations, authority | | |
| Author | DEPENDENCE: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| Bion 1961 Darlington, 1998 Lion, Gruenfeld 1993 | Desires for a Welfare state Look for the unenterprising Identifying with those in need | | 29 29 |
| Bion 1961 | The attempt is made to ensure that the leader is not a concrete person (to prevent the dual of baD) | | 24 |
| Bion 1961 | Feelings can be expressed with greater freedom p. 75 | | |

| | | | |
|--|---|-----------------|--|
| Kernberg, 1980 Gould, 1997 Atherton, 2001 | Feared disintegration of the group Dread of annihilation Defensive measures when faced with threats Fight and flee to survive Survive and win... | | 37 37 31 |
| Author | Fight-Flight: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| Bion 1948-55 Kernberg, 1978 Kernberg 1980 Brown, 1985 Hinshelwood, 1989 Gould, 1997 | Group achieves vitality by the release of aggressive impulses The first requisite is to recognize the existence of an enemy Readiness to fight Safety requires fight or flee from a common enemy Violent idea that there is an enemy to be identified Powerful enemies | | 26, 37 45 37 45, 18 |
| Darlington, 1998 Hinshelwood, 1989 Gould, 1997 | Need for an external enemy ... Enemy may be some object outside the group Aggression and hostility onto a despised out-group which is feared and hated | 16 | 45 45 45 |
| Kernberg (1978) Karterud 2000 Lion, Gruenfeld 1993 | Aggressive outbursts of rebellious behaviour Sound angry assertiveness Criticism of others | | 23 23, 50 23, 28, 50 |
| Kernberg, 1980 Hinshelwood, 1989 Gould, 1997 | Opposition to the ideology shared by the majority of the group cannot be tolerated Conformist phalanx In group/Out group mentality Unambivalent intra-group relations Unambivalent leader/follower relations Loyal followership Members either loyal or traitorous | | 48 48, 45 48 48, 31 18 |
| Bion 1948-55 Brown, 1985 Schneider, Shrivastava 1988 Hinshelwood, 1989 (Karterud, 1990) Hinshelwood, Chiesa, 2001 Lion, Gruenfeld 1993 | The group being extremely irksome to some individuals Blaming the absent saboteurs Scapegoating group members feel the need to justify and defend their positions Enemy may one of the members of the group Member attacked for not doing his/her duty for the group Common enemy either within the group Fighting among group members | | 50 28 18, 50 50 18 18, 23, 50 |
| Bion 1948-55 Hinshelwood, 1989 | Fighting neurosis as a way of dealing with it Enemy may be 'neurosis' itself | | 50 50 |
| Bion 1948-55 | Running away from the neurosis Preoccupation of absent member as a danger to the coherence as a | | 40 |

| | | | |
|--|--|-----------------|--|
| Karterud, 2000 Atherton 2001 Lion, Gruenfeld 1993 | group Avoidance of the problem or withdrawal from participation Day-dreaming, talking about irrelevant material, fail to turn up Avoid problems and back off from conflicts it may be not able to win Withdrawal, talking about an unrelated subject, Avoids unfriendliness or disagreement Does not trust authority and may not accept the task Passive resistance | | 13, 36 13, 32, 36 13, 43 32, 36 13 36 |
| Author | Fight-Flight: Domains of Characteristics | Old Item | New Item WGFS 1.02 |
| Meltzer, Harris 1976 Darlington, 1998 Atherton 2001 (Rosen, D 2001) | Ruthless greed towards the community Sink-or-swim market economy Object to be conquered. Competition for scarce resources | 20 | 31 |

Appendix 7. WGFS 1.02 questionnaire

English translation

Work Group Function Scale

(Work Group Function Scale, WGFS, © Torres 2001)

Filled out by Date
.....

The statements below refer to your attitude toward working with others in a group. A group in this connection may be everything from a circle of friends to a working partnership or an association that you belong to, provided that the group has a task or a project to work with. Please circle the number that applies best to your attitude, graded from 1 (not important) to 6 (very important).

Please complete each question by indicating a point on the scale that best reflects your view

Example:

In a working group it is essential...

To gain everyone's agreement

It is not essential 1.....2.....3.....4.....5.....6 It is absolutely essential

In a working group it is essential...

1. To have humour since then we can achieve anything

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

2. That everyone learns from those with more experience in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

3. To have a joker in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

4. That members of the group like, understand and feel warm towards each other

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

5. That everyone is completely truthful

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

6. That someone can sustain an atmosphere of hope in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

7. That members should be aware of destructive and suspect elements in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

8. Everyone bears in mind that if things go badly, they are likely to go better next time

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

9. Members are totally available to help each other

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

10. That everyone bears in mind that there will always be destructive people in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

11. That people don't feel satisfied/content with what is done/completed, and always look for further achievements

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

12. To enjoy each other's company because it will make the group more productive

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

13. that the group gives up when things get too difficult

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

14. That the group produces brilliant ideas

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

15. That everyone listens to, and understands, each other

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

16. That the group achieves more than any other group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

17. That there are flirtatious people in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

18. The group should beware of suspicious members

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

19. Members need each other to achieve their learning

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

20. That everyone's aim in a work group is motivated towards success or victory

- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 21. That everyone's aim in a work group is to increase the maturity of group members**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 22. That everyone's aim in a work group is to achieve innovation**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 23. The group rebels against members who try to oppress others**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 24. the group members' aspire to be good, generous and saintly people**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 25. That each member needs someone special for intimate personal contact**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 26. To follow the decisions/resolutions of the stronger and more ambitious members**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 27. To escape into planning the future when the present is difficult and morale is low**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 28. To find out who is responsible for the problems in the group**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 29. That the group is very helpful to those who are less able and most in need**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 30. flirtation, on occasions, can increase interest and enthusiasm**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 31. That all the members are selflessly committed to victory over competitors**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 32. that the people can get distracted with stuff not relevant to the group's objective**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 33. To listen carefully to the more experienced members and to learn from them**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 34. that the creativity and spontaneity of the people can flow freely**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 35. to try hard to achieve high levels of speed and effectiveness in the actions**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 36. to keep an emotional distance and avoid getting over-involved with things**

- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 37. to be able to take courageous and drastic measures when the group is threatened**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 38. to obtain support and solidarity from the group's leader**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 39. that the group's atmosphere is permissive and easy-going**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 40. to leave behind those who cannot keep up with the group's pace**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 41. that there are members from both sexes, who may complement each other**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 42. to avoid conflicts that may cause people to feel unsafe**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 43. to be realistic about succeeding or failing**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 44. achieve consensus in the group without imposition from the leader**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 45. to be able to identify our enemies**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 46. to entrust the responsibility to someone wise and more able**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 47. that the group can achieve radical change and innovation**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 48. to be able to think as if all the members are of one mind**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 49. to observe meticulously the established rules, customs and procedures**
- Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- 50. to get angry with the difficult or uncommitted members who hinder the group**

Portuguese version

Pedimos a sua participação neste questionário anónimo.

Não existem questões certas ou erradas, queremos saber a sua opinião.

Gostaríamos de saber qual é para si o **grupo de trabalho óptimo**. Ou seja, aquele onde simultaneamente você se sente bem e se conseguem obter bons resultados de trabalho.

Ao referir Grupo de Trabalho, queremos abranger qualquer tipo de actividade de grupo onde as pessoas juntam esforços para obter um resultado. Exemplo: trabalhos profissionais ou escolares, trabalhos associativos, e outros trabalhos de equipa em geral

Assinale a opção mais adequada para si numa escala de 1 a 6, em que 1 = Não é essencial e 6 = É absolutamente essencial .

Exemplo:

Num grupo de trabalho, é essencial...

1. **Existir concordância entre todos.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

Agradecemos desde já a sua colaboração neste estudo

Num grupo de trabalho é essencial...

1. **Pensar que com bom humor o trabalho avança e chega-se a todo o lado.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
2. **Os membros mais experientes ensinarem e ajudarem os outros.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
3. **Existir um brincalhão.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
4. **A minha relação com os outros colegas ser de empatia e de tentar compreendê-los.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
5. **Que todos sejam 100% verdadeiros.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
6. **Que exista uma pessoa no grupo que dê esperança para o futuro.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
7. **Estar atento aos elementos que aproveitam ocasiões para nos prejudicar .**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
8. **Pensar que" agora pode não ter corrido bem mas para a próxima vai correr melhor" .**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
9. **Que a minha relação com os outros seja de total disponibilidade para os ajudar .**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
10. **Ter consciência de que existem sempre pessoas que fazem mal, prejudicam e que dizem mal dos outros.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
11. **Nunca nos acomodarmos ao que está feito, e querer ir sempre mais longe.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
12. **O companheirismo entre as pessoas, pois torna o grupo mais produtivo.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
13. **Saber desistir quando as coisas forem demasiado difíceis.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
14. **Ter ideias luminosas.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial
15. **Saber ouvir os outros e tentar percebê-los.**
 Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

16. **Conseguir que o nosso grupo obtenha melhores resultados do que os outros grupos.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

Num grupo de trabalho é essencial...

17. **Que existam pessoas excitantes no grupo.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

18. **Ter em mente que podem sempre existir “traidores” entre nós.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

19. **Aprender com os outros.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

20. **Pensar que o bom resultado de um trabalho é o sucesso ou vitória.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

21. **Pensar que o bom resultado é o amadurecimento das pessoas do grupo.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

22. **Pensar que o bom resultado é existir inovação.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

23. **Revoltarmo-nos contra as pessoas que nos fazem sentir mal.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

24. **Que os nossos modelos de acção sejam pessoas generosas.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

25. **Cada um ter alguém especial com quem sinta afinidades, para desenvolver ideias e outras coisas.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

26. **Seguir as decisões daqueles que se mostrem mais fortes e combativos.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

27. **Olhar para o futuro quando as coisas estiverem difíceis no presente.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

28. **Procurar quem são os responsáveis pela existência de problemas no grupo.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

29. **Existir muita ajuda aos que mais precisarem.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

30. **De vez em quando haver uns ‘flirtes’, pois aumentam o entusiasmo no trabalho.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

31. **Estarmos todos totalmente empenhados para termos uma dinâmica de vencedores.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

32. **Podermos-nos distrair com outras coisas que não o objectivo do grupo.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

Num grupo de trabalho é essencial...

33. **Ouvir os mais experientes e maduros e aprender com isso.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

34. **Deixar fluir a nossa criatividade e espontaneidade.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

35. **Esforçarmo-nos para atingir níveis altos de rapidez e eficácia na acção.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

36. **Manter a distância e não nos envolvermos muito com as coisas.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

37. **Tomar medidas drásticas e corajosas quando o nosso grupo estiver ameaçado.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

38. **Obter a solidariedade e apoio de quem liderar o grupo.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

39. **Haver um ambiente à-vontade e sem constrangimentos.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

40. **Deixar para trás aqueles que não acompanharem o ritmo do grupo.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

41. **Haver pessoas dos dois sexos, para os feitos se complementarem.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

42. **Evitar conflitos que possam criar insegurança nas pessoas.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

43. **Perceber quando podemos ganhar e quando devemos desistir da luta.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

44. **Obter o consenso sem imposições de líderes, nem excluir ninguém.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

45. **Saber ver quem são os nossos inimigos.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

46. **Confiar a responsabilidade e as decisões a alguém ponderado e mais capaz.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

47. **Ser capaz de fazer grandes mudanças e de inventar novas coisas.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

48. **Conseguir pensar como se fossemos todos uma só cabeça.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

49. **Respeitar as regras estabelecidas previamente e os procedimentos habituais.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

50. **Zangarmo-nos com os indecisos e complicados que estiverem a atrapalhar.**

Não é essencial 1.....2.....3.....4.....5.....6 É absolutamente essencial

Para finalizar pedimos-lhe que responda às seguintes questões.

Assinale com uma cruz as opções que considera mais adequadas a si.

2.1 **Gosto de andar muito depressa em carros e/ou motos**

Nada__ Pouco__ Muito__ Sempre__

2.2 **Mantenho ou procuro uma relação amorosa estável e única**

Nada__ Pouco__ Medianamente__ Muito__

2.3. **Costumo ter problemas do aparelho digestivo (estômago e/ou intestinos)**

Nunca__ Poucas vezes__ Muitas vezes__ Constantemente__

2.4 **Costumo ter afecções alérgicas**

Nunca tive__ Poucas vezes__ Muitas vezes__ Constantemente__

2.4.1 **Quais ?** _____

2.5 **Tomo comprimidos para acalmar ou dormir**

Nunca__ Poucas vezes__ Muitas vezes__ Tomo todos os dias__

2.6 **Fumo tabaco**

Nunca__ Quase nunca__ Menos de 1 maço por dia__ 1 maço por dia ou mais__

2.7 Consumo bebidas Alcoolicas

Nunca__ Ocasionalmente__ Todos os dias__ Mais de 1 vez por dia__

2.8 Tenho perda do interesse sexual

Nunca__ Poucas vezes__ Muitas vezes__ Constantemente__

2.9 Tenho falta de apetite

Nunca__ Poucas vezes__ Muitas vezes__ Constantemente__

3.1 Sexo _____ 3.2 Idade _____ 3.3 Escolaridade (n.º de anos que
estudou) _____

3.4 Área Profissional (se for Estudante, colocar área de
estudo) _____

Muito obrigado pela sua colaboração

Appendix 7. WGFS 1.02 questionnaire

English translation

Work Group Function Scale

(Work Group Function Scale, WGFS, © Torres 2001)

Filled out by Date
.....

The statements below refer to your attitude toward working with others in a group. A group in this connection may be everything from a circle of friends to a working partnership or an association that you belong to, provided that the group has a task or a project to work with. Please circle the number that applies best to your attitude, graded from 1 (not important) to 6 (very important).

Please complete each question by indicating a point on the scale that best reflects your view

Example:

In a working group it is essential...

To gain everyone's agreement

It is not essential 1.....2.....3.....4.....5.....6 It is absolutely essential

In a working group it is essential...

P 1. To have humour since then we can achieve anything

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

D 2. That everyone learns from those with more experience in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

P 3. To have a joker in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

D 4. That members of the group like, understand and feel warm towards each other

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

F 5. That everyone is completely truthful

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

P 6. That someone can sustain an atmosphere of hope in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

F 7. That members should be aware of destructive and suspect elements in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

P 8. Everyone bears in mind that if things go badly, they are likely to go better next time

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

D 9. Members are totally available to help each other

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

F 10. That everyone bears in mind that there will always be destructive people in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

P 11. That people don't feel satisfied/content with what is done/completed, and always look for further achievements

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

D 12. To enjoy each other's company because it will make the group more productive

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

F 13. that the group gives up when things get too difficult

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

P 14. That the group produces brilliant ideas

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

D 15. That everyone listens to, and understands, each other

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

F 16. That the group achieves more than any other group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

P 17. That there are flirtatious people in the group

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

F 18. The group should beware of suspicious members

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

D 19. Members need each other to achieve their learning

Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- F 20. That everyone's aim in a work group is motivated towards success or victory**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- D 21. That everyone's aim in a work group is to increase the maturity of group members**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 22. That everyone's aim in a work group is to achieve innovation**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 23. The group rebels against members who try to oppress others**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- D 24. the group members' aspire to be good, generous and saintly people**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 25. That each member needs someone special for intimate personal contact**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 26. To follow the decisions/resolutions of the stronger and more ambitious members**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 27. To escape into planning the future when the present is difficult and morale is low**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 28. To find out who is responsible for the problems in the group**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- D 29. That the group is very helpful to those who are less able and most in need**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 30. flirtation, on occasions, can increase interest and enthusiasm**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 31. That all the members are selflessly committed to victory over competitors**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 32. that the people can get distracted with stuff not relevant to the group's objective**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- D 33. To listen carefully to the more experienced members and to learn from them**
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 34. that the creativity and spontaneity of the people can flow freely**

- F 35.** to try hard to achieve high levels of speed and effectiveness in the actions
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 36.** to keep an emotional distance and avoid getting over-involved with things
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 37.** to be able to take courageous and drastic measures when the group is threatened
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- D 38.** to obtain support and solidarity from the group's leader
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 39.** that the group's atmosphere is permissive and easy-going
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- F 40.** to leave behind those who cannot keep up with the group's pace
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 41.** that there are members from both sexes, who may complement each other
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- F 42.** to avoid conflicts that may cause people to feel unsafe
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 43.** to be realistic about succeeding or failing
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- P 44.** achieve consensus in the group without imposition from the leader
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- F 45.** to be able to identify our enemies
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- D 46.** to entrust the responsibility to someone wise and more able
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- P 47.** that the group can achieve radical change and innovation
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- F 48.** to be able to think as if all the members are of one mind
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential
- D 49.** to observe meticulously the established rules, customs and procedures
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

- F 50.** to get angry with the difficult or uncommitted members who hinder the group
Is not essential 1.....2.....3.....4.....5.....6 Is absolutely essential

Annexe 8. Kolmogorov-Smirnov Z Tests for variables in the preliminary hypothesis testing

NPART TESTS

```

/K-S(NORMAL)= dgeneral fgeneral pgeneral tfactor1 tasgi
/STATISTICS DESCRIPTIVES
/MISSING ANALYSIS.

```

NPART Tests

Descriptive Statistics

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|-----|---------|----------------|---------|---------|
| DGENERAL | 292 | 5,4054 | ,58003 | 2,38 | 6,00 |
| FGENERAL | 292 | 4,2776 | ,76310 | 1,62 | 6,00 |
| PGENERAL | 292 | 4,6500 | ,63937 | 2,58 | 6,00 |
| TFACTOR1 TAS Factor 1 "difficulty identifying/distinguish feelings from body | 292 | 2,7736 | 1,04176 | 1,00 | 5,00 |
| TASGI Tas Global 2 | 292 | 54,7413 | 14,13326 | 20,00 | 86,32 |

One-Sample Kolmogorov-Smirnov Test

| | | DGENERAL | FGENERAL | PGENERAL | TFACTOR1 TAS Factor 1 "difficulty identifying/ distinguish feelings from body | TASGI Tas Global 2 |
|----------------------------------|----------------|----------|----------|----------|---|-----------------------|
| N | | 292 | 292 | 292 | 292 | 292 |
| Normal Parameters ^{a,b} | Mean | 5,4054 | 4,2776 | 4,6500 | 2,7736 | 54,7413 |
| | Std. Deviation | ,58003 | ,76310 | ,63937 | 1,04176 | 14,13326 |
| Most Extreme Differences | Absolute | ,154 | ,052 | ,062 | ,071 | ,070 |
| | Positive | ,153 | ,046 | ,032 | ,071 | ,036 |
| | Negative | -,154 | -,052 | -,062 | -,069 | -,070 |
| Kolmogorov-Smirnov Z | | 2,629 | ,887 | 1,066 | 1,220 | 1,193 |
| Asymp. Sig. (2-tailed) | | ,000 | ,410 | ,206 | ,102 | ,116 |

a. Test distribution is Normal.

b. Calculated from data.

Appendix 9. Normality tests for residuals

NPAR TESTS

/K-S(NORMAL)= res_1 res_2 res_3 res_4 res_5 res_6

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS.

PATHOS pathologic condition = ,00

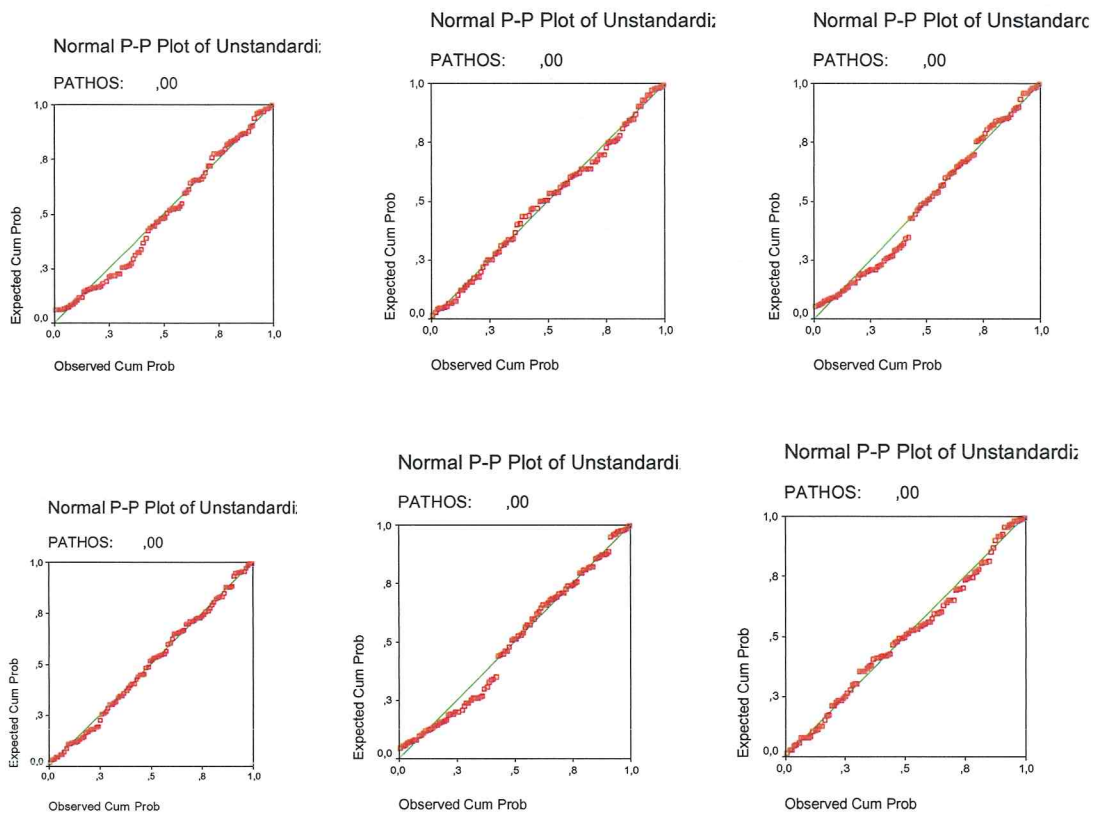
One-Sample Kolmogorov-Smirnov Test

| | RES_1 | RES_2 | RES_3 | RES_4 | RES_5 | RES_6 |
|--------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Unstandar- ized Residual | Unstandar- ized Residual | Unstandar- ized Residual | Unstandar- ized Residual | Unstandar- ized Residual | Unstandar- ized Residual |
| N | 102 | 102 | 102 | 102 | 102 | 102 |
| Normal Parameters | | | | | | |
| Mean | ,0000000 | ,0000000 | ,0000001 | ,0000000 | ,0000000 | ,0000000 |
| Std. Deviation | 11,33078575 | ,80586845 | 11,72738743 | ,80495328 | 11,11279011 | ,80524933 |
| Most Extreme Differences | | | | | | |
| Absolute | ,056 | ,082 | ,050 | ,086 | ,053 | ,097 |
| Positive | ,056 | ,082 | ,050 | ,086 | ,053 | ,097 |
| Negative | -,046 | -,059 | -,050 | -,052 | -,041 | -,043 |
| Kolmogorov-Smirnov Z | ,564 | ,831 | ,506 | ,866 | ,532 | ,977 |
| Asymp. Sig. (2-tailed) | ,909 | ,495 | ,960 | ,441 | ,939 | ,295 |

a. Test distribution is Normal.

b. Calculated from data.

c. PATHOS pathologic condition = ,00



PATHOS pathologic condition = 1,00

One-Sample Kolmogorov-Smirnov Test

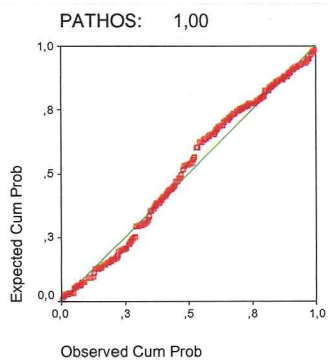
| | RES_1 | RES_2 | RES_3 | RES_4 | RES_5 | RES_6 |
|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | Unstandardized Residual | Unstandardized Residual | Unstandardized Residual | Unstandardized Residual | Unstandardized Residual | Unstandardized Residual |
| N | 190 | 190 | 190 | 190 | 190 | 190 |
| Normal Parameters | | | | | | |
| Mean | ,0000000 | ,0000000 | ,0000001 | ,0000000 | ,0000000 | ,0000000 |
| Std. Deviation | 2,28491688 | ,93078798 | 2,38110638 | ,94030756 | 2,38924408 | ,95178801 |
| Most Extreme Differences | | | | | | |
| Absolute | ,091 | ,085 | ,085 | ,078 | ,080 | ,077 |
| Positive | ,053 | ,051 | ,051 | ,044 | ,054 | ,051 |
| Negative | -,091 | -,085 | -,085 | -,078 | -,080 | -,077 |
| Kolmogorov-Smirnov Z | 1,252 | 1,165 | 1,167 | 1,080 | 1,097 | 1,059 |
| Asymp. Sig. (2-tailed) | ,087 | ,132 | ,131 | ,194 | ,180 | ,212 |

a. Test distribution is Normal.

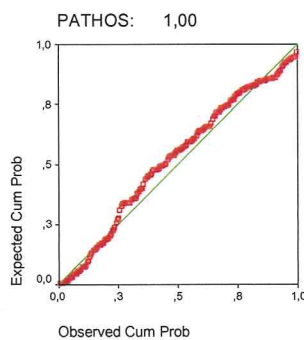
b. Calculated from data.

c. PATHOS pathologic condition = 1,00

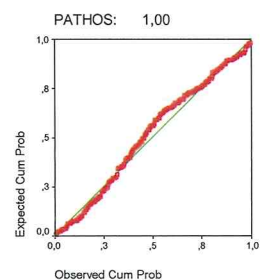
Normal P-P Plot of Unstandardiz



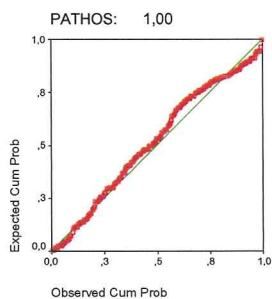
Normal P-P Plot of Unstandardiz



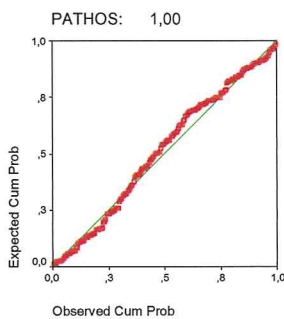
Normal P-P Plot of Unstandardiz



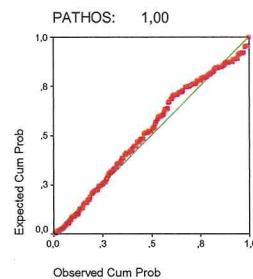
Normal P-P Plot of Unstandardiz



Normal P-P Plot of Unstandardiz



Normal P-P Plot of Unstandardiz



Appendix 10. Stata outputs of Multinomial Logistic

Regression models

(start next page)

```

log: C:\Documents and Settings\Nuno\Desktop\effects of TAS on
condit3.log
log type: text
opened on: 22 Jul 2004, 09:01:45

```

```
. use "C:\Documents and Settings\Nuno\Desktop\phd14.dta", clear
```

```

. log off
log: C:\Documents and Settings\Nuno\Desktop\effects of TAS on
condit3.log
log type: text
paused on: 22 Jul 2004, 09:01:59

```

```

log: C:\Documents and Settings\Nuno\Desktop\effects of TAS on
condit3.log
log type: text
resumed on: 22 Jul 2004, 09:26:25

```

```
. mlogit condit3 age gender if tas1~=.
```

```

Iteration 0: log likelihood = -318.57207
Iteration 1: log likelihood = -279.81431
Iteration 2: log likelihood = -278.26598
Iteration 3: log likelihood = -278.2535
Iteration 4: log likelihood = -278.2535

```

```

Multinomial logistic regression
Log likelihood = -278.2535
Number of obs = 242
LR chi2(6) = 80.64
Prob > chi2 = 0.0000
Pseudo R2 = 0.1266

```

| | condit3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|---|---------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | age | .0102661 | .0162552 | 0.63 | 0.528 | -.0215935 | .0421258 |
| | gender | 2.193895 | .438789 | 5.00 | 0.000 | 1.333884 | 3.053906 |
| | _cons | -3.821333 | .8592135 | -4.45 | 0.000 | -5.505361 | -2.137306 |
| 2 | age | -.0095199 | .0166464 | -0.57 | 0.567 | -.0421461 | .0231064 |
| | gender | 3.195376 | .4372413 | 7.31 | 0.000 | 2.338399 | 4.052353 |
| | _cons | -4.434161 | .8686868 | -5.10 | 0.000 | -6.136756 | -2.731566 |
| 3 | age | -.0112756 | .0185332 | -0.61 | 0.543 | -.0476 | .0250489 |
| | gender | 1.017858 | .5283521 | 1.93 | 0.054 | -.0176931 | 2.053409 |
| | _cons | -1.849041 | .939391 | -1.97 | 0.049 | -3.690214 | -.0078688 |

(Outcome condit3==0 is the comparison group)

```
. fitstat, saving(mod0)
```

Measures of Fit for mlogit of condit3

```

Log-Lik Intercept Only: -318.572    Log-Lik Full Model: -278.253
D(233):                 556.507    LR(6):                80.637
                          Prob > LR:          0.000
McFadden's R2:          0.127    McFadden's Adj R2:    0.098
Maximum Likelihood R2:  0.283    Cragg & Uhler's R2:   0.305
Count R2:               0.550    Adj Count R2:         0.268
AIC:                   2.374    AIC*n:                574.507
BIC:                   -722.415   BIC':                 -47.704

```

(Indices saved in matrix fs_mod0)

. mlogit condit3 age gender tas1 if tas1~=.

```
Iteration 0: log likelihood = -318.57207
Iteration 1: log likelihood = -244.12324
Iteration 2: log likelihood = -236.75524
Iteration 3: log likelihood = -236.32019
Iteration 4: log likelihood = -236.3168
Iteration 5: log likelihood = -236.3168
```

```
Multinomial logistic regression      Number of obs   =      242
                                      LR chi2(9)       =     164.51
                                      Prob > chi2      =     0.0000
                                      Pseudo R2       =     0.2582
```

Log likelihood = -236.3168

| condit3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|---------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| age | .0047819 | .0169955 | 0.28 | 0.778 | -.0285287 | .0380925 |
| gender | 2.244622 | .4595029 | 4.88 | 0.000 | 1.344013 | 3.145232 |
| tas1 | .8229295 | .2237411 | 3.68 | 0.000 | .384405 | 1.261454 |
| _cons | -5.722422 | 1.072141 | -5.34 | 0.000 | -7.823779 | -3.621065 |
| 2 | | | | | | |
| age | -.0147468 | .018235 | -0.81 | 0.419 | -.0504867 | .0209931 |
| gender | 3.348976 | .4966483 | 6.74 | 0.000 | 2.375564 | 4.322389 |
| tas1 | 1.474598 | .2533713 | 5.82 | 0.000 | .9779991 | 1.971196 |
| _cons | -8.498456 | 1.275886 | -6.66 | 0.000 | -10.99915 | -5.997766 |
| 3 | | | | | | |
| age | -.0206526 | .0219856 | -0.94 | 0.348 | -.0637435 | .0224383 |
| gender | 1.30152 | .6063531 | 2.15 | 0.032 | .1130897 | 2.48995 |
| tas1 | 2.140795 | .3330018 | 6.43 | 0.000 | 1.488123 | 2.793466 |
| _cons | -8.319131 | 1.591771 | -5.23 | 0.000 | -11.43895 | -5.199316 |

(Outcome condit3==0 is the comparison group)

. fitstat, using(mod0)

Measures of Fit for mlogit of condit3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|-------------|
| Model: | mlogit | mlogit | |
| N: | 242 | 242 | 0 |
| Log-Lik Intercept Only: | -318.572 | -318.572 | 0.000 |
| Log-Lik Full Model: | -236.317 | -278.253 | 41.937 |
| D: | 472.634(230) | 556.507(233) | -83.873(-3) |
| LR: | 164.511(9) | 80.637(6) | 83.873(3) |
| Prob > LR: | 0.000 | 0.000 | -0.000 |
| McFadden's R2: | 0.258 | 0.127 | 0.132 |
| McFadden's Adj R2: | 0.221 | 0.098 | 0.122 |
| Maximum Likelihood R2: | 0.493 | 0.283 | 0.210 |
| Cragg & Uhler's R2: | 0.531 | 0.305 | 0.226 |
| Count R2: | 0.616 | 0.550 | 0.066 |
| Adj Count R2: | 0.376 | 0.268 | 0.107 |
| AIC: | 2.052 | 2.374 | -0.322 |
| AIC*n: | 496.634 | 574.507 | -77.873 |
| BIC: | -789.822 | -722.415 | -67.407 |
| BIC': | -115.110 | -47.704 | -67.407 |

Difference of 67.407 in BIC' provides very strong support for current model.

. mlogit condit3 age gender tasglobal if tas1~=.

```

thesis NUNO TORRES chap9f (app 10)
Iteration 0: log likelihood = -318.57207
Iteration 1: log likelihood = -247.34709
Iteration 2: log likelihood = -241.19346
Iteration 3: log likelihood = -240.90063
Iteration 4: log likelihood = -240.89916
Iteration 5: log likelihood = -240.89916

```

```

Multinomial logistic regression
Log likelihood = -240.89916
Number of obs = 242
LR chi2(9) = 155.35
Prob > chi2 = 0.0000
Pseudo R2 = 0.2438

```

| condit3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| age | .00405 | .0173239 | 0.23 | 0.815 | -.0299043 | .0380043 |
| gender | 1.910058 | .4639889 | 4.12 | 0.000 | 1.000657 | 2.81946 |
| tasglobal | 1.49582 | .3420766 | 4.37 | 0.000 | .8253624 | 2.166278 |
| _cons | -4.861391 | .9608448 | -5.06 | 0.000 | -6.744612 | -2.97817 |
| 2 | | | | | | |
| age | -.0138317 | .0182452 | -0.76 | 0.448 | -.0495916 | .0219282 |
| gender | 2.878151 | .4831293 | 5.96 | 0.000 | 1.931235 | 3.825068 |
| tasglobal | 2.229523 | .3893827 | 5.73 | 0.000 | 1.466347 | 2.992699 |
| _cons | -6.611579 | 1.104474 | -5.99 | 0.000 | -8.776308 | -4.44685 |
| 3 | | | | | | |
| age | -.0218782 | .0212247 | -1.03 | 0.303 | -.0634779 | .0197216 |
| gender | .7074283 | .579938 | 1.22 | 0.223 | -.4292292 | 1.844086 |
| tasglobal | 2.720593 | .451742 | 6.02 | 0.000 | 1.835195 | 3.605991 |
| _cons | -4.65043 | 1.228303 | -3.79 | 0.000 | -7.057859 | -2.243001 |

(Outcome condit3==0 is the comparison group)

. fitstat, using(mod0)

Measures of Fit for mlogit of condit3

| | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| Model: | | | |
| N: | 242 | 242 | 0 |
| Log-Lik Intercept Only: | -318.572 | -318.572 | 0.000 |
| Log-Lik Full Model: | -240.899 | -278.253 | 37.354 |
| D: | 481.798(230) | 556.507(233) | 74.709(3) |
| LR: | 155.346(9) | 80.637(6) | 74.709(3) |
| Prob > LR: | 0.000 | 0.000 | 0.000 |
| McFadden's R2: | 0.244 | 0.127 | 0.117 |
| McFadden's Adj R2: | 0.206 | 0.098 | 0.108 |
| Maximum Likelihood R2: | 0.474 | 0.283 | 0.190 |
| Cragg & Uhler's R2: | 0.510 | 0.305 | 0.205 |
| Count R2: | 0.616 | 0.550 | 0.066 |
| Adj Count R2: | 0.376 | 0.268 | 0.107 |
| AIC: | 2.090 | 2.374 | -0.284 |
| AIC*n: | 505.798 | 574.507 | -68.709 |
| BIC: | -780.657 | -722.415 | -58.242 |
| BIC': | -105.945 | -47.704 | -58.242 |

Difference of 58.242 in BIC' provides very strong support for current model.

Note: p-value for difference in LR is only valid if models are nested.

```

-----
log: C:\Documents and Settings\Nuno\Desktop\multinomial WGFS Scales on
condition 3 (2).log
log type: text

```

thesis NUNO TORRES chap9f (app 10)
 opened on: 24 Jul 2004, 13:43:39

. mlogit condition3 age gender if missing~=1

Iteration 0: log likelihood = -359.32101
 Iteration 1: log likelihood = -321.63885
 Iteration 2: log likelihood = -319.47255
 Iteration 3: log likelihood = -319.45586
 Iteration 4: log likelihood = -319.45585

Multinomial logistic regression

Number of obs = 271
 LR chi2(6) = 79.73
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1109

Log likelihood = -319.45585

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|--------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | age | -.0171342 | .014037 | -1.22 | 0.222 | -.0446462 | .0103778 |
| | gender | 1.94801 | .4080151 | 4.77 | 0.000 | 1.148315 | 2.747705 |
| | _cons | -2.038952 | .7053235 | -2.89 | 0.004 | -3.421361 | -.6565435 |
| 2 | age | -.0145722 | .0158492 | -0.92 | 0.358 | -.0456361 | .0164918 |
| | gender | 3.235525 | .4382458 | 7.38 | 0.000 | 2.376579 | 4.094471 |
| | _cons | -4.320304 | .8287339 | -5.21 | 0.000 | -5.944593 | -2.696016 |
| 3 | age | -.0127258 | .0175902 | -0.72 | 0.469 | -.047202 | .0217503 |
| | gender | 1.015355 | .5270593 | 1.93 | 0.054 | -.0176622 | 2.048372 |
| | _cons | -1.779408 | .8944848 | -1.99 | 0.047 | -3.532566 | -.0262502 |

(Outcome condition3==0 is the comparison group)

. fitstat, saving(mod0)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -319.456 |
| D(262): | 638.912 | LR(6): | 79.730 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.111 | McFadden's Adj R2: | 0.086 |
| Maximum Likelihood R2: | 0.255 | Cragg & Uhler's R2: | 0.274 |
| Count R2: | 0.498 | Adj Count R2: | 0.227 |
| AIC: | 2.424 | AIC*n: | 656.912 |
| BIC: | -828.843 | BIC': | -46.118 |

(Indices saved in matrix fs_mod0)

. mlogit condition3 Fgeneral age gender if missing~=1

Iteration 0: log likelihood = -359.32101
 Iteration 1: log likelihood = -316.93156
 Iteration 2: log likelihood = -314.36184
 Iteration 3: log likelihood = -314.334
 Iteration 4: log likelihood = -314.33399

Multinomial logistic regression

Number of obs = 271
 LR chi2(9) = 89.97
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1252

Log likelihood = -314.33399

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|----------|----------|-----------|------|-------|----------------------|----------|
| 1 | Fgeneral | .2753645 | .2162789 | 1.27 | 0.203 | -.1485343 | .6992633 |
| | | | | | | | |

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```

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```

| | age | gender | _cons |
|-------|-----------|-----------|-----------|
| 1 | -.0195542 | 1.906832 | -3.049367 |
| | .0141866 | .4099559 | 1.073528 |
| | -1.38 | 4.65 | -2.84 |
| | 0.168 | 0.000 | 0.005 |
| | -.0473593 | 1.103333 | -5.153442 |
| | .008251 | 2.710331 | -.9452916 |
| ----- | | | |
| 2 | Fgeneral | | |
| | age | | |
| | gender | | |
| | _cons | | |
| | .6852998 | 3.158721 | -6.987933 |
| | .2656028 | .4425965 | 1.380898 |
| | 2.58 | 7.14 | -5.06 |
| | 0.010 | 0.000 | 0.000 |
| | .1647279 | 2.291248 | -9.694443 |
| | 1.205872 | 4.026194 | -4.281422 |
| ----- | | | |
| 3 | Fgeneral | | |
| | age | | |
| | gender | | |
| | _cons | | |
| | .6773545 | .9397875 | -4.392238 |
| | .2791497 | .5312041 | 1.43885 |
| | 2.43 | 1.77 | -3.05 |
| | 0.015 | 0.077 | 0.002 |
| | .130231 | -.1013534 | -7.212333 |
| | 1.224478 | 1.980928 | -1.572142 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mod0)

Measures of Fit for mlogit of condition3

| Model: | Current mlogit | Saved mlogit | Difference |
|-------------------------|----------------|--------------|------------|
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -314.334 | -319.456 | 5.122 |
| D: | 628.668(259) | 638.912(262) | 10.244(3) |
| LR: | 89.974(9) | 79.730(6) | 10.244(3) |
| Prob > LR: | 0.000 | 0.000 | 0.017 |
| McFadden's R2: | 0.125 | 0.111 | 0.014 |
| McFadden's Adj R2: | 0.092 | 0.086 | 0.006 |
| Maximum Likelihood R2: | 0.283 | 0.255 | 0.028 |
| Cragg & Uhler's R2: | 0.304 | 0.274 | 0.030 |
| Count R2: | 0.517 | 0.498 | 0.018 |
| Adj Count R2: | 0.256 | 0.227 | 0.028 |
| AIC: | 2.408 | 2.424 | -0.016 |
| AIC*n: | 652.668 | 656.912 | -4.244 |
| BIC: | -822.281 | -828.843 | 6.563 |
| BIC': | -39.555 | -46.118 | 6.563 |

Difference of 6.563 in BIC' provides strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 Fgeneral age gender if missing~=1

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -316.93156
Iteration 2: log likelihood = -314.36184
Iteration 3: log likelihood = -314.334
Iteration 4: log likelihood = -314.33399

```

```

Multinomial logistic regression
Log likelihood = -314.33399
Number of obs = 271
LR chi2(9) = 89.97
Prob > chi2 = 0.0000
Pseudo R2 = 0.1252

```

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|------------|-----------|-----------|-------|-------|----------------------|
| 1 | Fgeneral | | | | |
| | age | | | | |
| | gender | | | | |
| | _cons | | | | |
| | .2753645 | .2162789 | 1.27 | 0.203 | -.1485343 .6992633 |
| | -.0195542 | .0141866 | -1.38 | 0.168 | -.0473593 .008251 |
| | 1.906832 | .4099559 | 4.65 | 0.000 | 1.103333 2.710331 |
| | -3.049367 | 1.073528 | -2.84 | 0.005 | -5.153442 -.9452916 |

2

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| | Fgeneral | age | gender | _cons |
|-------|-----------|-----------|----------|-------|
| | .6852998 | .2656028 | 2.58 | 0.010 |
| | -.0194337 | .0160924 | -1.21 | 0.227 |
| | 3.158721 | .4425965 | 7.14 | 0.000 |
| | -6.987933 | 1.380898 | -5.06 | 0.000 |
| ----- | | | | |
| 3 | Fgeneral | .6773545 | .2791497 | 2.43 |
| | age | -.0181761 | .0179066 | -1.02 |
| | gender | .9397875 | .5312041 | 1.77 |
| | _cons | -4.392238 | 1.43885 | -3.05 |

(Outcome condition3==0 is the comparison group)

. fitstat, saving(mod09)

Measures of Fit for mlogit of condition3

saving() name must be < 5 characters long
r(198);

. fitstat, saving(mod9)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -314.334 |
| D(259): | 628.668 | LR(9): | 89.974 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.125 | McFadden's Adj R2: | 0.092 |
| Maximum Likelihood R2: | 0.283 | Cragg & Uhler's R2: | 0.304 |
| Count R2: | 0.517 | Adj Count R2: | 0.256 |
| AIC: | 2.408 | AIC*n: | 652.668 |
| BIC: | -822.281 | BIC': | -39.555 |

(Indices saved in matrix fs_mod9)

. mlogit condition3 Fgeneral Fgenera2 age gender if missing~1

Iteration 0: log likelihood = -359.32101
 Iteration 1: log likelihood = -315.16826
 Iteration 2: log likelihood = -312.62371
 Iteration 3: log likelihood = -312.59803
 Iteration 4: log likelihood = -312.59802

Multinomial logistic regression

| | | |
|---------------|---|--------|
| Number of obs | = | 271 |
| LR chi2(12) | = | 93.45 |
| Prob > chi2 | = | 0.0000 |
| Pseudo R2 | = | 0.1300 |

Log likelihood = -312.59802

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | | |
|------------|----------|-----------|----------|-------|----------------------|-----------|----------|
| ----- | | | | | | | |
| 1 | Fgeneral | .9351445 | 1.904142 | 0.49 | 0.623 | -2.796906 | 4.667195 |
| | Fgenera2 | -.0758436 | .2271142 | -0.33 | 0.738 | -.5209792 | .369292 |
| | age | -.0198735 | .014202 | -1.40 | 0.162 | -.0477089 | .007962 |
| | gender | 1.895606 | .4118384 | 4.60 | 0.000 | 1.088418 | 2.702794 |
| | _cons | -4.417159 | 3.927232 | -1.12 | 0.261 | -12.11439 | 3.280075 |
| ----- | | | | | | | |
| 2 | Fgeneral | -.4964916 | 2.348634 | -0.21 | 0.833 | -5.099729 | 4.106746 |
| | Fgenera2 | .1390556 | .2727039 | 0.51 | 0.610 | -.3954342 | .6735455 |
| | age | -.0192164 | .016105 | -1.19 | 0.233 | -.0507816 | .0123489 |
| | gender | 3.185565 | .4477096 | 7.12 | 0.000 | 2.30807 | 4.063059 |
| | _cons | -4.592585 | 4.937872 | -0.93 | 0.352 | -14.27064 | 5.085466 |
| ----- | | | | | | | |
| 3 | Fgeneral | -2.405322 | 1.758596 | -1.37 | 0.171 | -5.852106 | 1.041462 |
| | Fgenera2 | .3627175 | .2105828 | 1.72 | 0.085 | -.0500173 | .7754523 |

```

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age | -.0189826 .0180512 -1.05 0.293 -.0543623 .0163971
gender | 1.029391 .5378587 1.91 0.056 -.0247922 2.083575
_cons | 1.840812 3.627077 0.51 0.612 -5.268129 8.949752

```

(Outcome condition3==0 is the comparison group)

. fitstat, using(mod9)

Measures of Fit for mlogit of condition3

| | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| Model: | | | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.598 | -314.334 | 1.736 |
| D: | 625.196(256) | 628.668(259) | 3.472(3) |
| LR: | 93.446(12) | 89.974(9) | 3.472(3) |
| Prob > LR: | 0.000 | 0.000 | 0.324 |
| McFadden's R2: | 0.130 | 0.125 | 0.005 |
| McFadden's Adj R2: | 0.088 | 0.092 | -0.004 |
| Maximum Likelihood R2: | 0.292 | 0.283 | 0.009 |
| Cragg & Uhler's R2: | 0.314 | 0.304 | 0.010 |
| Count R2: | 0.509 | 0.517 | -0.007 |
| Adj Count R2: | 0.244 | 0.256 | -0.011 |
| AIC: | 2.418 | 2.408 | 0.009 |
| AIC*n: | 655.196 | 652.668 | 2.528 |
| BIC: | -808.946 | -822.281 | 13.334 |
| BIC': | -26.221 | -39.555 | 13.334 |

Difference of 13.334 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. log off

```

log: C:\Documents and Settings\Nuno\Desktop\multinomial WGFS Scales on
Condition 3 (2).log
log type: text
paused on: 26 Jul 2004, 12:21:15

```

```

log: C:\Documents and Settings\Nuno\Desktop\multinomial WGFS Scales on
Condition 3 (2).log
log type: text
resumed on: 26 Jul 2004, 12:28:52

```

. mlogit condition3 Pgeneral age gender if missing~=1

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -315.99921
Iteration 2: log likelihood = -312.85574
Iteration 3: log likelihood = -312.80712
Iteration 4: log likelihood = -312.80709

```

Multinomial logistic regression

```

Number of obs = 271
LR chi2(9) = 93.03
Prob > chi2 = 0.0000
Pseudo R2 = 0.1294

```

Log likelihood = -312.80709

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|------------|-----------|-----------|-------|-------|----------------------|
| 1 | | | | | |
| Pgeneral | .2339447 | .2567256 | 0.91 | 0.362 | -.2692284 .7371177 |
| age | -.0168251 | .014042 | -1.20 | 0.231 | -.0443468 .0106967 |
| gender | 2.038 | .4217759 | 4.83 | 0.000 | 1.211334 2.864666 |
| _cons | -3.242746 | 1.512459 | -2.14 | 0.032 | -6.207112 -.2783803 |

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| | | | | | | |
|-----------|-----------|----------|-------|-------|-----------|----------|
| age | -.0111556 | .0162396 | -0.69 | 0.492 | -.0429848 | .0206735 |
| gender | 3.66341 | .4813676 | 7.61 | 0.000 | 2.719947 | 4.606874 |
| _cons | -5.389747 | 6.770043 | -0.80 | 0.426 | -18.65879 | 7.879293 |
| ----- | | | | | | |
| 3 | | | | | | |
| Pgeneral1 | -.1321694 | 3.274082 | -0.04 | 0.968 | -6.549253 | 6.284914 |
| Pgenera2 | .0577998 | .3602759 | 0.16 | 0.873 | -.6483281 | .7639276 |
| age | -.0119792 | .0176411 | -0.68 | 0.497 | -.0465551 | .0225968 |
| gender | 1.159596 | .5429461 | 2.14 | 0.033 | .0954414 | 2.223751 |
| _cons | -2.64597 | 7.486457 | -0.35 | 0.724 | -17.31916 | 12.02722 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mod1)

Measures of Fit for mlogit of condition3

| Model: | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.272 | -312.807 | 0.535 |
| D: | 624.544(256) | 625.614(259) | 1.071(3) |
| LR: | 94.098(12) | 93.028(9) | 1.071(3) |
| Prob > LR: | 0.000 | 0.000 | 0.784 |
| McFadden's R2: | 0.131 | 0.129 | 0.001 |
| McFadden's Adj R2: | 0.089 | 0.096 | -0.007 |
| Maximum Likelihood R2: | 0.293 | 0.291 | 0.003 |
| Cragg & Uhler's R2: | 0.316 | 0.313 | 0.003 |
| Count R2: | 0.517 | 0.509 | 0.007 |
| Adj Count R2: | 0.256 | 0.244 | 0.011 |
| AIC: | 2.415 | 2.397 | 0.018 |
| AIC*n: | 654.544 | 649.614 | 4.929 |
| BIC: | -809.599 | -825.335 | 15.736 |
| BIC': | -26.873 | -42.609 | 15.736 |

Difference of 15.736 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 plibido age gender if missing~=1

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -315.02001
Iteration 2: log likelihood = -312.0124
Iteration 3: log likelihood = -311.96966
Iteration 4: log likelihood = -311.96964
```

| | | | |
|---------------------------------|---------------|---|--------|
| Multinomial logistic regression | Number of obs | = | 271 |
| | LR chi2(9) | = | 94.70 |
| | Prob > chi2 | = | 0.0000 |
| | Pseudo R2 | = | 0.1318 |

Log likelihood = -311.96964

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|------------|---------|-----------|-----------|-------|-------|----------------------|
| 1 | | | | | | |
| | plibido | .2282108 | .1791837 | 1.27 | 0.203 | -.1229829 .5794044 |
| | age | -.0157675 | .0141488 | -1.11 | 0.265 | -.0434987 .0119637 |
| | gender | 1.966144 | .4102944 | 4.79 | 0.000 | 1.161981 2.770306 |
| | _cons | -2.968631 | 1.032605 | -2.87 | 0.004 | -4.9925 -.944762 |
| 2 | | | | | | |
| | plibido | .7513284 | .2196136 | 3.42 | 0.001 | .3208938 1.181763 |
| | age | -.0080564 | .0160946 | -0.50 | 0.617 | -.0396013 .0234885 |
| | gender | 3.308824 | .4519196 | 7.32 | 0.000 | 2.423078 4.19457 |
| | _cons | -7.632868 | 1.34079 | -5.69 | 0.000 | -10.26077 -5.004969 |

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```
3
```

| | | | | | | |
|---------|-----------|----------|-------|-------|-----------|-----------|
| Plibido | .5377624 | .2291164 | 2.35 | 0.019 | .0887025 | .9868223 |
| age | -.0090293 | .017633 | -0.51 | 0.609 | -.0435894 | .0255307 |
| gender | 1.060475 | .5325705 | 1.99 | 0.046 | .0166561 | 2.104294 |
| _cons | -4.060097 | 1.344808 | -3.02 | 0.003 | -6.695872 | -1.424322 |

(Outcome condition3==0 is the comparison group)

```
. fitstat, using(mod0)
```

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -311.970 | -319.456 | 7.486 |
| D: | 623.939(259) | 638.912(262) | 14.972(3) |
| LR: | 94.703(9) | 79.730(6) | 14.972(3) |
| Prob > LR: | 0.000 | 0.000 | 0.002 |
| McFadden's R2: | 0.132 | 0.111 | 0.021 |
| McFadden's Adj R2: | 0.098 | 0.086 | 0.012 |
| Maximum Likelihood R2: | 0.295 | 0.255 | 0.040 |
| Cragg & Uhler's R2: | 0.317 | 0.274 | 0.043 |
| Count R2: | 0.517 | 0.498 | 0.018 |
| Adj Count R2: | 0.256 | 0.227 | 0.028 |
| AIC: | 2.391 | 2.424 | -0.033 |
| AIC*n: | 647.939 | 656.912 | -8.972 |
| BIC: | -827.009 | -828.843 | 1.834 |
| BIC': | -44.284 | -46.118 | 1.834 |

Difference of 1.834 in BIC' provides weak support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. fitstat, using(mod3)
```

Measures of Fit for mlogit of condition3

Incorrect using() option: no indices saved as mod3
r(111);

```
. fitstat, saving(mod3)
```

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -311.970 |
| D(259): | 623.939 | LR(9): | 94.703 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.132 | McFadden's Adj R2: | 0.098 |
| Maximum Likelihood R2: | 0.295 | Cragg & Uhler's R2: | 0.317 |
| Count R2: | 0.517 | Adj Count R2: | 0.256 |
| AIC: | 2.391 | AIC*n: | 647.939 |
| BIC: | -827.009 | BIC': | -44.284 |

(Indices saved in matrix fs_mod3)

```
. mlogit condition3 Plibido Plibido2 age gender if missing~=1
```

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -313.48134
Iteration 2: log likelihood = -310.66142
Iteration 3: log likelihood = -310.62346
Iteration 4: log likelihood = -310.62345
```

```
Multinomial logistic regression      Number of obs =      271
                                      LR chi2(12) =      97.40
                                      Prob > chi2 =      0.0000
```

thesis NUNO TORRES chap9f (app 10)
 Log likelihood = -310.62345 Pseudo R2 = 0.1355

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| Plibido | 1.499128 | 1.204516 | 1.24 | 0.213 | -.8616807 | 3.859936 |
| Plibido2 | -.1693984 | .1577068 | -1.07 | 0.283 | -.4784981 | .1397013 |
| age | -.0147251 | .0141775 | -1.04 | 0.299 | -.0425124 | .0130623 |
| gender | 1.94519 | .4123433 | 4.72 | 0.000 | 1.137012 | 2.753368 |
| _cons | -5.223051 | 2.38604 | -2.19 | 0.029 | -9.899604 | -.5464978 |
| 2 | | | | | | |
| Plibido | .5179081 | 1.335515 | 0.39 | 0.698 | -2.099653 | 3.135469 |
| Plibido2 | .0229461 | .1680374 | 0.14 | 0.891 | -.3064012 | .3522934 |
| age | -.0082785 | .0162097 | -0.51 | 0.610 | -.040049 | .0234919 |
| gender | 3.328835 | .455411 | 7.31 | 0.000 | 2.436246 | 4.221424 |
| _cons | -7.109612 | 2.783796 | -2.55 | 0.011 | -12.56575 | -1.653472 |
| 3 | | | | | | |
| Plibido | 2.437815 | 1.758415 | 1.39 | 0.166 | -1.008616 | 5.884245 |
| Plibido2 | -.2406823 | .2178498 | -1.10 | 0.269 | -.66766 | .1862954 |
| age | -.0074218 | .017565 | -0.42 | 0.673 | -.0418487 | .027005 |
| gender | 1.023174 | .5360661 | 1.91 | 0.056 | -.0274958 | 2.073845 |
| _cons | -7.640751 | 3.620496 | -2.11 | 0.035 | -14.73679 | -.5447092 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mod3)

Measures of Fit for mlogit of condition3

| | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| Model: | | | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -310.623 | -311.970 | 1.346 |
| D: | 621.247(256) | 623.939(259) | 2.692(3) |
| LR: | 97.395(12) | 94.703(9) | 2.692(3) |
| Prob > LR: | 0.000 | 0.000 | 0.442 |
| McFadden's R2: | 0.136 | 0.132 | 0.004 |
| McFadden's Adj R2: | 0.094 | 0.098 | -0.005 |
| Maximum Likelihood R2: | 0.302 | 0.295 | 0.007 |
| Cragg & Uhler's R2: | 0.325 | 0.317 | 0.007 |
| Count R2: | 0.520 | 0.517 | 0.004 |
| Adj Count R2: | 0.261 | 0.256 | 0.006 |
| AIC: | 2.403 | 2.391 | 0.012 |
| AIC*n: | 651.247 | 647.939 | 3.308 |
| BIC: | -812.896 | -827.009 | 14.114 |
| BIC': | -30.170 | -44.284 | 14.114 |

Difference of 14.114 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 Phopeful age gender if missing~=1

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -315.79816
Iteration 2: log likelihood = -312.50611
Iteration 3: log likelihood = -312.45176
Iteration 4: log likelihood = -312.45172
```

```
Multinomial logistic regression          Number of obs   =      271
                                          LR chi2(9)      =      93.74
                                          Prob > chi2     =      0.0000
Log likelihood = -312.45172              Pseudo R2       =      0.1304
```



```

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_cons | 1.005684 4.47788 0.22 0.822 -7.7708 9.782168

```

(Outcome condition3==0 is the comparison group)

```
. fitstat, using(mod5)
```

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -311.193 | -312.452 | 1.259 |
| D: | 622.386(256) | 624.903(259) | 2.517(3) |
| LR: | 96.256(12) | 93.739(9) | 2.517(3) |
| Prob > LR: | 0.000 | 0.000 | 0.472 |
| McFadden's R2: | 0.134 | 0.130 | 0.004 |
| McFadden's Adj R2: | 0.092 | 0.097 | -0.005 |
| Maximum Likelihood R2: | 0.299 | 0.292 | 0.007 |
| Cragg & Uhler's R2: | 0.322 | 0.315 | 0.007 |
| Count R2: | 0.498 | 0.483 | 0.015 |
| Adj Count R2: | 0.227 | 0.205 | 0.023 |
| AIC: | 2.407 | 2.394 | 0.013 |
| AIC*n: | 652.386 | 648.903 | 3.483 |
| BIC: | -811.756 | -826.045 | 14.289 |
| BIC': | -29.031 | -43.319 | 14.289 |

Difference of 14.289 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. mlogit condition3 Pmessiah age gender if missing~=1
```

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -318.55727
Iteration 2: log likelihood = -316.44956
Iteration 3: log likelihood = -316.43184
Iteration 4: log likelihood = -316.43184

```

```

Multinomial logistic regression          Number of obs   =      271
                                         LR chi2(9)      =      85.78
                                         Prob > chi2     =      0.0000
Log likelihood = -316.43184             Pseudo R2       =      0.1194

```

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|----------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | Pmessiah | -.4871646 | .287647 | -1.69 | 0.090 | -1.050942 | .0766132 |
| | age | -.0185703 | .0141028 | -1.32 | 0.188 | -.0462113 | .0090708 |
| | gender | 1.844947 | .4130398 | 4.47 | 0.000 | 1.035404 | 2.65449 |
| | _cons | .660671 | 1.730851 | 0.38 | 0.703 | -2.731735 | 4.053077 |
| 2 | Pmessiah | -.1178004 | .329312 | -0.36 | 0.721 | -.7632401 | .5276393 |
| | age | -.0156953 | .0159547 | -0.98 | 0.325 | -.046966 | .0155753 |
| | gender | 3.215286 | .4429698 | 7.26 | 0.000 | 2.347081 | 4.083491 |
| | _cons | -3.638542 | 1.998553 | -1.82 | 0.069 | -7.555633 | .2785491 |
| 3 | Pmessiah | -.7004543 | .3458417 | -2.03 | 0.043 | -1.378292 | -.0226169 |
| | age | -.0152971 | .0176104 | -0.87 | 0.385 | -.0498128 | .0192185 |
| | gender | .8628728 | .5360131 | 1.61 | 0.107 | -.1876935 | 1.913439 |
| | _cons | 2.099193 | 2.105086 | 1.00 | 0.319 | -2.0267 | 6.225086 |

(Outcome condition3==0 is the comparison group)

```
. fitstat, using(mod0)
```


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Iteration 1: log likelihood = -318.55727
 Iteration 2: log likelihood = -316.44956
 Iteration 3: log likelihood = -316.43184
 Iteration 4: log likelihood = -316.43184

Multinomial logistic regression

Number of obs = 271
 LR chi2(9) = 85.78
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1194

Log likelihood = -316.43184

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|----------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | Pmessiah | -.4871646 | .287647 | -1.69 | 0.090 | -1.050942 | .0766132 |
| | age | -.0185703 | .0141028 | -1.32 | 0.188 | -.0462113 | .0090708 |
| | gender | 1.844947 | .4130398 | 4.47 | 0.000 | 1.035404 | 2.65449 |
| | _cons | .660671 | 1.730851 | 0.38 | 0.703 | -2.731735 | 4.053077 |
| 2 | Pmessiah | -.1178004 | .329312 | -0.36 | 0.721 | -.7632401 | .5276393 |
| | age | -.0156953 | .0159547 | -0.98 | 0.325 | -.046966 | .0155753 |
| | gender | 3.215286 | .4429698 | 7.26 | 0.000 | 2.347081 | 4.083491 |
| | _cons | -3.638542 | 1.998553 | -1.82 | 0.069 | -7.555633 | .2785491 |
| 3 | Pmessiah | -.7004543 | .3458417 | -2.03 | 0.043 | -1.378292 | -.0226169 |
| | age | -.0152971 | .0176104 | -0.87 | 0.385 | -.0498128 | .0192185 |
| | gender | .8628728 | .5360131 | 1.61 | 0.107 | -.1876935 | 1.913439 |
| | _cons | 2.099193 | 2.105086 | 1.00 | 0.319 | -2.0267 | 6.225086 |

(Outcome condition3==0 is the comparison group)

. fitstat, saving(mod6)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -316.432 |
| D(259): | 632.864 | LR(9): | 85.778 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.119 | McFadden's Adj R2: | 0.086 |
| Maximum Likelihood R2: | 0.271 | Cragg & Uhler's R2: | 0.292 |
| Count R2: | 0.491 | Adj Count R2: | 0.216 |
| AIC: | 2.424 | AIC*n: | 656.864 |
| BIC: | -818.085 | BIC': | -35.359 |

(Indices saved in matrix fs_mod6)

. mlogit condition3 Pmessiah Pmessiah2 age gender if missing~=1

Iteration 0: log likelihood = -359.32101
 Iteration 1: log likelihood = -314.9835
 Iteration 2: log likelihood = -312.66706
 Iteration 3: log likelihood = -312.64795
 Iteration 4: log likelihood = -312.64795

Multinomial logistic regression

Number of obs = 271
 LR chi2(12) = 93.35
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1299

Log likelihood = -312.64795

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|-----------|-----------|-----------|-------|-------|----------------------|----------|
| 1 | Pmessiah | 3.168015 | 3.883756 | 0.82 | 0.415 | -4.444006 | 10.78004 |
| | Pmessiah2 | -.3751835 | .3865664 | -0.97 | 0.332 | -1.13284 | .3824728 |
| | age | -.0173218 | .014006 | -1.24 | 0.216 | -.044773 | .0101293 |

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| | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|-----------|----------|-------|-------|-----------|----------|
| gender | 1.829076 | .4137882 | 4.42 | 0.000 | 1.018066 | 2.640085 |
| _cons | -8.135281 | 9.780512 | -0.83 | 0.406 | -27.30473 | 11.03417 |
| ----- | | | | | | |
| 2 | | | | | | |
| Pmessiah | -5.512449 | 3.636517 | -1.52 | 0.130 | -12.63989 | 1.614993 |
| Pmessiah2 | .5510573 | .3655531 | 1.51 | 0.132 | -.1654137 | 1.267528 |
| age | -.0173906 | .0161375 | -1.08 | 0.281 | -.0490196 | .0142384 |
| gender | 3.270894 | .4496681 | 7.27 | 0.000 | 2.389561 | 4.152227 |
| _cons | 9.295617 | 9.006251 | 1.03 | 0.302 | -8.35631 | 26.94754 |
| ----- | | | | | | |
| 3 | | | | | | |
| Pmessiah | -3.853442 | 3.568598 | -1.08 | 0.280 | -10.84777 | 3.140882 |
| Pmessiah2 | .3268502 | .3627125 | 0.90 | 0.368 | -.3840532 | 1.037754 |
| age | -.016258 | .0178376 | -0.91 | 0.362 | -.0512191 | .018703 |
| gender | .8926197 | .5381414 | 1.66 | 0.097 | -.162118 | 1.947357 |
| _cons | 9.551856 | 8.803348 | 1.09 | 0.278 | -7.702389 | 26.8061 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mod6)

Measures of Fit for mlogit of condition3

| | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| Model: | | | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.648 | -316.432 | 3.784 |
| D: | 625.296(256) | 632.864(259) | 7.568(3) |
| LR: | 93.346(12) | 85.778(9) | 7.568(3) |
| Prob > LR: | 0.000 | 0.000 | 0.056 |
| McFadden's R2: | 0.130 | 0.119 | 0.011 |
| McFadden's Adj R2: | 0.088 | 0.086 | 0.002 |
| Maximum Likelihood R2: | 0.291 | 0.271 | 0.020 |
| Cragg & Uhler's R2: | 0.313 | 0.292 | 0.022 |
| Count R2: | 0.502 | 0.491 | 0.011 |
| Adj Count R2: | 0.233 | 0.216 | 0.017 |
| AIC: | 2.418 | 2.424 | -0.006 |
| AIC*n: | 655.296 | 656.864 | -1.568 |
| BIC: | -808.847 | -818.085 | 9.239 |
| BIC': | -26.121 | -35.359 | 9.239 |

Difference of 9.239 in BIC' provides strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 Dgeneral age gender if missing~=1

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -315.91552
Iteration 2: log likelihood = -313.27058
Iteration 3: log likelihood = -313.23801
Iteration 4: log likelihood = -313.23799
```

Multinomial logistic regression

```
Number of obs = 271
LR chi2(9) = 92.17
Prob > chi2 = 0.0000
Pseudo R2 = 0.1283
```

Log likelihood = -313.23799

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|------------|-----------|-----------|-------|-------|----------------------|
| 1 | | | | | |
| Dgeneral | -.1844006 | .2756639 | -0.67 | 0.504 | -.7246919 .3558907 |
| age | -.0167861 | .0139068 | -1.21 | 0.227 | -.044043 .0104707 |
| gender | 1.907632 | .4125109 | 4.62 | 0.000 | 1.099125 2.716138 |
| _cons | -1.014524 | 1.685347 | -0.60 | 0.547 | -4.317744 2.288695 |

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| 2 | | | | | | | |
|----------|-----------|----------|-------|-------|-----------|-----------|--|
| Dgeneral | .9237025 | .3834798 | 2.41 | 0.016 | .172096 | 1.675309 | |
| age | -.0154309 | .0162917 | -0.95 | 0.344 | -.0473621 | .0165003 | |
| gender | 3.370978 | .4501368 | 7.49 | 0.000 | 2.488726 | 4.25323 | |
| _cons | -9.54052 | 2.368413 | -4.03 | 0.000 | -14.18252 | -4.898517 | |
| 3 | | | | | | | |
| Dgeneral | -.0782327 | .350128 | -0.22 | 0.823 | -.764471 | .6080055 | |
| age | -.0126074 | .0174488 | -0.72 | 0.470 | -.0468064 | .0215917 | |
| gender | 1.000324 | .5328985 | 1.88 | 0.060 | -.0441374 | 2.044786 | |
| _cons | -1.344743 | 2.146722 | -0.63 | 0.531 | -5.552241 | 2.862754 | |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mod0)

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -313.238 | -319.456 | 6.218 |
| D: | 626.476(259) | 638.912(262) | 12.436(3) |
| LR: | 92.166(9) | 79.730(6) | 12.436(3) |
| Prob > LR: | 0.000 | 0.000 | 0.006 |
| McFadden's R2: | 0.128 | 0.111 | 0.017 |
| McFadden's Adj R2: | 0.095 | 0.086 | 0.009 |
| Maximum Likelihood R2: | 0.288 | 0.255 | 0.033 |
| Cragg & Uhler's R2: | 0.310 | 0.274 | 0.036 |
| Count R2: | 0.520 | 0.498 | 0.022 |
| Adj Count R2: | 0.261 | 0.227 | 0.034 |
| AIC: | 2.400 | 2.424 | -0.024 |
| AIC*n: | 650.476 | 656.912 | -6.436 |
| BIC: | -824.473 | -828.843 | 4.371 |
| BIC': | -41.747 | -46.118 | 4.371 |

Difference of 4.371 in BIC' provides positive support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. fitstat, using(mo10)

Measures of Fit for mlogit of condition3

Incorrect using() option: no indices saved as mo10
r(111);

. fitstat, saving(mo10)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -313.238 |
| D(259): | 626.476 | LR(9): | 92.166 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.128 | McFadden's Adj R2: | 0.095 |
| Maximum Likelihood R2: | 0.288 | Cragg & Uhler's R2: | 0.310 |
| Count R2: | 0.520 | Adj Count R2: | 0.261 |
| AIC: | 2.400 | AIC*n: | 650.476 |
| BIC: | -824.473 | BIC': | -41.747 |

(Indices saved in matrix fs_mo10)

. mlogit condition3 Dgeneral Dgenera2 age gender if missing~=1

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -315.02906
Iteration 2: log likelihood = -312.46769

(Indices saved in matrix fs_mo10)

```
. mlogit condition3 Fpersecut Fpersec2 age gender if missing~=1
```

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -314.49636
Iteration 2: log likelihood = -312.0517
Iteration 3: log likelihood = -312.02017
Iteration 4: log likelihood = -312.02015
```

```
Multinomial logistic regression          Number of obs   =      271
                                          LR chi2(12)     =      94.60
                                          Prob > chi2     =      0.0000
Log likelihood = -312.02015              Pseudo R2       =      0.1316
```

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| Fpersecut | .4964887 | 1.060263 | 0.47 | 0.640 | -1.581589 | 2.574566 |
| Fpersec2 | -.054278 | .1265002 | -0.43 | 0.668 | -.3022138 | .1936577 |
| age | -.0179549 | .0141451 | -1.27 | 0.204 | -.0456789 | .009769 |
| gender | 1.939765 | .4092951 | 4.74 | 0.000 | 1.137562 | 2.741969 |
| _cons | -3.06311 | 2.215819 | -1.38 | 0.167 | -7.406036 | 1.279817 |
| 2 | | | | | | |
| Fpersecut | 1.110058 | 1.451745 | 0.76 | 0.444 | -1.73531 | 3.955426 |
| Fpersec2 | -.0892594 | .1665731 | -0.54 | 0.592 | -.4157366 | .2372178 |
| age | -.0180919 | .0160703 | -1.13 | 0.260 | -.049589 | .0134052 |
| gender | 3.213737 | .4418126 | 7.27 | 0.000 | 2.3478 | 4.079674 |
| _cons | -7.224244 | 3.1169 | -2.32 | 0.020 | -13.33326 | -1.115231 |
| 3 | | | | | | |
| Fpersecut | -2.36875 | 1.122262 | -2.11 | 0.035 | -4.568344 | -.169156 |
| Fpersec2 | .3248994 | .1345176 | 2.42 | 0.016 | .0612497 | .588549 |
| age | -.0184745 | .0181419 | -1.02 | 0.309 | -.054032 | .017083 |
| gender | 1.057293 | .5398717 | 1.96 | 0.050 | -.0008356 | 2.115423 |
| _cons | 2.003872 | 2.366448 | 0.85 | 0.397 | -2.63428 | 6.642024 |

(Outcome condition3==0 is the comparison group)

```
. fitstat, using(mod10)
```

Measures of Fit for mlogit of condition3

```
using() name must be < 5 characters long
r(198);
```

```
. fitstat, using(mo10)
```

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.020 | -315.881 | 3.860 |
| D: | 624.040(256) | 631.761(259) | 7.721(3) |
| LR: | 94.602(12) | 86.881(9) | 7.721(3) |
| Prob > LR: | 0.000 | 0.000 | 0.052 |
| McFadden's R2: | 0.132 | 0.121 | 0.011 |
| McFadden's Adj R2: | 0.090 | 0.087 | 0.002 |
| Maximum Likelihood R2: | 0.295 | 0.274 | 0.020 |
| Cragg & Uhler's R2: | 0.317 | 0.295 | 0.022 |
| Count R2: | 0.498 | 0.491 | 0.007 |
| Adj Count R2: | 0.227 | 0.216 | 0.011 |
| AIC: | 2.413 | 2.420 | -0.006 |

```

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AIC*n:          654.040          655.761          -1.721
BIC:            -810.102         -819.188          9.086
BIC':           -27.376          -36.462          9.086

```

Difference of 9.086 in BIC' provides strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. fitstat, using(mod0)
```

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.020 | -319.456 | 7.436 |
| D: | 624.040(256) | 638.912(262) | 14.871(6) |
| LR: | 94.602(12) | 79.730(6) | 14.871(6) |
| Prob > LR: | 0.000 | 0.000 | 0.021 |
| McFadden's R2: | 0.132 | 0.111 | 0.021 |
| McFadden's Adj R2: | 0.090 | 0.086 | 0.004 |
| Maximum Likelihood R2: | 0.295 | 0.255 | 0.040 |
| Cragg & Uhler's R2: | 0.317 | 0.274 | 0.043 |
| Count R2: | 0.498 | 0.498 | 0.000 |
| Adj Count R2: | 0.227 | 0.227 | 0.000 |
| AIC: | 2.413 | 2.424 | -0.011 |
| AIC*n: | 654.040 | 656.912 | -2.871 |
| BIC: | -810.102 | -828.843 | 18.741 |
| BIC': | -27.376 | -46.118 | 18.741 |

Difference of 18.741 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. mlogit condition3 Fcruelty age gender if missing~=1
```

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -317.15193
Iteration 2: log likelihood = -314.87541
Iteration 3: log likelihood = -314.85325
Iteration 4: log likelihood = -314.85324

```

Multinomial logistic regression

```

Number of obs = 271
LR chi2(9) = 88.94
Prob > chi2 = 0.0000
Pseudo R2 = 0.1238

```

Log likelihood = -314.85324

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| Fcruelty | .4281098 | .1809635 | 2.37 | 0.018 | .0734278 | .7827917 |
| age | -.0231255 | .0143862 | -1.61 | 0.108 | -.0513218 | .0050709 |
| gender | 1.858116 | .4123558 | 4.51 | 0.000 | 1.049914 | 2.666318 |
| _cons | -3.130093 | .8581508 | -3.65 | 0.000 | -4.812038 | -1.448148 |
| 2 | | | | | | |
| Fcruelty | .343721 | .208195 | 1.65 | 0.099 | -.0643338 | .7517757 |
| age | -.0195556 | .0161125 | -1.21 | 0.225 | -.0511355 | .0120242 |
| gender | 3.162651 | .4410006 | 7.17 | 0.000 | 2.298306 | 4.026997 |
| _cons | -5.176936 | 1.005661 | -5.15 | 0.000 | -7.147995 | -3.205878 |
| 3 | | | | | | |
| Fcruelty | .5655006 | .2216494 | 2.55 | 0.011 | .1310757 | .9999256 |
| age | -.0209503 | .0179854 | -1.16 | 0.244 | -.0562012 | .0143005 |
| gender | .9019398 | .5331668 | 1.69 | 0.091 | -.1430479 | 1.946928 |
| _cons | -3.250379 | 1.08704 | -2.99 | 0.003 | -5.380938 | -1.11982 |

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| 2 | | | | | | | |
|-------|----------|-----------|----------|-------|-------|-----------|-----------|
| | Fcruelty | -.034545 | 1.15006 | -0.03 | 0.976 | -2.288621 | 2.219531 |
| | Fcruel2 | .0563876 | .1618714 | 0.35 | 0.728 | -.2608744 | .3736497 |
| | age | -.019997 | .0161386 | -1.24 | 0.215 | -.051628 | .0116341 |
| | gender | 3.175724 | .443303 | 7.16 | 0.000 | 2.306866 | 4.044582 |
| | _cons | -4.589839 | 2.04866 | -2.24 | 0.025 | -8.605139 | -.5745393 |
| ----- | | | | | | | |
| 3 | | | | | | | |
| | Fcruelty | .6710926 | 1.307619 | 0.51 | 0.608 | -1.891794 | 3.233979 |
| | Fcruel2 | -.0090389 | .1781685 | -0.05 | 0.960 | -.3582428 | .3401651 |
| | age | -.0211292 | .0179847 | -1.17 | 0.240 | -.0563786 | .0141202 |
| | gender | .8993542 | .5347603 | 1.68 | 0.093 | -.1487567 | 1.947465 |
| | _cons | -3.487121 | 2.421629 | -1.44 | 0.150 | -8.233427 | 1.259185 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mo12)

Measures of Fit for mlogit of condition3

| | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| Model: | | | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -314.438 | -314.853 | 0.416 |
| D: | 628.875(256) | 629.706(259) | 0.831(3) |
| LR: | 89.767(12) | 88.936(9) | 0.831(3) |
| Prob > LR: | 0.000 | 0.000 | 0.842 |
| McFadden's R2: | 0.125 | 0.124 | 0.001 |
| McFadden's Adj R2: | 0.083 | 0.090 | -0.007 |
| Maximum Likelihood R2: | 0.282 | 0.280 | 0.002 |
| Cragg & Uhler's R2: | 0.303 | 0.301 | 0.002 |
| Count R2: | 0.502 | 0.509 | -0.007 |
| Adj Count R2: | 0.233 | 0.244 | -0.011 |
| AIC: | 2.431 | 2.412 | 0.019 |
| AIC*n: | 658.875 | 653.706 | 5.169 |
| BIC: | -805.267 | -821.242 | 15.975 |
| BIC': | -22.541 | -38.516 | 15.975 |

Difference of 15.975 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 Fvictory age gender if missing~=1

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -316.19574
Iteration 2: log likelihood = -312.9728
Iteration 3: log likelihood = -312.91748
Iteration 4: log likelihood = -312.91744
```

```
Multinomial logistic regression          Number of obs   =      271
                                          LR chi2(9)      =      92.81
                                          Prob > chi2     =      0.0000
Log likelihood = -312.91744              Pseudo R2      =      0.1291
```

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| | Fvictory | .2421416 | 1.31 | 0.189 | -.1194877 | .6037709 |
| | age | -.0172695 | -1.23 | 0.218 | -.0447754 | .0102364 |
| | gender | 1.920488 | 4.69 | 0.000 | 1.117905 | 2.723071 |
| | _cons | -3.147844 | -2.84 | 0.004 | -5.317479 | -.9782083 |
| 2 | | | | | | |
| | Fvictory | .8208548 | 3.31 | 0.001 | .3350205 | 1.306689 |
| | age | -.0168179 | -1.04 | 0.300 | -.0485897 | .014954 |

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|------------------------------------|-----------|----------|-------|-------|-----------|-----------|--|
| gender | 3.167773 | .4468831 | 7.09 | 0.000 | 2.291898 | 4.043648 | |
| _cons | -8.212467 | 1.507431 | -5.45 | 0.000 | -11.16698 | -5.257958 | |
| ----- | | | | | | | |
| 3 | | | | | | | |
| Fvictory | .409987 | .2439071 | 1.68 | 0.093 | -.0680622 | .8880362 | |
| age | -.0133968 | .017678 | -0.76 | 0.449 | -.0480449 | .0212514 | |
| gender | .9734682 | .5299637 | 1.84 | 0.066 | -.0652416 | 2.012178 | |
| _cons | -3.673348 | 1.456655 | -2.52 | 0.012 | -6.528339 | -.8183572 | |

(Outcome condition3==0 is the comparison group)

. fitstat, saving(mo14)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -312.917 |
| D(259): | 625.835 | LR(9): | 92.807 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.129 | McFadden's Adj R2: | 0.096 |
| Maximum Likelihood R2: | 0.290 | Cragg & Uhler's R2: | 0.312 |
| Count R2: | 0.513 | Adj Count R2: | 0.250 |
| AIC: | 2.398 | AIC*n: | 649.835 |
| BIC: | -825.114 | BIC': | -42.388 |

(Indices saved in matrix fs_mo14)

. fitstat, using(mod0)

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.917 | -319.456 | 6.538 |
| D: | 625.835(259) | 638.912(262) | 13.077(3) |
| LR: | 92.807(9) | 79.730(6) | 13.077(3) |
| Prob > LR: | 0.000 | 0.000 | 0.004 |
| McFadden's R2: | 0.129 | 0.111 | 0.018 |
| McFadden's Adj R2: | 0.096 | 0.086 | 0.010 |
| Maximum Likelihood R2: | 0.290 | 0.255 | 0.035 |
| Cragg & Uhler's R2: | 0.312 | 0.274 | 0.038 |
| Count R2: | 0.513 | 0.498 | 0.015 |
| Adj Count R2: | 0.250 | 0.227 | 0.023 |
| AIC: | 2.398 | 2.424 | -0.026 |
| AIC*n: | 649.835 | 656.912 | -7.077 |
| BIC: | -825.114 | -828.843 | 3.730 |
| BIC': | -42.388 | -46.118 | 3.730 |

Difference of 3.730 in BIC' provides positive support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 Fvictory Fvictory2 age gender if missing~=1

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -307.43333
Iteration 2: log likelihood = -303.46383
Iteration 3: log likelihood = -303.30839
Iteration 4: log likelihood = -303.30749
Iteration 5: log likelihood = -303.30749
```

| | | | |
|---------------------------------|---------------|---|--------|
| Multinomial logistic regression | Number of obs | = | 271 |
| | LR chi2(12) | = | 112.03 |
| | Prob > chi2 | = | 0.0000 |
| Log likelihood = -303.30749 | Pseudo R2 | = | 0.1559 |

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| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | | | | | | |
| Fvictory | -1.704363 | 1.751818 | -0.97 | 0.331 | -5.137863 | 1.729138 |
| Fvictor2 | .2247458 | .1924243 | 1.17 | 0.243 | -.1523988 | .6018905 |
| age | -.0191215 | .0141513 | -1.35 | 0.177 | -.0468576 | .0086146 |
| gender | 1.955737 | .4119065 | 4.75 | 0.000 | 1.148415 | 2.763059 |
| _cons | .9050132 | 3.999212 | 0.23 | 0.821 | -6.933299 | 8.743325 |
| 2 | | | | | | |
| Fvictory | -4.71973 | 1.821657 | -2.59 | 0.010 | -8.290112 | -1.149348 |
| Fvictor2 | .6103506 | .2004046 | 3.05 | 0.002 | .2175648 | 1.003136 |
| age | -.0214546 | .0166034 | -1.29 | 0.196 | -.0539966 | .0110875 |
| gender | 3.28617 | .4600448 | 7.14 | 0.000 | 2.384499 | 4.187841 |
| _cons | 3.878868 | 4.132011 | 0.94 | 0.348 | -4.219725 | 11.97746 |
| 3 | | | | | | |
| Fvictory | -5.307795 | 1.708226 | -3.11 | 0.002 | -8.655856 | -1.959734 |
| Fvictor2 | .6555911 | .191777 | 3.42 | 0.001 | .279715 | 1.031467 |
| age | -.0201282 | .0186809 | -1.08 | 0.281 | -.0567422 | .0164857 |
| gender | 1.114497 | .5428766 | 2.05 | 0.040 | .0504784 | 2.178516 |
| _cons | 8.149705 | 3.845985 | 2.12 | 0.034 | .611713 | 15.6877 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mo14)

Measures of Fit for mlogit of condition3

| | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| Model: | | | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -303.307 | -312.917 | 9.610 |
| D: | 606.615 (256) | 625.835 (259) | 19.220(3) |
| LR: | 112.027(12) | 92.807(9) | 19.220(3) |
| Prob > LR: | 0.000 | 0.000 | 0.000 |
| McFadden's R2: | 0.156 | 0.129 | 0.027 |
| McFadden's Adj R2: | 0.114 | 0.096 | 0.018 |
| Maximum Likelihood R2: | 0.339 | 0.290 | 0.049 |
| Cragg & Uhler's R2: | 0.364 | 0.312 | 0.052 |
| Count R2: | 0.520 | 0.513 | 0.007 |
| Adj Count R2: | 0.261 | 0.250 | 0.011 |
| AIC: | 2.349 | 2.398 | -0.049 |
| AIC*n: | 636.615 | 649.835 | -13.220 |
| BIC: | -827.527 | -825.114 | -2.414 |
| BIC': | -44.802 | -42.388 | -2.414 |

Difference of 2.414 in BIC' provides positive support for current model.

Note: p-value for difference in LR is only valid if models are nested.

. mlogit condition3 Fflight age gender if missing~=1

```
Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -317.05679
Iteration 2: log likelihood = -314.74077
Iteration 3: log likelihood = -314.71765
Iteration 4: log likelihood = -314.71764
```

| | | | |
|---------------------------------|---------------|---|--------|
| Multinomial logistic regression | Number of obs | = | 271 |
| | LR chi2(9) | = | 89.21 |
| | Prob > chi2 | = | 0.0000 |
| | Pseudo R2 | = | 0.1241 |

Log likelihood = -314.71764

| condition3 | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|------------|-------|-----------|---|------|----------------------|
|------------|-------|-----------|---|------|----------------------|

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| 1 | | | | | | | |
|-------|---------|-----------|----------|-------|-------|-----------|-----------|
| | Fflight | .2398737 | .2056552 | 1.17 | 0.243 | -.1632032 | .6429506 |
| | age | -.0213697 | .0142794 | -1.50 | 0.135 | -.0493568 | .0066174 |
| | gender | 1.981729 | .4115514 | 4.82 | 0.000 | 1.175103 | 2.788355 |
| | _cons | -2.813441 | .9877475 | -2.85 | 0.004 | -4.749391 | -.8774918 |
| ----- | | | | | | | |
| 2 | | | | | | | |
| | Fflight | .433128 | .2380005 | 1.82 | 0.069 | -.0333444 | .8996004 |
| | age | -.0194886 | .0160365 | -1.22 | 0.224 | -.0509196 | .0119424 |
| | gender | 3.279823 | .4439478 | 7.39 | 0.000 | 2.409702 | 4.149945 |
| | _cons | -5.822608 | 1.214792 | -4.79 | 0.000 | -8.203556 | -3.44166 |
| ----- | | | | | | | |
| 3 | | | | | | | |
| | Fflight | .760687 | .2681778 | 2.84 | 0.005 | .2350682 | 1.286306 |
| | age | -.0230468 | .0183398 | -1.26 | 0.209 | -.058992 | .0128985 |
| | gender | 1.087838 | .5365077 | 2.03 | 0.043 | .0363022 | 2.139374 |
| | _cons | -4.430744 | 1.34301 | -3.30 | 0.001 | -7.062995 | -1.798493 |

(Outcome condition3==0 is the comparison group)

. fitstat, using(mo16)

Measures of Fit for mlogit of condition3

Incorrect using() option: no indices saved as mo16
r(111);

. fitstat, saving(mo16)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -314.718 |
| D(259): | 629.435 | LR(9): | 89.207 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.124 | McFadden's Adj R2: | 0.091 |
| Maximum Likelihood R2: | 0.280 | Cragg & Uhler's R2: | 0.302 |
| Count R2: | 0.506 | Adj Count R2: | 0.239 |
| AIC: | 2.411 | AIC*n: | 653.435 |
| BIC: | -821.513 | BIC': | -38.788 |

(Indices saved in matrix fs_mo16)

. fitstat, using(mod0)

Measures of Fit for mlogit of condition3

| | Current | Saved | Difference |
|-------------------------|---------------|---------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -314.718 | -319.456 | 4.738 |
| D: | 629.435 (259) | 638.912 (262) | 9.476 (3) |
| LR: | 89.207 (9) | 79.730 (6) | 9.476 (3) |
| Prob > LR: | 0.000 | 0.000 | 0.024 |
| McFadden's R2: | 0.124 | 0.111 | 0.013 |
| McFadden's Adj R2: | 0.091 | 0.086 | 0.005 |
| Maximum Likelihood R2: | 0.280 | 0.255 | 0.026 |
| Cragg & Uhler's R2: | 0.302 | 0.274 | 0.028 |
| Count R2: | 0.506 | 0.498 | 0.007 |
| Adj Count R2: | 0.239 | 0.227 | 0.011 |
| AIC: | 2.411 | 2.424 | -0.013 |
| AIC*n: | 653.435 | 656.912 | -3.476 |
| BIC: | -821.513 | -828.843 | 7.330 |
| BIC': | -38.788 | -46.118 | 7.330 |

Difference of 7.330 in BIC' provides strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

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Iteration 0: log likelihood = -359.32101
 Iteration 1: log likelihood = -317.5044
 Iteration 2: log likelihood = -315.16672
 Iteration 3: log likelihood = -315.14555
 Iteration 4: log likelihood = -315.14554

Multinomial logistic regression
 Log likelihood = -315.14554
 Number of obs = 271
 LR chi2(9) = 88.35
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1229

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|---------|-----------|-----------|-------|-------|----------------------|----------|
| 1 | Dinterd | -.2037628 | .2637499 | -0.77 | 0.440 | -.7207031 | .3131775 |
| | age | -.016776 | .013953 | -1.20 | 0.229 | -.0441234 | .0105713 |
| | gender | 1.901336 | .4118582 | 4.62 | 0.000 | 1.094109 | 2.708563 |
| | _cons | -.8939829 | 1.644281 | -0.54 | 0.587 | -4.116714 | 2.328748 |
| 2 | Dinterd | .6501543 | .3480532 | 1.87 | 0.062 | -.0320174 | 1.332326 |
| | age | -.0159343 | .0161165 | -0.99 | 0.323 | -.0475221 | .0156536 |
| | gender | 3.33276 | .4466799 | 7.46 | 0.000 | 2.457284 | 4.208237 |
| | _cons | -7.988476 | 2.169864 | -3.68 | 0.000 | -12.24133 | -3.73562 |
| 3 | Dinterd | .0220442 | .3479624 | 0.06 | 0.949 | -.6599497 | .7040381 |
| | age | -.012777 | .0175569 | -0.73 | 0.467 | -.047188 | .0216339 |
| | gender | 1.020936 | .5317246 | 1.92 | 0.055 | -.0212248 | 2.063097 |
| | _cons | -1.904294 | 2.160839 | -0.88 | 0.378 | -6.13946 | 2.330873 |

(Outcome condition3==0 is the comparison group)

. fitstat, saving(mo20)

Measures of Fit for mlogit of condition3

| | | | |
|-------------------------|----------|---------------------|----------|
| Log-Lik Intercept Only: | -359.321 | Log-Lik Full Model: | -315.146 |
| D(259): | 630.291 | LR(9): | 88.351 |
| | | Prob > LR: | 0.000 |
| McFadden's R2: | 0.123 | McFadden's Adj R2: | 0.090 |
| Maximum Likelihood R2: | 0.278 | Cragg & Uhler's R2: | 0.299 |
| Count R2: | 0.520 | Adj Count R2: | 0.261 |
| AIC: | 2.414 | AIC*n: | 654.291 |
| BIC: | -820.658 | BIC': | -37.932 |

(Indices saved in matrix fs_mo20)

. fitstat, using(mod0)

Measures of Fit for mlogit of condition3

| Model: | Current mlogit | Saved mlogit | Difference |
|-------------------------|-------------------|-----------------|------------|
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -315.146 | -319.456 | 4.310 |
| D: | 630.291(259) | 638.912(262) | 8.621(3) |
| LR: | 88.351(9) | 79.730(6) | 8.621(3) |
| Prob > LR: | 0.000 | 0.000 | 0.035 |
| McFadden's R2: | 0.123 | 0.111 | 0.012 |
| McFadden's Adj R2: | 0.090 | 0.086 | 0.004 |
| Maximum Likelihood R2: | 0.278 | 0.255 | 0.023 |
| Cragg & Uhler's R2: | 0.299 | 0.274 | 0.025 |
| Count R2: | 0.520 | 0.498 | 0.022 |
| Adj Count R2: | 0.261 | 0.227 | 0.034 |


```

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AIC*n:          659.502          654.291          5.211
BIC:            -804.640         -820.658         16.018
BIC':           -21.914          -37.932          16.018

```

Difference of 16.018 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. mlogit condition3 Dleader age gender if missing~=1
```

```

Iteration 0:  log likelihood = -359.32101
Iteration 1:  log likelihood = -314.84671
Iteration 2:  log likelihood = -311.83653
Iteration 3:  log likelihood = -311.79144
Iteration 4:  log likelihood = -311.79141

```

```

Multinomial logistic regression          Number of obs   =      271
                                         LR chi2(9)       =      95.06
                                         Prob > chi2      =      0.0000
Log likelihood = -311.79141             Pseudo R2       =      0.1323

```

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|---------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | Dleader | .1278123 | .2380344 | 0.54 | 0.591 | -.3387265 | .5943511 |
| | age | -.018842 | .0141013 | -1.34 | 0.181 | -.04648 | .0087961 |
| | gender | 1.971532 | .4106218 | 4.80 | 0.000 | 1.166728 | 2.776336 |
| | _cons | -2.629191 | 1.321383 | -1.99 | 0.047 | -5.219055 | -.0393275 |
| 2 | Dleader | 1.035605 | .3094812 | 3.35 | 0.001 | .4290325 | 1.642177 |
| | age | -.0209263 | .016387 | -1.28 | 0.202 | -.0530442 | .0111917 |
| | gender | 3.319488 | .4522717 | 7.34 | 0.000 | 2.433052 | 4.205925 |
| | _cons | -9.438523 | 1.810625 | -5.21 | 0.000 | -12.98728 | -5.889763 |
| 3 | Dleader | .5359076 | .3203195 | 1.67 | 0.094 | -.0919072 | 1.163722 |
| | age | -.0178482 | .0179671 | -0.99 | 0.321 | -.053063 | .0173667 |
| | gender | 1.071977 | .5319954 | 2.02 | 0.044 | .0292851 | 2.114669 |
| | _cons | -4.325485 | 1.785935 | -2.42 | 0.015 | -7.825853 | -.8251167 |

(Outcome condition3==0 is the comparison group)

```
. fitstat, saving(mo22)
```

Measures of Fit for mlogit of condition3

```

Log-Lik Intercept Only:  -359.321      Log-Lik Full Model:      -311.791
D(259):                  623.583      LR(9):                   95.059
                                         Prob > LR:                0.000
McFadden's R2:          0.132      McFadden's Adj R2:      0.099
Maximum Likelihood R2:  0.296      Cragg & Uhler's R2:    0.318
Count R2:                0.524      Adj Count R2:           0.267
AIC:                     2.390      AIC*n:                  647.583
BIC:                     -827.366     BIC':                   -44.640

```

(Indices saved in matrix fs_mo22)

```
. fitstat, using(mod0)
```

Measures of Fit for mlogit of condition3

| Model: | Current | Saved | Difference |
|-------------------------|----------|----------|------------|
| | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -311.791 | -319.456 | 7.664 |

```

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D:                623.583(259)      638.912(262)      15.329(3)
LR:               95.059(9)       79.730(6)        15.329(3)
Prob > LR:       0.000            0.000            0.002
McFadden's R2:   0.132            0.111            0.021
McFadden's Adj R2: 0.099            0.086            0.013
Maximum Likelihood R2: 0.296            0.255            0.041
Cragg & Uhler's R2: 0.318            0.274            0.044
Count R2:        0.524            0.498            0.026
Adj Count R2:    0.267            0.227            0.040
AIC:             2.390            2.424            -0.034
AIC*n:          647.583            656.912          -9.329
BIC:            -827.366           -828.843          1.477
BIC':           -44.640            -46.118           1.477

```

Difference of 1.477 in BIC' provides weak support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. mlogit condition3 Dleader Dleader2 age gender if missing~=1
```

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -310.70257
Iteration 2: log likelihood = -307.8321
Iteration 3: log likelihood = -307.79295
Iteration 4: log likelihood = -307.79293

```

Multinomial logistic regression

```

Number of obs = 271
LR chi2(12) = 103.06
Prob > chi2 = 0.0000
Pseudo R2 = 0.1434

```

Log likelihood = -307.79293

| condition3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|------------|----------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | Dleader | 1.394343 | 2.659196 | 0.52 | 0.600 | -3.817585 | 6.60627 |
| | Dleader2 | -.1359799 | .2815915 | -0.48 | 0.629 | -.6878891 | .4159293 |
| | age | -.0189493 | .0141333 | -1.34 | 0.180 | -.04665 | .0087514 |
| | gender | 1.979556 | .4113773 | 4.81 | 0.000 | 1.173271 | 2.785841 |
| | _cons | -5.518995 | 6.282307 | -0.88 | 0.380 | -17.83209 | 6.7941 |
| 2 | Dleader | -.4743832 | 3.247427 | -0.15 | 0.884 | -6.839223 | 5.890456 |
| | Dleader2 | .1582194 | .3358305 | 0.47 | 0.638 | -.4999962 | .8164351 |
| | age | -.0215348 | .0164311 | -1.31 | 0.190 | -.0537391 | .0106696 |
| | gender | 3.314391 | .4525315 | 7.32 | 0.000 | 2.427446 | 4.201337 |
| | _cons | -5.880537 | 7.823982 | -0.75 | 0.452 | -21.21526 | 9.454186 |
| 3 | Dleader | -6.325569 | 2.730867 | -2.32 | 0.021 | -11.67797 | -.9731671 |
| | Dleader2 | .7224981 | .2903403 | 2.49 | 0.013 | .1534416 | 1.291555 |
| | age | -.0201909 | .0182434 | -1.11 | 0.268 | -.0559473 | .0155654 |
| | gender | 1.050076 | .5366655 | 1.96 | 0.050 | -.0017695 | 2.101921 |
| | _cons | 11.6351 | 6.429136 | 1.81 | 0.070 | -.9657703 | 24.23598 |

(Outcome condition3==0 is the comparison group)

```
. fitstat, using(mo22)
```

Measures of Fit for mlogit of condition3

| Model: | Current mlogit | Saved mlogit | Difference |
|-------------------------|----------------|--------------|------------|
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -307.793 | -311.791 | 3.998 |
| D: | 615.586(256) | 623.583(259) | 7.997(3) |
| LR: | 103.056(12) | 95.059(9) | 7.997(3) |

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```

Prob > LR:          0.000          0.000          0.046
McFadden's R2:     0.143          0.132          0.011
McFadden's Adj R2: 0.102          0.099          0.003
Maximum Likelihood R2: 0.316          0.296          0.020
Cragg & Uhler's R2: 0.340          0.318          0.022
Count R2:          0.520          0.524         -0.004
Adj Count R2:     0.261          0.267         -0.006
AIC:              2.382          2.390         -0.007
AIC*n:            645.586         647.583        -1.997
BIC:              -818.557        -827.366         8.809
BIC':             -35.831         -44.640         8.809
    
```

Difference of 8.809 in BIC' provides strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. mlogit condit3 age gender Fgeneral if condit3~=0, basecategory(1)
```

```

Iteration 0: log likelihood = -183.77029
Iteration 1: log likelihood = -169.15903
Iteration 2: log likelihood = -168.78964
Iteration 3: log likelihood = -168.78884
    
```

```

Multinomial logistic regression          Number of obs   =       176
                                          LR chi2(6)      =       29.96
                                          Prob > chi2     =       0.0000
Log likelihood = -168.78884              Pseudo R2      =       0.0815
    
```

| condit3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|---------|----------|-----------|-----------|-------|-------|----------------------|
| 2 | age | -.0015338 | .0142514 | -0.11 | 0.914 | -.029466 .0263985 |
| | gender | 1.245978 | .3667728 | 3.40 | 0.001 | .5271167 1.96484 |
| | Fgeneral | .3883478 | .2580078 | 1.51 | 0.132 | -.1173382 .8940338 |
| | _cons | -3.776731 | 1.30531 | -2.89 | 0.004 | -6.335092 -1.21837 |
| 3 | age | .0001059 | .0165097 | 0.01 | 0.995 | -.0322525 .0324642 |
| | gender | -.9740106 | .4704694 | -2.07 | 0.038 | -1.896114 -.0519075 |
| | Fgeneral | .388214 | .2853524 | 1.36 | 0.174 | -.1710665 .9474945 |
| | _cons | -1.22811 | 1.41213 | -0.87 | 0.384 | -3.995835 1.539615 |

(Outcome condit3==1 is the comparison group)

```

. log off
  log: C:\Documents and Settings\Nuno\Desktop\multinomial WGFS scales on
Condition 3 (2).log
  log type: text
  paused on: 4 Aug 2004, 12:07:25
    
```

```

  log: C:\Documents and Settings\Nuno\Desktop\multinomial WGFS scales on
Condition 3 (2).log
  log type: text
  resumed on: 5 Aug 2004, 11:36:41
    
```

```
. mlogit condit3 Dgeneral if missing~=1, basecategory(0)
```

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -354.79904
Iteration 2: log likelihood = -354.66142
Iteration 3: log likelihood = -354.66114
    
```

```

Multinomial logistic regression          Number of obs   =       271
                                          LR chi2(3)      =       9.32
    
```

Log likelihood = -354.66114 Prob > chi2 = 0.0253
 Pseudo R2 = 0.0130

| condit3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|---------|----------|-----------|-----------|-------|-------|----------------------|----------|
| 1 | Dgeneral | -.3987769 | .2547222 | -1.57 | 0.117 | -.8980232 | .1004694 |
| | _cons | 1.907296 | 1.370008 | 1.39 | 0.164 | -.7778707 | 4.592462 |
| 2 | Dgeneral | .5417966 | .3313133 | 1.64 | 0.102 | -.1075654 | 1.191159 |
| | _cons | -3.3212 | 1.830979 | -1.81 | 0.070 | -6.909852 | .2674528 |
| 3 | Dgeneral | -.1725584 | .3427607 | -0.50 | 0.615 | -.8443571 | .4992402 |
| | _cons | -.128206 | 1.85229 | -0.07 | 0.945 | -3.758628 | 3.502216 |

(Outcome condit3==0 is the comparison group)

. mlogit condit3 age gender Dgeneral if missing~=1, basecategory(0)

Iteration 0: log likelihood = -359.32101
 Iteration 1: log likelihood = -315.91552
 Iteration 2: log likelihood = -313.27058
 Iteration 3: log likelihood = -313.23801
 Iteration 4: log likelihood = -313.23799

Multinomial logistic regression Number of obs = 271
 LR chi2(9) = 92.17
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1283
 Log likelihood = -313.23799

| condit3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|---------|----------|-----------|-----------|-------|-------|----------------------|-----------|
| 1 | age | -.0167861 | .0139068 | -1.21 | 0.227 | -.044043 | .0104707 |
| | gender | 1.907632 | .4125109 | 4.62 | 0.000 | 1.099125 | 2.716138 |
| | Dgeneral | -.1844006 | .2756639 | -0.67 | 0.504 | -.7246919 | .3558907 |
| | _cons | -1.014524 | 1.685347 | -0.60 | 0.547 | -4.317744 | 2.288695 |
| 2 | age | -.0154309 | .0162917 | -0.95 | 0.344 | -.0473621 | .0165003 |
| | gender | 3.370978 | .4501368 | 7.49 | 0.000 | 2.488726 | 4.25323 |
| | Dgeneral | .9237025 | .3834798 | 2.41 | 0.016 | .172096 | 1.675309 |
| | _cons | -9.54052 | 2.368413 | -4.03 | 0.000 | -14.18252 | -4.898517 |
| 3 | age | -.0126074 | .0174488 | -0.72 | 0.470 | -.0468064 | .0215917 |
| | gender | 1.000324 | .5328985 | 1.88 | 0.060 | -.0441374 | 2.044786 |
| | Dgeneral | -.0782327 | .350128 | -0.22 | 0.823 | -.764471 | .6080055 |
| | _cons | -1.344743 | 2.146722 | -0.63 | 0.531 | -5.552241 | 2.862754 |

(Outcome condit3==0 is the comparison group)

. fitstat, using(mod0)

Measures of Fit for mlogit of condit3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -313.238 | -319.456 | 6.218 |
| D: | 626.476(259) | 638.912(262) | 12.436(3) |
| LR: | 92.166(9) | 79.730(6) | 12.436(3) |
| Prob > LR: | 0.000 | 0.000 | 0.006 |

```

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McFadden's R2:          0.128          0.111          0.017
McFadden's Adj R2:     0.095          0.086          0.009
Maximum Likelihood R2: 0.288          0.255          0.033
Cragg & Uhler's R2:   0.310          0.274          0.036
Count R2:              0.520          0.498          0.022
Adj Count R2:         0.261          0.227          0.034
AIC:                  2.400          2.424          -0.024
AIC*n:               650.476        656.912        -6.436
BIC:                 -824.473       -828.843        4.371
BIC':                -41.747        -46.118        4.371

```

Difference of 4.371 in BIC' provides positive support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

```
. fitstat, saving(mo18)
```

Measures of Fit for mlogit of condit3

```

Log-Lik Intercept Only:  -359.321      Log-Lik Full Model:  -313.238
D(259):                 626.476      LR(9):              92.166
                        Prob > LR:              0.000
McFadden's R2:          0.128      McFadden's Adj R2:  0.095
Maximum Likelihood R2:  0.288      Cragg & Uhler's R2: 0.310
Count R2:               0.520      Adj Count R2:       0.261
AIC:                   2.400      AIC*n:              650.476
BIC:                  -824.473     BIC':               -41.747

```

(Indices saved in matrix fs_mo18)

```
. mlogit condit3 age gender Dgeneral Dgenera2 if missing~=1, basecategory(0)
```

```

Iteration 0: log likelihood = -359.32101
Iteration 1: log likelihood = -315.02906
Iteration 2: log likelihood = -312.46769
Iteration 3: log likelihood = -312.43858
Iteration 4: log likelihood = -312.43857

```

```

Multinomial logistic regression          Number of obs   =      271
                                         LR chi2(12)    =      93.76
                                         Prob > chi2    =      0.0000
Log likelihood = -312.43857              Pseudo R2      =      0.1305

```

| condit3 | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|---------|----------|-----------|-----------|-------|-------|----------------------|----------|
| 1 | age | -.0171135 | .0139281 | -1.23 | 0.219 | -.0444121 | .0101852 |
| | gender | 1.906057 | .4125357 | 4.62 | 0.000 | 1.097502 | 2.714612 |
| | Dgeneral | -.7265064 | 2.633653 | -0.28 | 0.783 | -5.888372 | 4.435359 |
| | Dgenera2 | .0518404 | .2643578 | 0.20 | 0.845 | -.4662913 | .5699722 |
| | _cons | .3995174 | 6.627516 | 0.06 | 0.952 | -12.59018 | 13.38921 |
| 2 | age | -.0158355 | .0163181 | -0.97 | 0.332 | -.0478184 | .0161475 |
| | gender | 3.371311 | .4508822 | 7.48 | 0.000 | 2.487598 | 4.255024 |
| | Dgeneral | -.4894504 | 4.075791 | -0.12 | 0.904 | -8.477854 | 7.498954 |
| | Dgenera2 | .1400938 | .3984116 | 0.35 | 0.725 | -.6407786 | .9209663 |
| | _cons | -6.020683 | 10.42168 | -0.58 | 0.563 | -26.4468 | 14.40543 |
| 3 | age | -.0146088 | .0177451 | -0.82 | 0.410 | -.0493886 | .020171 |
| | gender | .9973451 | .5360738 | 1.86 | 0.063 | -.0533402 | 2.04803 |
| | Dgeneral | -3.311021 | 2.779593 | -1.19 | 0.234 | -8.758923 | 2.136881 |
| | Dgenera2 | .3350312 | .2847244 | 1.18 | 0.239 | -.2230184 | .8930808 |
| | _cons | 6.307149 | 6.894089 | 0.91 | 0.360 | -7.205016 | 19.81931 |

(Outcome condit3==0 is the comparison group)

. fitstat, using(mo18)

Measures of Fit for mlogit of condit3

| | Current | Saved | Difference |
|-------------------------|--------------|--------------|------------|
| Model: | mlogit | mlogit | |
| N: | 271 | 271 | 0 |
| Log-Lik Intercept Only: | -359.321 | -359.321 | 0.000 |
| Log-Lik Full Model: | -312.439 | -313.238 | 0.799 |
| D: | 624.877(256) | 626.476(259) | 1.599(3) |
| LR: | 93.765(12) | 92.166(9) | 1.599(3) |
| Prob > LR: | 0.000 | 0.000 | 0.660 |
| McFadden's R2: | 0.130 | 0.128 | 0.002 |
| McFadden's Adj R2: | 0.089 | 0.095 | -0.006 |
| Maximum Likelihood R2: | 0.292 | 0.288 | 0.004 |
| Cragg & Uhler's R2: | 0.315 | 0.310 | 0.005 |
| Count R2: | 0.524 | 0.520 | 0.004 |
| Adj Count R2: | 0.267 | 0.261 | 0.006 |
| AIC: | 2.417 | 2.400 | 0.016 |
| AIC*n: | 654.877 | 650.476 | 4.401 |
| BIC: | -809.265 | -824.473 | 15.208 |
| BIC' | -26.539 | -41.747 | 15.208 |

Difference of 15.208 in BIC' provides very strong support for saved model.

Note: p-value for difference in LR is only valid if models are nested.

. log close

log: C:\Documents and Settings\Nuno\Desktop\multinomial WGFS Scales on
 Condition 3 (2).log
 log type: text
 closed on: 5 Aug 2004, 11:41:18

Appendix 11 - Ethical Issues

I have followed the British Psychological Association's "Ethical principles for conducting research with human participants" (B.P.A., 1993).

a) Consent.

The participants were informed of any of the objectives of the investigation that might reasonably be expected to influence their willingness to participate. They were informed that the interview/questionnaire was written with the objective of trying to understand their life, and that it would form part of an academic study about the kind of problems they were suffering from.

None of the participants had impairments (detained, mental retarded or had a diagnostic of psychosis) that could limit their understanding such they were unable to give their true consent.

I informed the staff of the institutions who collaborated in my research that in asking subjects to participating they should state that participation was completely voluntary and that refusal or withdrawal would not in no way prejudice their rights and privileges as patients and clients of the institutions.

b) Confidentiality

Information provided by the participants was treated confidentially, and where published is not identifiable as being theirs. With the exception of big cites, in which there is no risk of being identified, the names of persons and places The names of persons and places were altered or avoided.

c) Protection of participants

The risk of harm during the investigation was intended to be no greater than in ordinary life. There is no reference to any special risk in the seminal literature life-story research (Thompson, 2003[1978]; Plummer, 1995). When the participants seemed reluctant disclose potentially embarrassing material, assurances were given that answers to personal questions need not be given. In cases where the participant showed signs of being tired, having other things to do, or not wanting to disclose much personal information, the interview was shortened.

A brief verbal report was made to the staff of the institutions after all the interviews, stating how the interview went, and if the participants seemed distressed or at ease when they left. Only a general description of the emotional state of the participant was provided to third persons, no confidential information.

d) Withdrawal from participation

The participants were free to withdrawal from participation. None of the interviewed subjects showed signs of wanting to withdraw or requested the tape to be destroyed.

e) Giving advice

When the participants showed signs of disturbed emotional states during the interviews, such as distress, anxiety, or sadness, they were advised that they should contact the staff of the institutions that referred them to the interviews. All outpatients (psychosomatics and para-suicidal), were asked when they would have their next appointment, and if they felt they would need help or care before that date.

f) Copyright Issues

There are some rather complex issues concerning copyright of life-stories. The copyright in the recording as a recording is normally the property of the interviewer, and the copyright in the information of the recording is the property of the interviewee (Thompson, 2003; personal communication). However, according to Paul Thompson:

[...] short extracts may be used for reviews or research, including theses.

Perhaps more importantly, a licence to quote the informant is implied by a consent to be interviewed. (Thompson, 2003, page 252-253).

Due to the potential disturbing effect of copyright issues and potential threats to anonymity on the interviewing processes, I have published only short extracts of the interviews in the following chapters.