UNIVERSITY OF KENT AT CANTERBURY

Centre for the Study of Psychotherapy

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An evaluation of the Inventory of Interpersonal Problems (IIP) as a measure of psychotherapeutic change in patients seen by trainees within the Centre for the Study of Psychotherapy

NC Riding - Doctor of Clinical Science Thesis

Contents

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1. Introduction

The starting point of this research is the attempt to understand the changes that take place within and as a result of psychoanalytic psychotherapy. These changes are experienced by patients and observed by therapists, but the process of describing and understanding them in more generalisable terms has always proved difficult. The systematic collection of self report questionnaire data from patients assessed by staff and seen by trainees within the Centre for the Study of Psychotherapy (CSP) since its inception in 1985 was an attempt to contribute to this knowledge and to provide audit information. The author was fortunate in being given access this data, specifically with the aim of looking at psychotherapy outcome in relation to the Inventory of Interpersonal Problems (IIP), which had been used by CSP since very soon after the instrument was launched by Horowitz et al (1988).

Given the international interest in the IIP as a potentially sensitive measure of interpersonal change, which it was hoped would be particularly relevant for therapies based within psychodynamic and interpersonal models, this has been a rapidly developing research field. Some of the major papers have been published late on in this research, making it necessary quickly to accommodate new perspectives and relevant results. The main issues have hinged around the development of sub-scales for the IIP. Subscales are necessary to provide some kind of structure to the use of the IIP: it is quite clear that 127 items cannot be readily interpreted without sub-scales.

The two main starting points to the development of sub-scales have been: factor analysis (Horowitz et al 1988, Barkham et al 1994 and 1996, Savournin et al 1995); and interpersonal theory (Alden et al 1990, Soldz et al 1995). Although the current research was started with a factor analysis of the CSP data, in the hope of producing results which were consistent with other published findings, the eventual approach was to adopt the theoretical perspective; although a slightly different one from the standard interpersonal theory approach of Alden et al (1990). The idea for this solution came from a workshop led by John Birtchnell on his theory of interpersonal relationships (Birtchnell 1993) at the 1995 Society for Psychotherapy Research UK Conference at Ravenscar. The Birtchnell model has the virtue, it will be argued below, of integrating with evolutionary theory and of sitting comfortably with psychoanalytically based theory (which underlies the

orientation of the CSP training). The opportunity to work with Birtchnell to develop scales based on his model gave the advantage of basing a set of sub-scales securely in a theoretical framework.

The structure of this thesis is thus first to discuss some of the issues which are relevant in the measurement of psychotherapy outcome: the relationship between research and clinical work; process and outcome research; choice of instrument; experimental design and significant change. It will then look specifically at the IIP, starting with factor analytic approaches to structuring the 127 items, including an analysis of 150 pre-assessment questionnaires completed by CSP patients, and discuss the sub-scales based on this approach developed by Barkham et al (1996). A discussion of the theoretical approaches to the development of sub-scales starts with interpersonal theory and, more specifically, the interpersonal circle and the Birtchnell model. There is then an examination of the Alden et al (1990) interpersonal theory based sub-scales and a description the scales which have been developed based on the Birtchnell (1993) model: which have been called the IIP-40. These scales are then applied to IIP data that exists for 48 CSP patients who have completed the IIP before and one year into a course of psychotherapy. In these patients it is possible to compare the IIP results with the symptom-based Delusions Symptoms States Instrument (DSSI) results. Data taken from a wider group will be used to test out some of the predictions on therapeutic engagement made by interpersonal theorists.

It is thus intended to evaluate the IIP, and more specifically the sub-scales developed from it, as a useful instrument for predicting psychotherapy engagement and for demonstrating change. Considerations of validity and reliability are crucial in evaluating outcome measures (as discussed by Kellner & Uhlenhuth 1991, Lambert & Hill 1994). The face and content validity of the sub-scales will be evaluated through the correspondence of scale items to Birtchnell's model. Evidence for the construct and predictive validity will be considered from a factor analysis of the sub-scales and from the insepection of their ability to predict therapeutic engagement and change. Further evidence of predictive validity will be drawn from sub-scale change for patients who have been one year in therapy. Concurrent validity will be examined through comparisons with the IIP main scale and the DSSI.

2. Measuring psychotherapy outcome

a. Introduction

The position of research in relation to psychotherapy has always been a problematic one, and the resistance of Freud and his followers to the use of empirical methods to test the tenets of psychoanalytic theory is probably at the root of this. The development of psychoanalysis has traditionally been outside of the universities and, arguably, away from the rigours of conventional scientific testing. The primacy of the analyst's experience of the analytic situation has always been asserted as the only way of formulating clinical theories: it is the consulting room which is the laboratory and theory is formulated and refined through participant observation of the therapeutic relationship. It is only recently that evidence from experimental psychology research into early child development (discussed in Spence 1994) has started to inform psychoanalytic developmental models, and the findings of research into psychotherapy itself has been slower to influence clinicians.

This phenomenon - the distant relationship between psychotherapy research and clinical work - has been the subject of a recent volume (Talley et al 1994), which includes contributions from notable clinicians and researchers. Despite the rapid development of psychotherapy research over the last ten years, it is still possible for many clinicians to argue that research is not relevant to their clinical practice. It is commonly found that psychoanalytically based practitioners, in particular, are dismissive of research findings, arguing that they only deal with the trivial and that it is only an individual perspective on the particular patient that is relevant to psychotherapy. The key issue here is not the validity of Freudian metapsychology, a well known area for epistemological controversy, or of various developmental models, but whether therapy "works" and what specific aspects of therapeutic interventions work more than others. A recent survey found that 75% of clinicians felt that research "treats all therapists or all responses by therapists as interchangeable" and that 68% criticised the absence of "practical, relevant and scientifically sound measures of psychological change due to therapy" (Elliott & Morrow-Bradley 1994, p127). They also found large proportions who felt that complexities and important variables (such as the therapist-patient relationship) are ignored and that traditional research methodologies drawn from the physical sciences are inappropriate. However, given the improved quality of published research and the increased engagement with these issues,

it is difficult not to conclude that one reason for the common dismissal of research findings by clinicians is ignorance of the more recent literature.

Elliott and Morrow-Bradley (1994) argue that a kind of marital therapy is needed to close the gap between clinicians and researchers, since, whether they like or not, they are mutually dependant on each other. This dependence is partly because of the pressing demand for audit in the area of health provision, as discussed by Parry (1992). But also, argue Elliott and Morrow-Bradley, research can help therapists to do a better job by fostering a thoughtful reflection on practice, by helping to develop and clarify clinical observations, and by facilitating practice directly through providing evidence for the importance of factors such as the therapeutic alliance and accurate interpretation.

b. Outcome and process

Before discussing the measurement of outcome, it is important to acknowledge the importance of research into psychotherapy process, particularly since this is the major area of current interest amongst psychotherapy researchers. The business of evaluating outcome is complicated by the relationship to "process". It could be argued that in order to evaluate in meaningful terms the effectiveness of therapies it is necessary to look in detail at what actually happens within the therapy session. The main reason for this is the crucial issue of experimental control: you need to know what variables are remaining constant in order to determine the specific contribution of the other variables. It is therefore the link between process and outcome that is the key one, and the rapidly developing field of psychotherapy research has moved away from the separate investigation of process and outcome to the development of an integrated approach referred to as "process-outcome" research:

> "Originally, in the '50s and '60s, when the field was very young, researchers typically distinguished between outcome studies and process studies. Outcome studies attempted to evaluate the effectiveness of treatments. Some patients were assigned to "regular treatment", while others were assigned to comparison or control groups on a random or matching basis, without any attempt to specify or assess what occurred in treatment. On the other hand, many studies focused on the process rather than the outcome of treatment. These sought one of two basic goals. Proponents of specific clinical theories attempted to document the presence and operation of their favorite therapeutic technique - interpretation, for example, in the case of psychoanalytically oriented researchers or empathic reflection of feeling in the case of client-centred researchers. Other investigators, less committed to a particular clinical model, simply sought to describe objectively what "actually" occurs in therapy sessions. Inevitably, subsequent studies have become more finely differentiated. Among these, process-outcome research

> examines the relation between treatment effectiveness and *specific aspects* of therapeutic process" (Orlinsky 1994 p103).

Orlinsky found, in a review of process-outcome research published between 1950 and 1992, that the total number of published findings in the seven years up to 1992 was greater than the 1,100 findings published in the 35 years up to 1985 (Orlinsky 1994, p104). It in thus the process-outcome area of research that the main interest currently centres, and research findings of the influence of various process factors on outcome come thick and fast.

Orlinsky (1994) has categorised the focus of process-outcome research as falling into six main sections: formal aspects (therapeutic contract); technical aspects (therapeutic operations); interpersonal aspects (therapeutic bond); intrapersonal aspects (self-relatedness); clinical aspects (in-session impacts); and temporal aspects (sequential processes). Within these dimensions fall those issues which according to Henry et al (1994) are of particular relevance for psychodynamic therapy: transference interpretation; therapeutic alliance; and formulation. Luborsky et al (1988) also argue that psychodynamic therapy needs special measures which don't just concentrate on overt behaviour and symptoms:

> "For psychodynamic psychotherapies, the lack of a reliable and valid measure of psychodynamic change has forced studies to rely on other types of assessment, such as general symptom inventories or global ratings of improvement. Such measures have the virtue of simplicity and applicability to many different kinds of treatment. However, measures derived from each theory of therapy are lacking. For psychoanalytic psychotherapy, relevant measures would include change in the main conflictual relationship pattern and changes in the patient's awareness of this pattern." (Luborsky et al 1988, p251)

As discussed by Luborsky, Malan (1963) made an early attempt to develop assessment based specifically on psychodynamic formulation, but it is generally agreed that this research has been shown to be methodologically flawed (Mintz 1981)[1].

Process-outcome research methods are discussed comprehensively in the volume by Miller et al (1994) and form the main part of a special issue of the Journal of Consulting and Clinical Psychology (Luborsky, Barber & Beutler 1993). Within these relatively new fields of research, the observation of

[1] However, you could argue that Malan's main finding, that transference interpretation is positively related to outcome, has since been vindicated by the research into accurate formulation and interpretation of the transference using Luborksy's core conflict relationship theme methodology (see below).

psychotherapeutic process has arguably started to transcend the purely subjective judgement of the therapist or clinical observer. For instance, in the development of Luborsky's core conflict relationship theme (CCRT) as a device to analyse the patient's core relationship pattern and to evaluate the accuracy of the therapist's interpretation (Crits-Christoph et al 1993, Barber & Crits-Christoph 1993) there has been shown to be good reliability between different raters of the CCRT. These articles demonstrate that the accuracy of transference interpretation, evaluated using the CCRT method, relates positively to outcome. Similarly, there is now a weight of evidence that the quality of the therapeutic bond or alliance is a good indication for therapeutic outcome (Horvath & Luborsky 1993, Orlinsky 1994).

Although the topic of this thesis is not the psychotherapy process, it is important to recognise the important developments within this field and to be aware of the limitations of research which deals only with the results of outcome measures administered outside of the therapy situation. While the monitoring of therapeutic process is (as would be expected) an important aspect of a Centre which is concerned with training students, and audio tapes are available of student sessions in the earlier stages of training, it was decided that including consideration of therapeutic process within the consideration of the IIP would make the scope impossibly wide. However, it is recognised that looking in detail at process in connection with some of the cases for which the IIP data has been collected could provide a useful extra dimension to the evaluation of it as an outcome measure. For instance, it would be interesting to find out whether there are observable differences in the nature of the therapeutic bond in patients who score highly on particular sub-scales or if the ability to accept and work with interpretations is to some extent determined by entrenched patterns of interpersonal relating.

c. *Instruments*

The development of instruments (questionnaires or structured interviews), usually administered pre-treatment and at termination, is an attempt to measure change with therapy. It may seem on the surface that measuring the outcome of psychotherapy would be simple, at least in methodological terms. After all, all that needs to be done is to define what it is that psychotherapy aims to achieve and then to measure whether it actually does that. However, even the first part of that procedure - defining what psychotherapy should achieve - is fraught with difficulties. There is no consensus on whether we are

aiming at symptom reduction, better interpersonal functioning, increased happiness, greater awareness, or even an improved moral sensibility. As a result there is a puzzling choice of instruments, as observed by Lambert & Hill (1994), who found in a search of 20 journal articles published between 1983 and 1988 that there were references to a total of 1,430 outcome measures, of which 840 were used only once. Even for agoraphobia, a "well-defined, limited disorder, treated with an equally narrow range of interventions, mainly behavioral and cognitive-behavioral therapies", the authors found that 106 studies published in the 1980s had used 98 different outcome measures (Lambert & Hill 1994, p74). It can be seen from this survey that the issue of the choice of outcome measure (which will be discussed in more depth below) is not a simple one.

The main reason that the choice of questionnaires is so wide is that there is lack of agreement on what information should be collected (the *content*) and how it should be collected (the *source*). The main sources of data are clinical observer's ratings, patients' self-report, and therapists' ratings. Lambert & Hill point out that various research findings make it "obvious that multiple measures from different sources do not yield unitary results" (Lambert & Hill 1994, p80) and that factor analytic studies which have combined a variety of outcome measures tend to show that the main factors are associated closely with the measurement method or the source of observation rather that the theoretical or conceptual variable. This problem is summed up in the following anecdote:

> "The problem of choosing sources recalls the poor rabbi who was confronted at his door one day by a quarrelling couple. Both of them started to pour out accounts of their convincing positions. Unfortunately, these were not easily reconcilable. The rabbi began by listening to the woman; at the end of her story he proclaimed, "You certainly have a point." Then he listened to the man and at the end proclaimed, "You certainly have a point." The sexton overheard these comments and protested, "Rabbi, they can't both be right." The rabbi considered for a moment, then announced, "*You* certainly have a point"." (Luborsky et al 1988, p18)

It must therefore be recognised that we should not necessarily expect agreement between, say, clinicians and patients, or even between clinicians and expert observers. The evaluation of therapy outcome is necessarily somewhat subjective and there is no complete solution to this, short of limiting our interest to relatively trivial and constrained data such as physiological measures or socio-economic factors. We thus need adequate statistical checks (inter-

rater agreement tests, adequate sample size etc.) to ensure that results are generalisable.

In self-report questionnaires there is a particular risk of the response varying according to the timing of the collection and the current relationship with the therapist. Also, "clinical populations may experience psychopathology that interferes with self-report" (Alden et al 1990, p524): ie, there is the risk that the patient's pathology - the very thing that we are attempting to measure - prevents the reliable completion of the questionnaire. For instance, a highly defended person who alienates others by adopting a bossy and domineering attitude may see their main problems in terms of not having enough friends, but not associate this problem with being over controlling and dominant. Psychological conflict over particular issues may also cause non response[2]. Although these factors are normally assumed to be dealt with by the statistical methods for taking account of "noise" and normal variations and unreliabilities in response (hence the requirement for large volumes of data and various controls on collection[3]), caution must be exercised in interpreting individual results using self report measures. In the specific case of the IIP, systematic (if not deliberate) distortion for particular interpersonal types may also exist because of the interaction of that particular pathology on the self perception of interpersonal problems.

The actual outcome instrument used is subject to much discussion and, as discussed above, a bewildering choice. Given that measures range over the sources discussed earlier and the choice of a great variety of different contents, most research projects opt for a collection of different measures to enable internal (within the project) and external (with other projects) comparison. It is the issue of external comparison, or the ability to generalise over a large number of research projects, that has led researchers to argue for a "core battery" of measures (McCulloch 1994, Aveline et al 1995). This is important given the desire to increase overall knowledge in the field, and particularly

[2] An example of this is a woman who was seen for long-term psychotherapy. Amongst other things, she had problems around intimacy and had been unable ever to form a satisfactory sexual relationship with a partner. On pre-assessment completion of the IIP she answered "0" to the item 70 "It is hard for me to experience sexual satisfaction", indicating that this was not a problem. In three subsequent completions of the IIP - during the course of therapy - she left the question blank. On termination she answered the question "4", indicating that it was an extreme problem. On the surface this would seem to imply deterioration, but actually signalled a movement from denial (or non-disclosure), to conflict, to acceptance.

[3] This can, however, take little account of the so-called "transference cure" (Greenson 1985 p276), or the effect of the idealisation or denigration of the therapist on the results.

important given the high cost of well designed psychotherapy research. The core battery that Luborsky et al (1988) used for the Penn Psychotherapy Project included fourteen measures from the three sources listed earlier (clinical observers, patients and therapists). McCulloch (1993) listed nine areas of focus for instruments: presenting problems; symptoms; social adjustment; global functioning; structured diagnostic assessment; theory-specific instruments; disorder-specific instruments; physiological measurement; and longitudinal assessment. It can be seen that a completely thorough collection of data could be highly intrusive to the therapeutic process, as well as expensive to administer and to analyse.

In order to evaluate the usefulness of a particular measure consideration must be given not only to what is being measured when and by whom, but to issues of validity. This issue is obviously addressed when a new instrument is launched: in the case of the IIP, by Horowitz et al (1988). However, it is worth reconsidering validity issues when looking at results on new data. Also, developing sub-scales from an existing instrument requires us to address validity issues again. Reliability - consistency of results - is also an important consideration and test-retest results were published by Horowitz et al (1988) for the IIP.

The most common measure to determine change in psychotherapy is one based on current ("present state") psychiatric symptoms[4]: including symptoms of affect - depressed mood, elation, anxiety; inappropriate hostility and aggression; psychoticism etc. An increasingly common measure is the Symptom Checklist-90 (SCL-90), while the Beck Anxiety and Depression Inventories are commonly used to measure areas specific to anxiety and depression. These instruments are reviewed by McCulloch (1993), as are clinician and research interviewer based measures, such as the Hamilton scales, Luborsky's Health-Sickness Rating Scale and the DSM-IIIR (now replaced by DSM-IV). Axis I of the DSM-IIIR is primarily concerned with symptoms, whereas Axis II is concerned with personality disorders, which will be discussed later in connection with interpersonal theory.

[4] The relationship between "trait" (enduring disposition) and "state" (temporary and changeable phenomena) is discussed by Kellner & Uhlenhuth (1991). According to this distinction the IIP is a trait measure.

The symptom based questionnaire used by CSP is the Delusions Symptoms States Instrument, or DSSI(R) (see Appendix 1) and data from this instrument will be used to determine symptomatic change alongside the interpersonal change measured by the IIP, and discussed in more detail later. The DSSI(R), which is not currently in common use according to the reviews by Bergin and Garfield (1994) and McCulloch (1993), is founded on a hierarchical model of mental illness. The theoretical basis of the DSSI(R) and its psychometric properties are discussed in detail by Foulds (1976). It comprises 84 questions on present state in the form of False/True and, if true, a three point scale of severity: for instance, "Recently for no good reason I have had feelings of panic. If true, this has upset me - Unbearably, A lot, A bit". The questions are grouped into seven on each of twelve categories, formed into a hierarchy of four "illness classes":

Illness class	Description
0	No personal illness
1	Dysthymic states - Elation, Depression, Anxiety
2	Neurotic symptoms - Conversion, Dissociative, Phobic, Compulsive, Ruminative
3	Integrated delusions - Persecution, Grandeur, Contrition
4	Delusions of disintegration

Patients scoring four or more on any set of seven items are allocated to the class in which the set falls, and the final illness class assigned is the highest class entered. The hierarchical nature of the model follows from the observation that people higher up the hierarchy (ie more severe) tend to also have symptoms/states from lower classes:

> "The prediction is that a person with symptoms at any class level will have symptoms at *all* the lower class levels and that a person without symptoms at any class level will not have symptoms at *any* higher class level. This is the inclusive nature of the relationship. The relationship is also non-reflexive in that only *some* of those persons with symptoms at a particular class level will have symptoms at the higher class levels." (Foulds 1976, p57)

Foulds demonstrates the empirical basis of the hierarchical model by analysing the scores on the instrument from psychiatric and normal groups. The theoretical justification for the model, and particularly the separation between dysthymic and neurotic, is also discussed extensively. An advantage of the instrument from a research point of view is that, through the illness classes, it gives a clear hierarchy of severity of current state and hence is more useful than either a simple count of symptoms or a pure description or diagnosis. Foulds

observes that the instrument is sensitive to change, in that subjects will often change illness class "within a matter of weeks" (Foulds 1996, p75). A complete cure would be a reduction to illness class "0", or no personal illness; but partial cures are also detectable by the instrument, which is useful where psychotherapy is not expected to effect total cures but instead to bring about relative improvements in functioning.

d. Experimental design

We now need to turn briefly to the question of experimental design, since this is an important issue in evaluating the meaning of claims for efficacy. Kazdin (1994) talks of three major types of psychotherapy study. The first of these, the "true experiment", allows the maximum control over variables through the use of randomisation and the control groups, and hence enables "the strongest basis for drawing inferences" (Kazdin 1994, p23). The randomised clinical trial (RCT), where patients are assigned randomly to two or more different forms of treatment and to a no-treatment control group, is held up as the model to which the psychotherapy researcher should aspire. The alternative of the "quasi-experiment" approximates the conditions of the true experiment: for instance, by using waiting list groups from other settings as a comparison group. However, the requirements of the RCT are extremely difficult to satisfy. Even the quasi-experiment requires careful and precise screening of patients and standardisation of what actually goes on in the therapy itself. Neither is easy, although the use of instruments and sophisticated and experienced assessment can help with the former, and the use of manuals for treatment is way of controlling the latter. The RCT also raises ethical issues, since to knowingly assign a patient who one hopes would benefit from psychotherapy to a control group (particularly with the administration of a placebo drug) runs counter to the ethical demands of most clinicians[5].

As a result, true and quasi experiments often have to depend upon large sample sizes and restricted patient groups, like the NIMH (Elkin 1994) or the Sheffield Psychotherapy Project (Shapiro et al 1994), and hence are very expensive to run. Research projects have also concentrated on brief treatments, partly because of the lack of commitment to research by psychoanalytically based practititoners, partly because of the inherent

[5] The use of non-therapeutic "care management" is an alternative and very stringent control, which was used within the NIMH (Elkin 1994) project. It is a stringent requirement because the control group arguably receives the "common factors", such as feeling helped and supported, which form an important part of therapy itself.

methodological problems of researching into longer term therapy, as discussed by Denman (1995). Howard et al (1994) argue that the RCT, although the "official" model for outcome research, has inherent methodological problems, notably that: randomisation militates against generalisability because it is not representative of the real process though which patients are treated; the multitude of uncontrollable factors makes for impossibly large sample sizes; and it is impossible to control for therapist differences.

In contrast, there is Kazdin's (1994) third category - the "passive-observational" investigation, or the "naturalistic" experiment in Barkham's terms (Barkham 1990). In these investigations, often retrospective, the investigator does not attempt to intervene, manipulate and control, but instead observes and attempts to draw conclusions taking into account the various uncontrolled factors. Although it is often argued that due to the lack of adequate controls we cannot have complete confidence in the findings of this kind of study, it is clear that, given the inherent difficulties of psychotherapy research, this will be the most common research investigation.

Regardless of which of Kazdin's three categories of investigation is being used, a key issue for forming any generalisation about the effectiveness of specific treatment is an understanding of the possible variation in the main variables: notably the patient and the therapist. Screening (or assessment) of patients has always been an important issue in psychotherapy. Freud defined a relatively narrow band of neurotic disorders as being amenable to psychoanalysis, although this has been progressively widened into narcissistic, borderline and even psychotic patients by psychoanalytic theorists who have come after Freud, notably Klein, Kohut and Kernberg. A comprehensive discussion of assessment and suitability for various forms of psychotherapy is an important one for research, but is beyond the scope of this thesis. The CSP patients are the broad spectrum that you would expect in most NHS psychotherapy departments; like those in the Penn Psychotherapy Project, which also used a very broad range of patients compared to most studies. Luborsky et al (1988, p7) observe, though, that "almost all patients were non-psychotic". This is also the main screening for criterion for CSP patients, although there is also an assessment made as to whether the patient is likely to benefit from psychoanalytic psychotherapy and whether they are suitable for a trainee: this assessment is impossible to categorise in diagnostic terms, since it is a clinical judgement that is concerned more with analysability or

"psychological mindedness" (Holmes 1995, Coltart 1993) than with formal psychiatric diagnosis.

As to the standardisation of treatment, there has been considerable development in recent years of manuals to enable this. Adherence to manuals has been claimed to be important not just from the point of view of standardising treatment, but also for increasing effectiveness (Miller et al 1993). This is one response to Wallerstein's finding in the Menninger Psychotherapy Research Project that:

> "The therapeutic modalities of psychoanalysis, expressive psychotherapy, and supportive psychotherapy hardly exist in ideal or pure form in the real world of actual practice; real treatment in actual practice are intermingled blends of expressive-interpretative and supportive-stablizing elements; almost all treatments (including even pure psychoanalysis) carry many more supportive components than they are usually credited with..." (Wallerstein 1989, p205)

The widely observed finding that psychotherapy works, but that there seem to be no discernible differences between the various forms of therapy (Miller et al 1993) has led to a debate about whether it is the "common factors" (Barkham 1990, Lambert & Bergin 1993), such as quality of relationship, the value of support and reassurance etc, rather than the specific curative factors predicted by particular models, that are the most important. Researchers have thus been particularly concerned to investigate what *specific* factors might be important in psychotherapy: one reason for the shift into process based research. It is important to acknowledge with the CSP data that, while the theoretical orientation and clinical skills emphasised within the training should produce some standardisation of treatment, there is no ability to control for the different skills or personality of the individual therapists[6].

Another issue which arises in any study such as this is mechanics of the actual administration of the instrument: how and when the data is collected. Most psychotherapy research is concerned with short-term treatments and outcome measures tend to be administered only at pre-treatment and on completion.

[6] The level of experience of the therapist, which one would suppose is a significant factor, has not been demonstrated to be related to outcome according to Lambert & Bergin (1993, p171), although they do have methodological reservations about the research conducted in this area. The fact that the CSP cases were treated by trainees (at various levels of experience) should not therefore be seen as an obstacle to producing generalisable results. However, the significance for outcome of the matching of therapist to patient, as observed by Luborsky et al (1988, p309), needs to be borne in mind on a training course, where there is no choice exercised by therapist or patients on compatibility, because that judgement is made by a third person (usually the supervisor or assessor).

Barkham (1990) has argued for measures which can be administered frequently to enable the detailed tracking of change across the duration of therapy, with can vary according to life circumstances, significant events, or presumably (although Barkham does not discuss this) the particular phase of the transference relationship. The CSP questionnaires were administered at pre-therapy (and pre-assessment), on a six monthly basis throughout therapy, and on termination. Given that the CSP patients are seen for medium to long term, many of the cases have multiple (up to eight) questionnaire results. In order to minimise the influence of the transference relationship on outcome it could be argued that data should only be investigated at pre-therapy and termination, since in a properly terminated therapy the transference relationship should ideally have been mainly worked through by this stage. However, this is an unnecessary restriction, particularly since it is founded on the rather contentious assumption that there are no unresolved transference issues following termination. The risk of contamination by the transference relationship also raises issues about the administration of the questionnaire, for instance whether given to the patient within the session or sent by post. In the case of the CSP data, collection is by post independent of the therapy sessions or the therapist themselves with the aim of minimising the immediate effect of a particular session or relationship dynamic on the responses. However, the influence of transference reactions on the completion of questionnaires is impossible to rule out: it has to be hoped that these effects cancel out in a large enough sample.

e. Significant change

The final issue to be addressed in relation to measuring psychotherapy outcome is what constitutes significant change. Although the topic of this research is the evaluation of the IIP, rather than the therapy, the issue of what constitutes significant change is vital because the IIP needs to be able to demonstrate this change when it occurs in order to be of value as an outcome measure.

The need to demonstrate that psychotherapy is more effective than no treatment or placebo, as discussed above, can only be determined by the use of randomised clinical control trials. However, most studies attempt to evaluate psychotherapy by estimating the statistical significance of the observable change on outcome measures administered pre- and post-treatment. Luborsky et al (1988) point out that the simple calculation of a change score - post-

treatment minus pre-treatment - brings many serious statistical problems, even when this is standardised by dividing by the standard deviation to produce an effect size. The frequently observed correlation of change scores with initial level is one problem; another being the regression to the mean that can be expected when extreme groups are the subject for study. Luborsky thus argues for the use of the residual gain score, which takes into account the extent to which the amount of raw gain is linked to the initial level by re-scaling "the gain score for each subject relative to the mean gain for subjects with the same initial level" (Luborsky et al 1988, p19).

Another, more fundamental, problem is the relationship between statistical and clinical significance. The concept of statistical significance, which is a calculation of what would be the probability of the observed change happening purely by chance, could be seen as of limited usefulness in psychotherapy research. For instance, it has been pointed out that a statistically significant loss of, say, one stone in weight in a grossly obese group would probably be statistically significant, although it would have no clinical value as such (Barkham 1990, Lambert & Hill 1994). It order to measure the clinical benefit of psychotherapy it would be necessary to compare the outcome with normal population means to see if the patient has moved from an "illness" category to a "normal population" category. Jacobson and Truax (1991) argue that clinically significant change needs to have something to do with the return to normal functioning and suggest that this can mean that the level of functioning post-therapy either: falls outside the range of the dysfunctional population (two standard deviations from the mean); falls within the range of the functional or normal population; or places the patient closer to the mean of the functional population than to the mean of the dysfunctional population. In order to make these evaluations it is necessary, of course, to have reliable data about dysfunctional and normal population scores on the measures that are being used, which is not always available. Lacking this data, Barkham argues that "improvement to one standard deviation might suffice in terms of obtaining clinical improvement" (Barkham 1990, p290).

f. Conclusion

From this review of the principal issues to be considered in measuring psychotherapy outcome, there would appear to be two interesting areas of investigation of the CSP data in relation to the IIP. The first is the evaluation of sub-scales of the IIP as pure outcome measures - the reliability and

sensitivity to change - the second is the evaluation of sub-scale scores as a predictor of constructive engagement in therapy.

In evaluating the IIP as an outcome measure, the mean scores on the full scale and sub-scales and on the DSSI(R) total symptom score can be used to indicate whether there has been significant change. However, the DSSI(R) also should provide a good opportunity to form a judgement about clinically significant change, since contained within the DSSI model is the notion of a "no personal illness" class. Clinically significant change could clearly be seen to have taken place where a patient has moved from an illness class into this category, or from one illness class to a lower one. This will then be used to see if patients who have experienced clinically significant change as measured by the DSSI(R) also demonstrate change on the IIP mean or sub-scale scores, as a way of evaluating the concurrent validity of the IIP.

The other issue will be to examine if scores on the IIP organised within an appropriate sub-scale structure predict whether patients can engage in therapy, form positive therapeutic relationships, and hence have a positive outcome. The influence of underlying personality traits in determining the likelihood of the patient forming a constructive relationship with the therapist is observed by Luborsky et al (1988, p151), and Kazdin (1994, p27) discusses the possible effect of personality on the ability to engage in particular forms of therapy. This is an issue which is also discussed by Muran et al (1994) from an interpersonal theory perspective, who argue that interpersonal problems in the friendly-submissive area are associated with the positive development of the therapeutic alliance, whereas those in the hostile-dominant area are associated with negative development, and hence outcome. It is hoped that appropriate sub-scales on the IIP can be used to examine these hypotheses.

Before investigating these issues further it will be necessary to examine the structure of the IIP, both examined empirically by factor analysis and from the perspective of a theoretical model, to determine what sub-scales can be used to undertake this work.

3. Factor analyses of the IIP

a. Introduction

The Inventory of Interpersonal Problems (IIP) was launched in 1988 as a "promising new instrument that fills the need for a measure of distress due to interpersonal problems" (Horowitz et al, 1988, p891). It is a patient self report inventory of 127 items which had the aim of providing an inventory which focused on interpersonal problems rather than upon the non interpersonal problems (such as depressed feelings, unwanted thoughts, psychosomatic symptoms, pathological eating patterns etc) which were measured by most other questionnaires. Dissatisfaction with symptom based questionnaires had long been expressed by psychoanalytic therapists and this is possibly one reason that research into psychoanalytic therapy had been slow to become established. Many of the traditional measures, such as the Beck scales, were thought to be more sympathetic to the kinds of issues focused on by behavioural and cognitive therapies. The fact that symptoms often disappear quickly also argues for a questionnaire that is more sensitive to the kind of interpersonal change that should be expected in long-term therapy. As Storr (1979) observes - ".. any analytical type of psychotherapy is now predominantly interested in improving a patient's interpersonal relationships through the agency of the transference... this is why analytical psychotherapy tends to be prolonged." (p156). Given that the IIP endeavoured to measure the main issues talked about by patients in psychodynamic and interpersonal therapy (ie relationships with other people), Horowitz et al hoped that the IIP would enable a standardised analysis of interpersonal problems which would be sensitive to clinical change, particularly within these forms of therapy.

The methodology employed by Horowitz and his research team to develop a preliminary version of the questionnaire had an empirical basis, which is described in Horowitz et al (1988). They studied taped intake interviews of patients to develop a list of items in the form of "I can't [do something]" or "I can't stop [doing something]". Later they increased the sample within a student population and claimed to show internal consistency over some initial sub-scales, particularly the two principle scales which have emerged from most analyses: problems of socialising and problems of assertiveness.

The development of the full inventory involved studying 192 preliminary items to eliminate redundancies and ambiguities (hence establishing face and logical

validity), leaving a final pool of 127 items called the IIP (see Appendix 2). The items are divided into 78 beginning with the phrase "It is hard for me to" and 49 items which are things that the patient perceives as doing too much: ie "I fight with other people too much". As such, the focus is clearly upon interpersonal features which are perceived as problems, and thus can be seen as demonstrating some underlying pathology, rather than focussing on general interpersonal traits, including strengths as well as weaknesses[7].

b. *Major studies of the IIP factor structure*

With a pool of 127 items there clearly needs to be some structuring to make sense of the data. Barkham et al (1996) point out that there is general consensus that the IIP taps more than one dimension and that there are two ways of extracting the underlying components: to develop sub-scales from a factor analysis of data; or to start from a theoretical model, such as Leary's Interpersonal Circle (Leary, 1957), to develop sub-scales. This is a crucial distinction, which could even be seen as betraying the researcher's philosophical starting point. The argument for an empirical starting point is that if there are underlying structures which can aid our understanding they should be derivable from the observed inter-correlation of IIP scale items, subject of course to a viable dataset and adequate statistical checks and controls. The argument for the theoretical starting point is that you have to start with a theoretical model to structure understanding and then test hypotheses which are generated from that model.

Horowitz et al (1988) first adopted the former approach, and investigated the factor structure of IIP using a group of 103 patients (89 of whom were women) who had been screened to eliminate psychotics, organic/neurological conditions and severe drug abusers (including alcohol). The subscales were developed by Horowitz through a factor analysis, which found that a significant proportion of the variance was explained by what they called a "general Complaint factor", which is described as a "general tendency to report distress that systematically varies from patient to patient" (Horowitz, 1988, p886). This factor has been found in later published analyses of IIP data (Alden et al 1990, Barkham et al 1994, Savournin et al 1995) and in the

[7] It is important to make this point at this stage since this distinguishes IIP from a questionnaire which might be designed to show the interpersonal styles of a person; that is, including non - problematic or non-pathological relationship traits. More importantly from the point of view of psychotherapy it means that interpersonal behaviours which are not seen as problematic (for instance, ego syntonic defences) will probably not be picked up by IIP.

analysis of the CSP data. The interpretation of the complaint factor varies. Alden et al (1990) see it as a component that reflects "individual differences in the use of response format, rather than differences in the perception of self or others" (p525). This implies that a significant part of the overall IIP mean score is related not to actual interpersonal problems themselves but to a tendency to complain about them. An alternative explanation is that an overall higher score is a reflection of an actual greater severity of general interpersonal problem. This latter interpretation is more consistent with the observation that the mean IIP level correlates highly with symptom based measures and could link to co-morbidity; but it goes against the assumption of bipolarity by interpersonal theorists. This is an issue to which we will return.

The six sub-scales developed by Horowitz were reliable over two tests: on initial assessment and at the end of a waiting period of ten weeks. The sub-scales included 83 of the 127 items loading at .4 or above and accounted for 51% of the variance. They labelled the scales as follows[8]:

Hard to be Assertive
Hard to be Sociable
Hard to be Intimate
Hard to be Submissive
Too Responsible
Too Controlling

An ipsatization of the data (subtraction of the case mean from each item score for that case) to eliminate the influence of the general complaint factor showed that the only significant correlation was between the two scales seen as being at the hostile end: Hard to be Intimate and Hard to be Submissive[9].

Horowitz et al (1988) next went on to the issue of sensitivity to therapeutic change. In particular, they argued that if the focus of dynamic psychotherapy is interpersonal problems, as commonly agreed, the IIP should be more

[8] It should be noted that the labels that authors apply to sub-scales can hide the sometimes paradoxical combination of items. To be confident about interpreting the scales it is necessary to look at the set of items in their entirety. Space precludes the inclusion of lists for all of the sub-scales discussed in this section, although these are included where comparison or closer inspection is necessary.

[9] Ipsatisation has the advantage that it isolate the specific sub-scale effects from the general effects. However, it could be seen as resulting in some distortion; an issue which will be discussed later.

sensitive to change in psychodynamic therapy than are other instruments. Also, dynamic therapy should be more effective for patients suffering predominantly from interpersonal as opposed to non-interpersonal problems. Using a smaller sample of 28 patients who were assessed as suitable for dynamic psychotherapy and who completed a 20 week treatment, the authors demonstrate that the mean IIP score showed significant improvement over the 20 week treatment and consistency with the SCL-90R[10] symptom-based score (hence establishing concurrent validity). However, IIP was more sensitive to change than the SCL-90R between the 10 week and the termination test. They also demonstrated that problems of assertiveness showed a better improvement than problems of intimacy, and argued that this was consistent with their finding that the former were more frequently discussed in the therapy (possibly because patients with problems of intimacy also had problems in relating to the therapist). It was also speculated that another reason might be that assertiveness problems were generally more overt than those, say, concerned with intimacy.

A clear factor structure which conformed with a theoretical model did not emerge from the Horowitz analysis and subsequent researchers have attempted to establish this. Barkham et al (1994) attempted to do so by correcting three methodological weaknesses of the Horowitz 1998 analysis: the undersampling (fewer subjects than variables); the gender bias; and what they argued was the too small number of factors extracted. Using a sample of 250 patients presenting with problems affecting their work, they found that eight "clear, interpretable factors" (Barkham 1994, p175) could be extracted, accounting for 46.5% of the variance. The eight sub-scales, with 90 items loading at .4 or above, are labelled as follows:

Hard to be Assertive
Hard to be Sociable
Hard to be Supportive
Too Caring
Too Dependent
Too Aggressive
Hard to be Involved

[10] The SCL-90 "consists of patient ratings of symptoms of distress for thirty-eight common complaints which cover the major dimensions of clinical psychopathology in predominantly neurotic outpatients (anxiety, depression, psychoticism, hostility, anxiety, and so on)." (McCulloch 1993, p 475)

They found that only the first two of these sub-scales - Hard to be Assertive and Hard to be Sociable - matched the Horowitz scales closely. Again, in common with most analyses, there is some consensus in that these two scales each correspond to one end of what Alden et al (1990) claim to be the two underlying dimensions from the interpersonal circle (and consequently two of the pole positions of the Birtchnell model discussed below).

In their analysis of ipsatized scores Barkham et al found four "clear bipolar factors"[11] (1994, p178) arising from the pairing of the above sub-scales, which appeared to relate to problems with:

socialising (Hard to be Sociable / Too Open);
assertiveness (Hard to be Assertive / Too Aggressive);
independence (Hard to be Involved / Too Dependent);
nurturance (Hard to be Supportive / Too Caring).

They match these bipolar factors with Gilbert's four core schemata which "are the most important sources of human psychopathology" (Gilbert 1989, p20): competition, co-operation, care-eliciting and care-giving. However, as the authors pointed out, there is no satisfactory match with the interpersonal circle since problems with socialising, independence and nurturance "might all be constructed as versions of friendliness" (Barkham et al 1994, p183).

The Barkham paper is not entirely conclusive in its findings. It does not validate the original Horowitz analysis, but nor does it point with any confidence to a clear alternative factor structure which matches with a theoretical model. The clinical case included in the paper is an interesting demonstration of how the sub-scales can elucidate an individual case but the incidence of high ipsatised scores for the clinical case on both Hard to be involved and Too dependent raises doubt about the true bipolarity of at least one of the scales. Also the research does not claim to provide evidence of sensitivity of the IIP over a sample of patients. The authors conclude that

[11] It should be observed that combining ipsatisation with the extraction of a reduced number of factors more or less forces bipolarity: "ipsative data typically produce bipolar factors" (Baron 1996, p51). The consequence of the ipsatisation in the factor analysis is that, whereas in the analysis of the raw data there are mainly positive correlations, in the analysis of the ipsatised data there are a large number of negative correlations.

their analysis provides support for the clinical and theoretical usefulness of the IIP but that there is scope for further attempts to replicate the factors and to connect these to Gilbert's biosocial model.

However, the Savournin et al 1995 paper, "The elusive factor structure of the IIP", as the title suggests, provides little validation of the Barkham et al (1994) results. In their attempt to replicate the findings they claim to show "rather poor replication" (p365) for the eight sub-scales and the four bipolar components. Their alpha test scores of the eight Barkham sub-scales were good, but they observe that this was probably the result of the effect of the general complaint factor, which would result in more or less any sub-scales constructed from more than a few items having high alphas. Their factor analysis matched only on the following six Barkham sub-scales:

Hard to be Assertive
Too Dependent
Hard to be Sociable
Too Caring
Hard to be Supportive
Too Aggressive

Savournin et al argued that "IIP responses may show different component structures according to clinical and demographic variables" and made the case for further analysis of particular populations to elucidate this: concluding that "adjustments seeking to create a nomothetic and general scale structure are doomed to fail" (p368).

c. *Investigation of the CSP data*

At the time of starting the CSP research, the Savournin et al (1995) paper had not been published and the aim was to use the CSP data to attempt to replicate the Barkham et al (1994) results. The CSP data at the time of writing comprised 150 patients, 104 female (69%), who had completed the IIP along with the DSSI(R) questionnaires prior to assessment of suitability for psychoanalytic psychotherapy over a six year period from 1990 to April 1996. Most patients were referrals from GPs and Consultant Psychiatrists, although a few were self referrals.

Missing or invalid data is a problem with the IIP, as observed by Savournin et al, who attribute this to the length of the questionnaire and the obscurity of some of the questions: "A substantial degree of enthusiasm and concentration is probably required to fill in a 127-item questionnaire" (Savournin et al 1995, p359). Barkham et al (1994) point out that there is unanimity that for a factor analysis the number of cases should exceed the number of variables: this was one of the methodological weaknesses in the original Horowitz et al (1988) analysis which they sought to correct. It was important therefore to ensure that this condition was satisfied. However, it needs to be recognised that, despite satisying this requirement, the sample size of the CSP analysis is small compared to the number of variables. For instance, Kline (1994) has suggested that a 2:1 ratio is acceptable as a minimum. The CSP sample is smaller than either the Barkham (1994) or the Savournin (1995) analyses and this detracts from any confidence we might have about conclusions in relation to the replication or otherwise of their results.

Consequently, the problem is that the more cases which are excluded because they are incomplete the less generalisable is the factor analysis. A survey of the CSP data showed that the majority of the 150 initial questionnaires had no missing items (59%). This left a substantial minority with one or more item missing. However, 86% of the cases had answered all or all but one question. There was one case with 14 items unanswered, which was included because the missing items were spread over the whole questionnaire seeming to indicate difficulty or conflict over particular items. Cases where whole pages were left blank or where more than 14 questions were unanswered were excluded from the analysis. The distribution of missing items over cases is shown below:

Number of cases	**Number of missing items**
88	0
41	1
8	2
3	3
3	4
2	5
2	6
2	10
1	14

Looking at the distribution of missing responses within each item, only eight items (6.3%) had more than two missing responses. These are listed below:

Item	Number missing	%
57 - Hard for me to feel or act competent in my role as a parent	49	32.2
77 - Hard to be close to somebody without feeling that I'm betraying somebody else	6	3.9
59 - Hard to respond sexually to another person	6	3.9
44 - Hard to become sexually aroused toward the person I really care about	5	3.3
70 - Hard to experience sexual satisfaction	4	2.6
24 - Hard to get out of a relationship that I don't want to be in	3	2.0
34 - Hard to experience a feeling of love for another person	3	2.0
36 - Hard to set limits to other people	3	2.0

Thus the only major gap was in "Hard to act or feel competent in my role as parent" (57), which had 32.2% missing, for reasons which are obvious. Item 57 is excluded from Barkham and Savournin's analyses for this reason, and it was excluded from the analysis of the CSP data. Of the remaining items with a relatively large number of blanks it is interesting that three of them (59, 44, 70) are around sexual response and satisfaction, which could indicate either a frequent level of conflict around this area or a reluctance to disclose. As to "Hard to be close to somebody without feeling that I'm betraying somebody else" (77), this is possibly often left blank because of the level of complication.

What to do with the blank cells was a problem. Neither Horowitz et al (1988) nor Barkham et al (1994) are explicit about how they solved this problem, although it seems unlikely that all of their samples were complete. Savournin et al (1995) excluded 168 (37%) of their sample of 454. The option of taking out all cases from the CSP data from which there was a missing answer was not preferred, since this would have brought the sample down to 90: ie. below the 127 variables and hence not viable for the factor analysis. The issue was thus whether to substitute the missing items with a "0" or with some other figure. The finding of Savournin that, despite other demographic details being uniform over their completors and non-completors of all IIP items, there is a significant correlation between patient severity and the level of non-completion, argues strongly against counting non-reply as "0" (indicating that it is not a problem). It is more likely that items are not answered either because they are not clearly understood or because there is conflict or uncertainty around them. For this reason the missing responses in the CSP analysis were substituted with the case mean: ie that patient's average IIP score

over the remainder of the questionnaire (excluding item 57). Given the importance of the "general complaints factor" observed by investigators of the IIP (Horowitz 1988, Alden 1990, Barkham 1994, Savournin 1995) and the evidence that most raw items IIP items were positively correlated, this was considered to be the best option. It had the slight disadvantage of producing a tendency to inflate the first factor and the slightly higher number of items loading on, and percentage of variance explained by, the first factor compared to that in the Barkham and Savournin analyses is possibly a result of this.

The factor analysis methodology was the same as that employed by Barkham et al (1994) and Savournin et al (1995) in an attempt to replicate their results. The Kaiser-Meyer-Olkin measure of sampling adequacy was shown as .62692, which is moderate (Norusis 1990) and a reflection of the smaller sample size. Eight factors were extracted and a varimax rotation was employed. A total of 111 items loaded, accounting for just over 50% of the variance (compared to 90 items and 46.5% variance for the Barkham analysis and 109 items and 67.5% variance for the Savournin). The eight factors and items loading at >.4 are shown in Table 1 below:

Table 1: Factor analysis of CSP data

Factor number and interpretation		Items in order of loading. Where items load on more than one factor this is indicated in brackets: ie (2) means that it secondarily loads on factor 2.	No. of items
1	Hard to be assertive 25.6%	74, 91, 110, 101, 2, 120, 121, 93, 114, 106 (2), 87, 73, 81, 9, 54, 100, 122, 33, 126, 36, 5 (2), 108, 115, 80, 76 (4), 83, 119, 6, 58, 92, 56, 14, 41, 69, 103, 8, 37, 32 (2), 16, 45, 35, 60, 22, 55, 13, 77, 24, 31	48
2	Hard to socialise 6.3%	23, 10, 27, 99, 7, 105, 42, 78 (1), 124 (1), 28, 118, 67, 3, 125, 107	15
3	Hard to be involved 5.3%	38, 40, 39 (2), 34, 15, 75, 12, 26 (2), 29, 11, 46, 61, 48	13
4	Too open 3.5%	113, 4, 88, 95, 84, 30R (2), 71R (2), 25, 65 (3), 86 (1), 85, 63, 51	13
5	Too aggressive 3.0%	112, 116, 90, 82, 79, 96, 127, 20R (1)	8
6	Hard to be supportive 2.6%	64, 52, 19, 21, 50, 18	6
7	Hard to be sexually close 2.4%	44, 59, 104 (1), 70, 89	5
8	Too controlling 2.0%	98, 102, 111	3
	Total loading at > .4		111

Given the interpretative nature of assigning labels to the factors, the six highest loadings on each factor are listed in Appendix 3 to give the flavour of each of the factors.

Clearly these factors are not entirely satisfactory. Although they are interpretable, the first factor has too wide a coverage and the eighth factor is too small. The first item on Hard to be close/involved would seem to sit more comfortably within Hard to be supportive, although all the remaining items all seem to be around problems with getting close or involved. There are also some other overlapping items, a fact that is also shown up by the breakdown of the bipolar factors arising from the analysis of the ipsatised data (discussed below). Also, it is noticeable that the seventh factor, which has been labelled Hard to be sexually close, contains the paradoxical items 104 "I am overly generous to other people" and 89 "I am too independent", which seem to bear no immediately obvious relationship to the area of sexual difficulty, or to each other. However, this factor does seem to highlight that sexual functioning is an important area of difficulty, which is found by Savournin et al (1995) but which does not show in the Barkham et al (1994) analysis[12].

Attempting to match the CSP factors with those of Barkham and Savournin, while showing some common factors, does not produce confidence that a clear factor structure for the IIP has been found within any of the studies. Table 2 gives the attempted matching of the CSP analysis with those published by Barkham and Savournin. Factors have only been included as matching if at least 50% of the items on any one of the scales are contained in the matching scale. The first figure shown is the number of matches shown as a percentage of the CSP scale and the second is the number of matches shown as a percentage of the Barkham or Savournin scale (as appropriate).

Although there are a higher number of matches between the CSP analysis and that of Barkham (six), the matches of the CSP factors with those of Savournin (five) are on average better matches. The matches between Barkham and Savournin are shown by Savournin (1995, p361) to be six. Although the CSP analysis has six and five matches respectively, it does not add to the consensus since there are only three factors - Hard to be assertive, Hard to be sociable,

[12] Given that one of the Savournin populations was from a sexual dysfunction clinic it is perhaps not suprising that they find a factor mainly concerned with sexual problems.

and Too aggressive - which match on all three analyses[13]. It is, however, interesting to note that all three of these items on which there is agreement could be seen as pole positions on both the interpersonal circle and the Birtchnell model discussed below: what is missing from the Savournin analysis is Too open, which would provide the fourth pole position.

Table 2 - Comparison of CSP factors with Barkham and Savournin

CSP analysis		Barkham match	Savournin match
1	H. assertive	1 - H. assertive (42%) (83%)	Factor 1 (75%) (84%)
2	H. socialise	2 - H. sociable (87%) (81%)	Factor 3 (80%) (86%)
3	H. involved	7 - H. involved (31%) (57%)	No match
4	Too open	8 - Too open (38%) (83%)	No match
5	Too aggressive	6 - Too aggressive (63%) (71%)	Factor 6 (75%) (100%)
6	H. supportive	3 - H. supportive (67%) (36%)	Factor 8 (83%) (100%)
7	H. sexually close	No match	Factor 7 (60%) (60%)
8	Too controlling	No match	No match

In accordance with the methodology originally adopted by Barkham et al (1994), the next step was to ipsatise the scores to explore the existence of bipolar factors. This is done by subtracting from each individual IIP score the mean score for that patient. (This obviously had the consequence of coding the missing data, which had been substituted by the item mean, to "0".) The rationale for this procedure is to eliminate the effect of the general complaint factor. There has been some discussion of the virtues, and pitfalls, of ipsatisation (Barkham 1994, Saville and Willson 1991, Baron 1996) and caution must be exercised in its use. However, it would seem to make sense where there would appear to be a general tendency (whether it be seen as the propensity to complain, or an indication of the overall level of pathology/ severity) which inflates scores on all items. Ipsatisation has the advantage of cancelling out this general effect so that the specific relationships between items can be more easily observed. However, it is important to be aware that, while ipsatisation may make it easier to observe the relationship between variables, it makes it impossible to compare between individuals. Ipsatisation can be seen as a way round the problem which showed up in the CSP data, and which Savournin (1995) commented on. That is, when testing scale

[13] It should be noted that despite apparent consensus over Hard to be supportive, Savournin match their Factor 5 with Barkham's Hard to be supportive, whereas there is a match with the CSP Hard to be supportive with Savournin's Factor 8. This demonstrates the problematic nature of labelling of factors mentioned above.

reliability with Cronbach's alpha using the raw IIP scores it can be seen that more or less any clusters of four items generate a alpha of over .4.

One of the most impressive of Barkham's (1994) findings was the clear bipolarity that came out from the ipsatisation, conflating pairs of opposite scales into four bipolar factors. Neither the Savournin nor the CSP analyses gave this level of clarity, although some bipolarity was generated, as you might expect when extracting a lower number of factors using ipsatised data. Inspection of the breakdown of the items on the positive and negative poles of the bipolar scales in the CSP data shows that the items from the large first factor Hard to be assertive are split over three of the bipolar scales. As you would expect, there is a clear pairing of Hard to be assertive against Too aggressive (which corresponds to both Barkham and Savournin's findings). However, eight items from the Hard to be assertive scale are also paired with Hard to be involved and Hard to be supportive. These are items within the Hard to be assertive scale which are around putting the needs of others before your own, such as "I put other people's needs before my own too much" (101) and "I worry too much about disappointing other people" (110). These "closeness" items within the large first factor also do service in the fourth bipolar factor, in conjunction with Too open items, to sit in opposition to Hard to be close and Hard to be sexually close items.

Table 3. Bipolar factors from analysis of ipsatised data

		Factors from eight component factor analysis								
		H. Assert 25.6%	H. social 6.3%	H be involve 5.3%	Too open 3.5%	Too aggress 3.0%	H support 2.6%	H sexual 2.4%	Too control 2.0%	Non sal
		48	15	13	13	8	6	5	3	
Bipolar factors										
1 (8.9%)	Pos				4				1	1
	Neg		13							0
2 (7.3%)	Pos			5			3			1
	Neg	8								0
3 (4.8%)	Pos	9								0
	Neg					7				0
4 (4.0%)	Pos	4			3					0
	Neg			3				3		2
Non salient items		17	2	5	6	1	3	2	2	

Because the analysis of the ipsatised data does not result in a clear bipolar pairing of items as in the Barkham et al (1994) analysis, it is difficult to label the factors. In approximate terms they are concerned with problems around:

openness/sociability; personal needs and setting appropriate boundaries; expressing and controlling aggression; closeness/sexuality.

While it is recognised that the CSP analysis suffers from some of the methodological weaknesses highlighted by Barkham et al (1994) (a lower than desirable number of cases and a gender bias towards females), it does so to a lesser extent than in the original Horowitz (1988) analysis. The CSP data suffered from missing responses, a problem which was probably solved within the Horowitz and Barkham analyses by counting non responses as "0". This is arguably is a less satisfactory solution than the substitution by the case mean which was adopted for the CSP analysis, for the reasons outlined by Savournin et al (1995). However, it is recognised that the alternative, of eliminating incomplete cases, would have been the better option had there been enough cases. In relation to Savournin's argument that research needs to be undertaken to clarify whether particular populations will bring out different factor structures, another problem with the CSP data is that it is too general, since the patients represent the wide range of problems that you would expect to find in general psychiatry and primary health care. At the stage of the first questionnaire they had not been screened for suitability for psychoanalytic therapy. This, however, does have the advantage of providing a more representative psychiatric population than clients referred to specialist services. Despite these methodological reservations in relation to the CSP analysis, it tends to provide general support to Savournin's argument that the true factor structure of the IIP is not necessarily as indicated by the 1994 Barkham analysis.

d. Factor analytically derived short scales

A recently published paper (Barkham et al, 1996) uses the results of the original Barkham et al (1994) factor analysis to build a 32 item IIP (IIP-32), with four items on each of the eight sub-scales (see Appendix 4). The motivation for this is the clear advantage of a questionnaire based on interpersonal functioning which is more viable within everyday clinical practice, particularly where a number of instruments need to be administered (as part of a core battery of outcome measures) and where resources for analysis are scarce. The frequency of missing responses must surely be somewhat related to the sheer length of the IIP.

Barkham et al (1996) used the same data as in the original (1994) sample with the aim of developing eight four-item scales with reasonable reliability and which were comparable to the full scale in indicating therapeutic change. The four top loading items on each factor in the original analysis were used to form the sub-scales, except in the case of Hard to be involved, where the three top items (all around problems of sexuality) were taken out to eliminate a tautological sub-scale. Since the IIP-32 scales are based upon the Barkham et al (1994) factor analysis, the eight factors are labelled: Hard to be sociable; Hard to be assertive; Too aggressive; Too open; Too caring; Hard to be supportive; Hard to be involved; Too dependent. Barkham et al (1994) link the bipolar pairing of these scales with Gilbert's (1989) model, as discussed above. The sub-scales were then tested on an independent group of patients to confirm the original factor structure, and provided preliminary data on general population and out-patient norms for the IIP-32. Barkham et al (1996) concluded that "the IIP-32 meets the requirements for a standard outcome measure: it is brief, easy to administer and score, assesses a range of problems and is sensitive to change" (p34).

To provide a comparison, the CSP data were used to test the IIP-32 sub-scales. Using the CSP data to test the alphas for these scales showed moderately good results - ranging from .72 to .84. Although lower on average (.79 against .82) than the alphas on the Birtchnell-related scales discussed later, this can be explained by the smaller number of items (four against five). Enthusiasm about the good alpha scores, however, needs to be tempered by Savournin's comments (Savournin et al 1995) about the effect of the general complaints factor on the level of the alpha scores generally.

A factor analysis of the Barkham scale items on the CSP data showed discrete groupings, with each set of four items (except one item from Hard to be assertive) primarily loading on a separate factor, and minimal secondary factor loadings. The distribution of the items is shown in the following table:

Factors	Barkham scale items loading at > .4
1	4 x Hard to be sociable
2	4 x Too aggressive
3	4 x Too caring, 1 x Hard to be assertive
4	4 x Hard to be involved
5	4 x Too dependent
6	4 x Too open
7	4 x Hard to be supportive
8	3 x Hard to be assertive

The CSP data thus provides good evidence for the reliability of the Barkham IIP-32 scale structure on both the alpha scores and the factor analysis. However, this could be a reflection of a choice of a small number of items within each of the scales which paraphrase each other (see Appendix 4 for a list of the items), rather than evidence of an underlying factor structure[14]. While the generation of the sub-scales from the original factor analysis should be a safeguard against the failure to find all significant items, it should be remembered that in the original Barkham et al (1994) analysis only 46.5% of the variance was explained against 67.5% in the Savournin et al (1995) analysis. For this reason Savournin et al (1995) argue that the "eight component solution for the London [their] data should be regarded as a more complete summary of the information in the 126 item responses than it is for the Sheffield [Barkham] data" (p362).

The other unsatisfactory feature of the Barkham short scales is the inclusion of reversed items (30 and 71) on the Too open sub-scale. Barkham et al (1996) point out that the reversed scores are used to calculate the sub-scale score but not the overall IIP-32 mean, for which the raw scores are used. However, answering "Not at all" to "It is hard for me to tell personal things to other people" is quite different from showing an extreme problem on its opposite. The former indicates that the person does not have a problem in telling personal things to other people: the latter implies that the person perceives an extreme problem in telling personal things to other people too much. Reversing the items for the purpose of generating a scale mean can therefore result in misleading interpretations[15].

Despite the above reservations, the IIP-32 clearly matches well with the CSP data and therefore has validity in purely empirical terms.

e. Conclusion

The failure to find consensus on a clear factor structure for the IIP raises interesting questions. As Savournin et al (1995) argue, there could be different structures for different populations and this will only become clearer

[14] This, however, could also be a criticism of most sub-scales built from the IIP, since many of the original IIP items could be seen as paraphrases.

[15] The inflation of the Too Open sub-scale scores shown in Barkham et al (1996) - mean 1.74 for the normal population group against the IIP-32 mean of .98 - is an indication of the unsatisfactory nature of this solution.

after further large scale analyses on different groups. Even with further research it seems unlikely that a completely clear factor structure will emerge. Although Savournin et al argue that "these results do not detract from the clinical relevance of the 127 items from which the IIP is constructed" (Savournin 1995, p368), one of the reasons for this could be the empirical starting point of Horowitz's development of the IIP: the generation of items from intake interviews. Not only does this beg questions about the group of subjects used for the generation of the original problems, but it also assumes that all significant problems will be happily discussed at an intake interview. It also assumes that the subject is fully aware at that stage of what their interpersonal problems might be. The fact that the IIP includes more items on assertiveness type issues might not mean that these are the most common problems: it might just be that it is easier to be aware of and to talk about these kinds of issues (particularly at an intake interview with a stranger) than, say, problems with intimacy or with sadistic feelings. The result could well be that the IIP pool of items is not comprehensive or equally representative of the full range of interpersonal problems. If this is the case than a true factor structure will not necessarily emerge from factor analysis, or at least will result in widely different numbers of items loading on each factor, as was found by Horowitz, Barkham, Savournin and in the analysis of the CSP data[16].

Another problem is that the IIP (and any self report questionnaire) can take little account of defensive or avoidant behaviours. For instance, being too aggressive can sometimes arise from a lack of assertiveness or a compensation for feelings of inferiority. Pathological distancing behaviours are often a defence against getting close to somebody and then having to face losing them. Also, a factor analysis may produce a cluster of items to do with, say, aggression but it is difficult to know how to interpret this: ie what the aggression is about; or what interpersonal situations it might arise from[17]. This is a problem that was observed by Horowitz et al (1993), who conclude that "..assessment procedures still need to be devised to clarify the nature of the person's dysfunction. Possibly, problems in one region of the circumplex (eg being overly exploitable) reflect a conceptually different type of problem from

[16] A questionnaire built from a theoretical model, such as the Persons Relating to Others Questionnaire (PROQ) developed by Birtchnell (1993) has a clear appeal from this point of view, although running the risk of not adequately representing real interpersonal problems as expressed by patients.

[17] It has been suggested by Birtchnell (personal communication) that aggression is better viewed in non-interpersonal terms. Aggression can thus be seen as a response to frustration in interpersonal relationships rather than an interpersonal trait in its own right.

those in other regions of the space (eg. social avoidance)" (p559). The relatively weak clustering of items onto sub-scales can give us the illusion that these interpersonal traits are more coherent and discrete than they really are, despite the fact that all of the researchers in this field have pointed to the importance of the general complaints factor and the consequent positive correlation of most items with each other. It has been found that negative forms of relating often span several segments of the interpersonal circle and "co-morbidity" is commonly observed in people with personality disorders (see Dolan 1995, Birtchnell 1996).

There are also inherent problems in starting from a purely empirical perspective - that is, from the factor analysis itself - as has been pointed out by other writers:

> "Factor analysis can be helpful in identifying stable patterns that can be called *traits*. However, empirical factor analysis by itself means little. The data gathering and analysis must relate appropriately to an underlying, clinically useful theory" (Benjamin 1994, p276)

Since there was clearly little that could be done in the CSP research to change the data gathering - the decision to use the IIP had been taken some years before the research started and the data had been accumulated by CSP over a long period - and because of the lack of consensus on a factor structure for the IIP, it was decided to start the sub-scale building from the theoretical end. The CSP data could then be used to provide empirical evidence for sub-scales which were developed. It seemed possible to take a model of interpersonal behaviour and then to try to group IIP items into reliable scales which corresponded with the model. It was hoped that this would produce sub-scales with a clear theoretical meaning. The opportunity to collaborate with John Birtchnell, whose "spatial" model was published in How Humans Relate. A new interpersonal theory (1993), enabled the extraction of IIP items which most closely described the Birtchnell model octants. Before describing this process the basics of interpersonal theory will be outlined.

4. Overview of interpersonal theory

a. *Introduction*

The development of much psychoanalytic theorising from a drive based model to an object related perspective has been charted by Greenberg and Mitchell (1983). Within the British psychoanalytic object relations world the significance of the earlier radical rejection of the biological drive based model, first by Adler and later by Horney and Sullivan, is often not appreciated. Adler challenged the libido based model of Freud; Sullivan (1940) and Horney (1937) put environmental and cultural factors squarely back into prominence. It could be argued that this was correcting a fundamental early shift in Freud's thinking, where he moved away from the seduction theory and interest in actual trauma to an emphasis on internal fantasy.

Sullivan's "needs" were unlike the Freudian drives in that they were not biologically derived from physical urges originating within the infant's own body, but instead were intrinsically inseparable from relationships. Sullivan thus started a school of psychology which came to be known as interpersonal theory. Later developments in interpersonal theory included the "interpersonal circle" (IPC) as outlined by Freedman et al (1951), Leary (1957) and others. Interpersonal theorists have viewed the development of maladaptive relating patterns as relating to basic anxiety and the desire to maintain a tie to an earlier figure: clearly this is consistent both with much of object relations theory and with the perspective of Bowlby's attachment theory (Holmes 1993). The underlying basis of interpersonal theory was an understanding that relating can be placed on two dimensions: a vertical axis relating to "affiliation", or friendliness/hostility, and a horizontal axis relating to "control", or dominance/ submission. Leary argued that these dimensions were implied in Freud's later writings, although the correspondence with Freud's biological drive based model is not straightforward since the death drive could be seen as relating to either of the two IPC axes.

The importance of relationships over the internal workings of the libido had earlier been asserted by Adler (Ansacher and Ansbacher, 1956), with his central motivating factor of the striving for dominance. This was a drive which was not derived from the death drive and which inevitably was played out in the relationship to others: "a drive for power or mastery that reflected the

child's objective interpersonal situation" (Greenberg and Mitchell p50). The role of the interpersonal was also central to Sullivan's model:

> "The field of Psychiatry is the field of interpersonal relations - a personality can never be isolated from the complex of interpersonal relations in which the person lives and has his being." (1940, p10)

The infant has a need for contact which is reciprocated by the mother - a reciprocation which Sullivan referred to as a complementary need. In stressing the need for contact, or closeness, Sullivan laid the ground for the development of the two axis model. The roots of these relationship needs (in coping with anxiety arising from actual interpersonal experiences in the past) places Sullivan's theory close in basics (if not in language) to those of Winnicott and the British object relations school generally, as observed by Greenberg and Mitchell (1983):

> "The words he selects to designate residues of past relations and memories - personifications, diagrammatic fragments - serve the same function in his system as the term "internal object" serves for most of the authors within the British school. Sullivan, ever wary of metaphors being mistaken for actuality, chooses words that suggest process and function rather than language suggesting substance and structure." (p105)

Maybe the most striking similarity between earlier post-Freudian psychoanalytic theories and later interpersonal models was with Horney's model outlined in The Neurotic Personality of Our Time (1937). Horney outlines four responses to "basic anxiety": affection, submissiveness, power, and withdrawal, which correspond closely to the polar positions on the Interpersonal Circle. Basic anxiety arises from childhood factors, often lack of love caused by parents' own neuroses. The four responses can clearly be seen as defences and thus as representing the pathological aspect of the polar positions. Horney sees these positions as being available as alternatives:

> "More frequently reassurance from a great underlying anxiety is sought not in one way only, but in several ways which, moreover, are incompatible with one another. Thus the neurotic person may at the same time be driven imperatively toward dominating everyone and wanting to be loved by everyone, toward complying with others and imposing his will on them, toward detachment from people and a craving for affection. It is these utterly unsoluble conflicts which are most often the dynamic center of neuroses." (Horney 1937, p101)

This goes against the bipolar model developed by Kiesler (1983) and Wiggens (1982), but does conform to the non-circumplex model developed by Birtchnell (1993). The main determinants of neurosis, as Horney sees it, are

the strivings for dominance and the craving for affection (Horney 1937, p105) and the denying defences against: for instance, withdrawal as a defence against rejection, or submisseness and compliance as a denial of the unrealised desire for dominance. The use of two axes, rather than the one stressed by Adler[18], arguably makes Horney's model richer as a way of understanding these pathological relationship patterns. As Birtchnell (1993) points out, however, in Horney's later writings (1942, 1944) she moves away from these four positions and conforms less closely to the interpersonal circle or to Birtchnell's own model.

b. *The interpersonal circle*

It was the achievement of Leary in Interpersonal Diagnosis of Personality to develop these post-psychoanalytic theories into a system for classifying interpersonal behaviour using a two dimensional model that became the Interpersonal Circle. While acknowledging that interpersonal behaviour is a small part of human activity, he believed this "to be the area of psychology which is most crucial and functionally important to human happiness and human survival" (Leary 1957, p6). Drawing on the work of Sullivan, Fromm, Horney and Erikson, Leary saw the main motivation for the development of set patterns of interpersonal relating as being to avoid or minimise anxiety. The fear of rejection, social disapproval and loss of self-esteem which motivate the development of maladaptive interpersonal traits derives from the basic fear of abandonment and death. Leary also drew upon Jungian theory to argue for a full integration between normal and pathological interpersonal behaviour, seeing the latter as indicated by excessive *rigidity* and high *intensity*. Along with the consideration of intensity and rigidity as indicators of maladjustment, he added *stability* and *accuracy* (or *appropriateness*). He argued against the predominant symptom-based classification of psychiatric disorder, seeing symptoms as "external signs" of unsuccessful adaptation, and felt that the use of direct interpersonal terms would come to be more important. This has to some extent been realised in the DSM-IV Axis II definitions.

Given the desire for an integrated model that can see behaviour within any of the predominant categories as normal or pathological depending on these

[18] Birtchnell (1993, p49) has argued that Adler was vertical theorist, since he clearly stressed the vertical dimension of dominance versus submission. However, Adler's concept of "social interest" (Ansbacher & Ansbacher 1956, p126) could be seen as implying the second dimension, although it is difficult to match this exactly with the affiliation axis in interpersonal theory since it relates to wider social or group relating rather than to individual relationships.

quantitative factors, Leary was concerned to find neutral descriptors of the positions within the Interpersonal Circle: not an easy task given the limitations of language. For instance:

> "It was, however, a tedious task to get three or four commonly used words for the concept of adjustive, socially approved hostility. Considerable dictionary, thesaurus, and literary research uncovered a few such words - *frank, blunt, critical* - but it appears that the English language, and the implicit folk conceptions of human nature that underlie it, pay little attention to the theme of appropriate expression of disaffiliative interpersonal behaviour." (Leary 1957, p29)

Similar problems were encountered in trying to finding terms for extreme, rigid maladjustive affectionate behaviour: the language did not accommodate the concept of being *too loving*.

A richness of Leary's model that is sometimes forgotten is that he talked of five levels of classification, all of which would have appropriate instruments to provide measurement. He saw these as being:

Level I	Public communication - overt behaviour rated by others
Level II	Conscious descriptions - of himself and others, derived from a variety of sources including questionnaires
Level III	Private symbolization - derived from fantasy material, dreams, projective tests
Level IV	Unexpressed unconscious - defined by "interpersonal themes which are systematically and compulsively avoided"
Level V	Values - subject's system of moral judgements, ego ideal

It is clear from this typology that a full "diagnosis" could give considerable complexity and sophistication, allowing for internal conflict and seemingly contradictory behaviours. Leary developed suggestions for the classification within each of the levels except that of Level IV, which he felt needed further development, possibly enabled by the use of statistical techniques and the analysis of taped material. It should be borne in mind that the IIP, and reduced versions of the IIP based on interpersonal theory such as have been developed by Alden et al (1990) and Soldz et al (1995), measure only at Level II and therefore lack the richness of Leary's full model.

The Interpersonal Circle was developed empirically using data from "several scores of individuals ... brought into interpersonal relationships in small groups" (Leary 1957, p62). Leary and his colleagues found that by placing "dominate" and "submit" at either ends of the vertical dimension, "love" and "hate" at either end of the horizontal axis, a two dimension space was provided which enabled all interaction to be placed. This then enabled a subdivision

into 16 segments in the two dimensional space and the description of personality traits within these segments. The model was used to categorise both "normal" and pathological behaviour: the latter being a more extreme form of the former (the concept of intensity). In conformity with the notion of rigidity, one would expect a well adjusted person to move between different positions in different relationships while more pathological forms of behaviour are often stuck in a particular mould.

c. *Recent elaborations of the interpersonal circle*

There have been various elaborations of the Leary's circle and these are reviewed by Birtchnell (1993). The underlying dimensions have been successively relabelled and particular descriptions have been moved between segments (nurturing behaviour, in particular, was not securely located in the controlling-friendly area) by various writers (see, for instance, Benjamin 1974, Strong et al 1988, Wiggens et al 1982). Some of the relabelling of axes has substantial implications: Leary's dominate v. submit and love v. hate is somewhat different from Alden's domineering v. submissive and cold v. nurturing (Alden et al 1990). The model has been subject to other modifications: an interactional model was developed by Benjamin, who produced "surfaces" for parent-like and childlike behaviours and for "introjected attitudes from significant others" (Benjamin 1974, p394). The latter therefore gave scope for an intra-psychic model which could be expected to connect closely with object relations theories (as indeed could Leary's model developed to its full potential). However, despite these modifications there has continued to be a high level of consensus that the underlying two dimensional structure itself is theoretically and empirically justified.

The interactional model was developed further by Kiesler (1983) who aimed to apply it in a more clinically useful way. He argued that the full power of interpersonal theory in the clinical field had not been demonstrated because "researchers have directed the bulk of their energies to the area of personality, with considerably less theoretical or empirical attention being devoted to issues of psychopathology and psychotherapy" (Kiesler 1983, p185). One key to this desirable development, Kiesler felt, was the further elaboration of the issue of interpersonal complementarity: the link between behaviour and the response from others. (This notion had been developed earlier by Leary (1957), who refers to behaviour as "pulling" complementary behaviour from others.)

The "1982 Interpersonal Circle" developed by Kiesler (see figure 1) claimed to address some of the problems of previous models and was supported by a comprehensive list of traits within 16 segments of the circle. The aim was that the circle should reveal a circumplex ordering, with adjacent segments positively correlated and opposite segments negatively correlated. It thus assumed a bipolar structure, with, for instance, hostile behaviour not normally found alongside friendly behaviour[19]. Something is therefore lost in the move from the Leary model, which could accommodate through its five levels a more complex set of interpersonal dynamics.

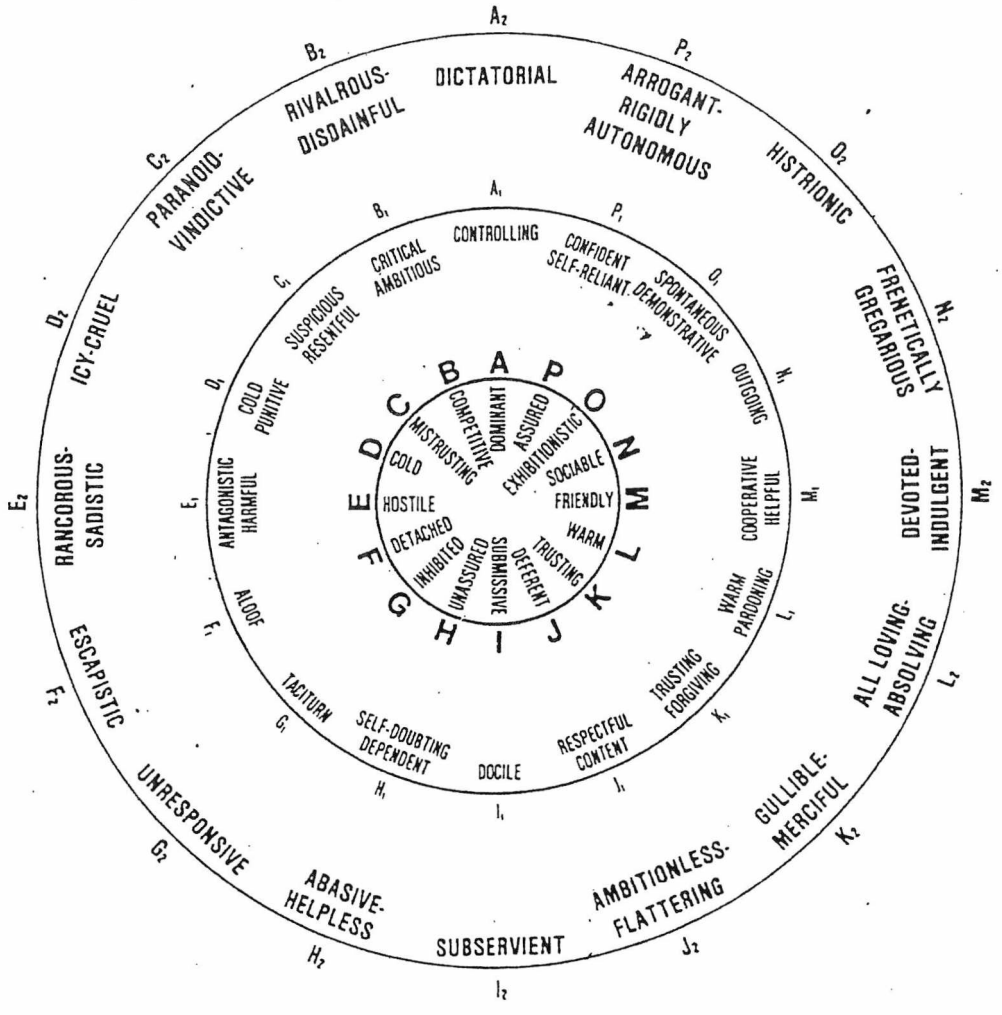

Figure 1 - Kiesler's Interpersonal Circle

Kiesler follows other interpersonal theorists in defining abnormal behaviour in two ways: "(a) as rigid adherence to 1 or a few of the 16 segments of the interpersonal circle; and (b) as behaviours at extreme levels of 1 or a few circle

[19] One problem with this is that while, for instance, hostility and friendliness cannot exist side by side in a specific relationship episode, when measured as frequently occurring pathological traits or tendencies there is absolutely no reason why they should not. Indeed, it is very common for a person to have problems around hostility in some relationships while being too passive in others.

segments." (p187). The circle thus has an outer circle showing traits such as: histrionic, frenetically gregarious, icy-cruel etc. (see figure 1). The other aim of Kiesler, in making the interpersonal circle have more clinical relevance, was in matching the psychiatric classifications of pathology, and attempts have been made to match the pathological behaviour segment positions to DSM classifications of personality disorder (Kiesler 1986, Pincus and Wiggens 1990, Birtchnell 1993, Soldz et al 1993, Matano and Locke 1995). However, the observed high incidence of "co-morbidity", and frequent diagnoses of more than one personality disorder on DSM-III(R) (Dolan et al 1995) provides further evidence for the lack of usefulness of the bipolar model embraced by interpersonal theorists.

It is the notion of complementarity which is particularly interesting from the point of view of psychotherapy. Kiesler (1983, 1992) argues that if we define complementary behaviours we should be able to use this within the psychotherapy session to promote change in pathological interpersonal relating patterns. He develops a basic model of complementarity which had been suggested by Sullivan (1953) in his "theorem of reciprocal emotion", was observed but not developed in Leary's (1957) original model, and explicit in later writings by Carson (1969) and others:

> "Generally speaking, complementarity occurs on the basis of reciprocity in respect to the dominance-submission axis (dominance tends to induce submission, and vice versa), and on the basis of correspondence in respect to the hate-love axis (hate induces hate, and love induces love)." (Carson 1969, p112)

Kiesler claims empirical validation of this theory (1983, p201) and develops a series of propositions relating to complementary, acomplementary and anticomplementary reciprocation. He argues that, within psychotherapy, complementarity may be important to build the therapeutic alliance (hence in the early stage of therapy) but that later stages of therapy would confront entrenched behavioural patterns by challenging through reciprocations of an acomplementary or anticomplementary kind (Kiesler 1992, p85). The transference relationship can be understood as an attempt by the patient to duplicate previous patterns of interpersonal complementarity: it is the job of the therapist not to reciprocate these patterns in the middle phase of therapy:

> "A transactional prediction might be that the patient and therapist will move from rigid and extreme complementary transaction early in therapy, to noncomplementary positions in the change-oriented middle phases of therapy, to a later transactional pattern that exhibits mild and flexible complementarity. In

> contrast, within unsuccessful therapy, the patient-therapist relationship will remain bogged down in various degrees of complementarity throughout the entire therapy course." (Kiesler 1992, p92).

While not systematised to this extent, the notion that the therapist should behave in such a way as not to reinforce pathological relationship patterns is a common one within psychodynamic therapy: "The task of a psychodynamic therapist, in part, is to modify these interactional patterns within the patient-therapist relationship and help the patient produce similar change outside of treatment" (Horowitz 1993, p550). The success of therapy, according to Kiesler, should therefore also be shown in that "patient transactions with significant others outside therapy should demonstrate movement from pre-therapy rigid and extreme patterns to post-therapy mild and flexible patterns" (Kiesler 1992, p92): a change which should presumably show up in instruments which focus on interpersonal relating such as the IIP.

Kiesler's propositions with regard to complementarity have been challenged by others, both in respect of general relating and specifically in the psychotherapy relationship. While there is some evidence that "goodness of fit" between therapist and patient is significant in contributing to psychotherapy outcome (Luborsky et al 1988 p308, Gilbert 1989 p40), it is difficult to understand this in terms of Kiesler's complementarity rules. Safran (1992) points out that Kiesler speculates that greater complementarity should be associated with a better therapeutic alliance, but is not convinced by some of the implications of this: for instance, that matching a hostile client with hostile therapist will build the therapeutic alliance. Safran argues that the model would need to be extended to the intra-psychic sphere to take on real meaning.

Kiesler's claims of empirical validation are disputed by Orford (1986), who argues that while friendly-dominant and friendly-submissive behaviours are often found to be complementary (as required by Kiesler's model) there is also evidence that hostile-submissive behaviour is often met by friendly-dominance and that hostile-dominance is reciprocated (neither predicted by the model). Orford argues for a more complex model which can take account of factors such as "group membership, role, status, and setting" (p376): a particularly important point if we are to attempt to apply this model to the artificiality of the psychotherapy setting. Strong et al (1988) also argue that interpersonal behaviour has multiple determinants and conclude:

> "Clearly, how one person behaves toward another profoundly influences how the other behaves toward that person. However, a specific interpersonal behavior does not impel a specific response from the other. Rather, the person's behavior biases the other's responses in a particular direction, a direction that is evident in the other's overall pattern of response but may not be apparent in specific responses." (Strong et al 1988, p808)

All of these points would argue against the rather simplistic model of therapy phases outlined by Kiesler (1992).

d. Spatial theory

A challenge to interpersonal theory has come from those who argue that it does not take adequate account of the evolutionary perspective. Gilbert (1989), focussing on the development of social behaviours of humans, feels that the models of Leary and other interpersonal theorists "lack any close link with evolution theory" (p75). He instead develops the model based on care eliciting, care giving, competitive (power) seeking, and co-operating, which Barkham et al (1994) use as a theoretical structure to make sense of their factor analysis of the IIP. However, he does seem to accept the usefulness of the underlying two dimensions of the interpersonal circle and refers to the importance of "linking" and "spacing", which is clearly the affiliation or closeness/distance axis, and of "control", which is the power axis. These processes are, according to Gilbert, fundamental in social interaction (Gilbert 1989, p13). Gilbert also accepts that most psychopathology is socially related:

> ".. the vast majority of mental distress, from personality disorder through to depression, social anxieties and various psychoses, may be viewed as representing difficulties of self in relation to others. These difficulties may arise from endogenous (biochemical) sources which carry important information as to the short- or long-term threat to the capacity to derive desired social outcomes (e.g. status, respect, love, care, non-persecution and so on). Even in patients who fear death it is not unusual to find that the common theme igniting most affect is related to a sense of abandonment and isolation from loved others (the world carrying on without them)." (p20)

Like Gilbert, Birtchnell (1993, 1994) does not want to throw out the baby with the bath water. He accepts that the interpersonal circle has been the basis of useful research but feels that it started with fundamental deficiencies which create serious problems. A fundamental weakness is the nodal points, since they are not general enough and don't, argues Birtchnell, allow for constructive as well as pathological relating: which is essential if the model is to be securely based within evolutionary theory. He does not see interpersonal relating patterns as primarily motivated by the attempt to avoid anxiety, as do

the interpersonal theorists. Also, points out that the interpersonal circle thus has a built in bias: for instance, hating is clearly negative, and submitting is usually thought also to be negative[20].

Birtchnell (1993, p514) also maintains that the interpersonal circle becomes unmanageable beyond eight segments and that the assumption of bipolarity (as required for a circumplex model) is not useful. This latter point is, arguably, an essential one in using the model to understand pathological relating patterns: any psychoanalytic view would need to embrace the use of defence (for instance, hostility as a defence against the feared rejection) and of seemingly contradictory presentations. It is commonly found that people exhibit contradictory or paradoxical behaviours in their relationships which any bipolar model would find difficult to accommodate. In addition to these weaknesses, Birtchnell argues that there needs to be a distinction between adaptive and maladaptive behaviour that is qualitative, not quantitative. In other words, the concept of intensity - of seeing pathological positions as more extreme forms of "normal" one - is not acceptable.

Birtchnell (1993) claims to correct these deficiencies by building a "spatial theory", based on two axes[21] of relating: the "power" one with the nodal points of "upper" and "lower" and a proximity dimension with the nodal points of "closeness" and "distance", which clearly correspond to the interpersonal circle dominate/ submit and love/hate axes. He draws on evolution theorists to point out that the issues of distancing in relation to others and in seeking or accepting power are fundamental for any life species. Unlike the interpersonal circle, the dimensions do not have a built in bias: distant behaviour is often associated with creativity, achievement and personal space; lower behaviour with being nurtured, taught, accepting rational authority etc. Birtchnell argues that well adapted humans move between different "states of relatedness" freely depending on their different roles, life stages and tasks. He point out that:

> "The (good) states of relatedness associated with each of the four positions are equally desirable and equally pleasurable. In terms of relating skills or competencies, the good relater needs to be as skilful or as competent in one direction of an axis as s/he is in another. Conversely, the bad relater may be equally bad in both directions on a particular axis." (p42)

[20] This is a problem that Leary (1957) had earlier acknowledged in his discussion of the difficulty of finding neutral language to describe the segment positions.
[21] Birtchnell prefers "axis" over "dimension" since the latter implies bipolarity.

It can be seen that this model is more able to explain the fact that more "severe" patients tend to score highly over a broad range of IIP questions: ie that they seem to often have relating problems in most of the sub-scales. This fits in with the co-morbidity, or breadth of pathology, observation (Dolan et al, 1995) that patients usually exhibit more than one Axis II DSM personality disorder. This can also be seen as a compelling explanation for the "general complaints factor" (Horowitz et al 1988).

Birtchnell blends each of the nodal positions with that of its neighbours to produce an octagon with eight positions labelled upper neutral (UN), upper close (UC), neutral close (NC) etc., and describes each of the octant position in more detail for both adaptive and maladaptive relationship patterns (Birtchnell 1993). Birtchnell has some reservations about producing an octant, in particular because he feels that the two axes may not be completely orthogonal - "It may be that upper people are more inclined to be distant and lower people are more inclined to be close." (p215). He also has some difficulty in describing the differences between segments and feels that developing reliable and valid methods of measurement is a priority[22]. The octagon with the positions described for adaptive relating is shown in Figure 2.

[22] To this end he has developed his own questionnaire called the Person's Relating to Others Questionnaire (PROQ) which is descibed in the book (1993).

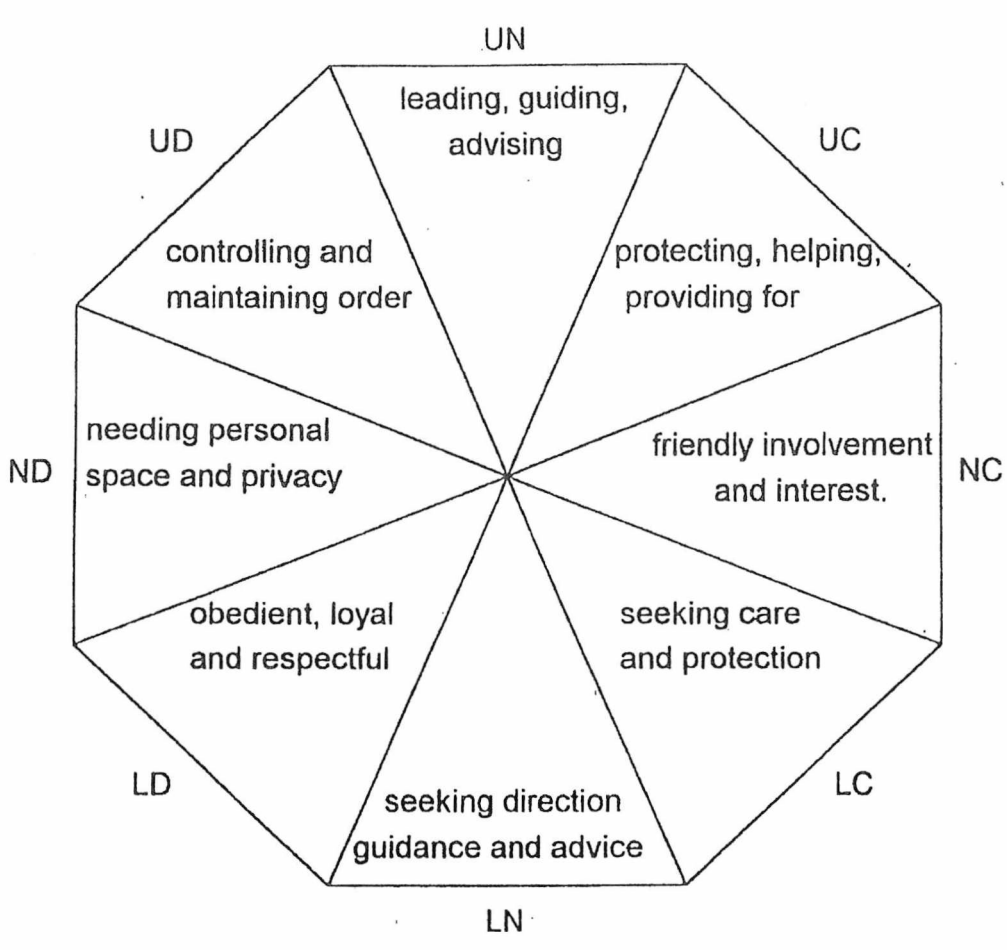

Figure 2 - The Octagon for normal relating

While adaptive relating is interesting, it is obviously the model of maladaptive relating that is essential for an understanding of the IIP, since the IIP items focus upon areas of relating that are perceived as problematic. Birtchnell argues for maladaptive forms being qualitatively (rather than quantitatively as in the interpersonal theory of "intensity") different from adaptive relating, and points out that they often arise from a lack of competence in that area, or a fear of the opposite. For instance, entrenched distant behaviour can been seen as arising from a fear of intimacy. The octagon of maladaptive relating is shown in Figure 3.

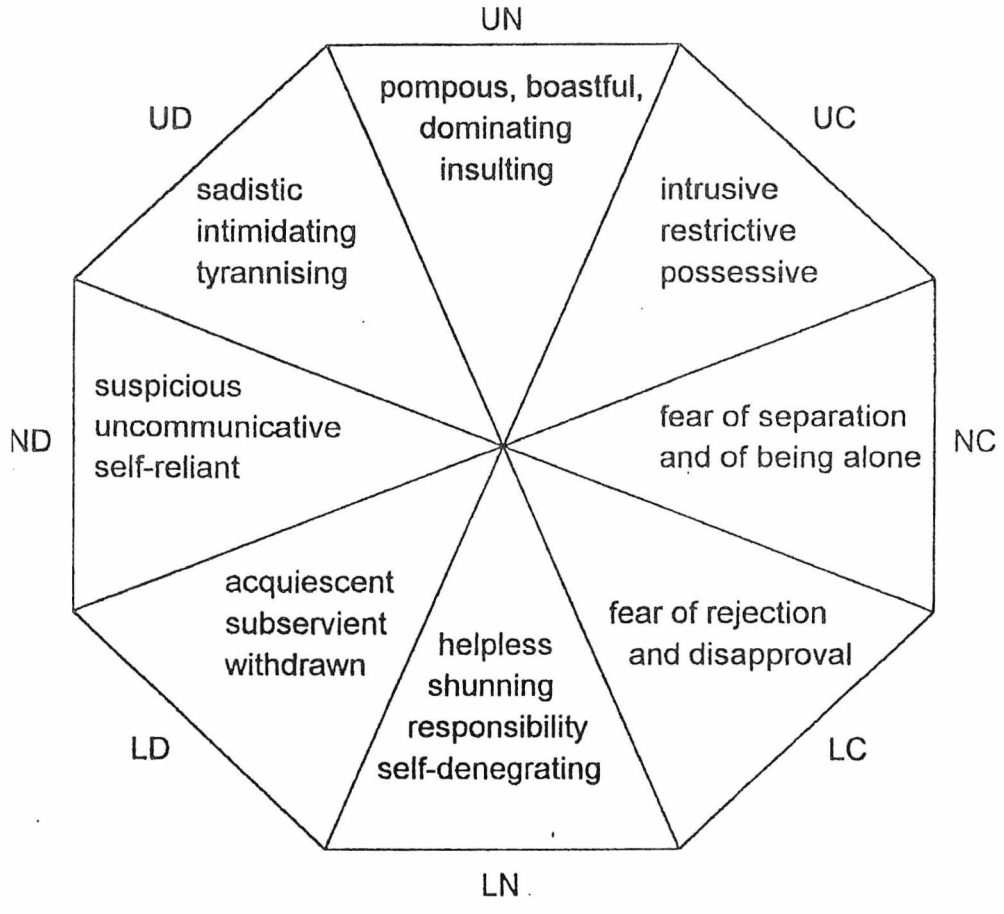

Figure 3 - The Octagon for maladaptive relating

Birtchnell defines three kinds of maladaptive, or negative, relating. The two forms "avoidant" and "insecure" can be expected to show consistently in the IIP, since they clearly constitute behaviour which would be perceived by patient as problematic. In avoidant behaviour the person clings to one position out of fear of the opposite position, which can arise from a fear of the consequences of failing to attain the opposite position. For instance, distance can be used as a defence against the rejections that have been felt in the past which arose from trying to attain positions of closeness. Insecure relating is clinging to one position because of fear of losing it, and again this can arise because of failures to achieve, or maintain, a particular state of relatedness in the past. Needing to staying in dominance over others can, therefore, arise from a fear that, once relinquished, a state of upperness will not be attainable again. The defence/avoidance model implicit in these concepts have the level of sophistication which enables the model to accommodate a psychodynamic or attachment theory model, as did Horney's (1937) and Leary's (1957) models described earlier.

The third form of negative relating - referred to by Birtchnell as "egocentric", but also sometimes as "disrespectful" or "unscrupulous" - is using others and it is therefore "difficult to consider egocentric relating without introducing the issue of morality" (Birtchnell 1994, p522). Given the exploitative nature of this form of maladaptive behaviour (which could be seen as "narcissistic"), it is quite likely that it will not show up so well on a questionnaire which focuses on interpersonal behaviours which are seen as problematic. However, some of the patterns which might normally accompany such behaviours could show and (leaving aside the moral dimension) it could be argued that such behaviour is only maladaptive if it has undesirable consequences for the person. For instance, somebody who seeks relationships in which s/he can exploit or abuse the other may well have to face the consequence of being able to find no relationships at all, which may be picked up by the questionnaire in the form of a difficulty of forming relationships. However, the probable shortcomings of a self-report inventory such as the IIP in being able to pick up such problems needs to be noted.

It is observed by Birtchnell that "Common to all definitions of personality is the understanding that there is a consistency in our attitudes and forms of behavior toward other, over time and across relationships." (1994, p525) but the issue of causation is one that depends on the developmental model chosen. An acceptance that there are entrenched forms of maladaptive relating, as well as favoured forms of adaptive relating based upon competencies, is implicit in most of the writing in this field. Clearly, for instance, an attachment based developmental model could fit comfortably with this understanding of the motivations for pathological interpersonal patterns. However, our understanding of the IIP does not need to assume a particular developmental perspective and developmental models are not therefore discussed in this paper.

A final issue that needs consideration in relation to the Birtchnell model is that of complementarity or interrelating. Birtchnell (1994) feels that discussion of this by the interpersonal theorists mentioned above does not take account of the difference between responses to agreed interrelating and responses to imposed relating. He accepts that generally speaking the matching of needs on the horizontal axis requires that both parties seek the same position (ie close-close, distant-distant), whereas on the power axis optimum matching requires the complement (ie upper-lower, lower-upper). However, Birtchnell feels that

interrelating is much more complicated than this ("Clearly there are rules of interrelating, but they need to be worked out much more carefully than the interpersonal psychologists have done so far", Birtchnell 1993, p260) and, in particular, what happens depends on the willingness of the recipient of the original proposer. Maladaptive relating has a further disruptive and complicating effect on interrelating. Although Birtchnell feels that his model has clinical implications, in being able to give indications of a focus for therapy or by monitoring changes in interpersonal relating, he does not claim that applying a complementarity principle within the therapy session can itself induce change, as Kiesler (1992) does.

e. *Conclusion*

It should be clear from the above discussion of the interpersonal circle and the Birtchnell alternative that the main reasons for using the latter as a way of understanding the IIP data are twofold. Firstly, it is because it was felt that the constraint of bipolarity is a hindrance to any psychodynamic understanding of behaviour. The representation of a wish by its opposite (reaction formation) was always a fundamental feature of psychoanalysis and the idea of defence is essential to the psychodynamic model. A model that is unable to incorporate this idea is unlikely to shed light on psychodynamic psychotherapy. The existence of contradictory positions side by side is commonly observed in psychotherapy. A clinging attachment to a particular individual can be accompanied (and often is) by social phobia, avoidance of others; it is a classic assertiveness problem to find submissive and aggressive or bullying behaviour together. The fact that less psychologically healthy patients are more likely to expect bad interpersonal responses over more dimensions has been observed by Safran: "..psychologically healthy individuals generally expect more positive responses than less healthy individuals to most interpersonal behaviours" (Safran 1992, p105) and by writers looking at co-morbidity or multiple personality disorder diagnosis on DSM Axis 2 (Dolan et al, 1995)[23]. This limitation of interpersonal theory is mainly a problem with the more simplistic model adopted by recent interpersonal theorists, and implicit within the circumplex scales of the IIP. Neither Leary's nor Benjamin's models emphasised a uni-dimensional bipolar system and both models therefore gave scope for a more sophisticated analysis of interpersonal relationships.

[23] It is interesting to observe that, despite the contention that they had developed bipolar scales, the case history in Barkham et al (1994) shows positive ipsatised scores at both ends of the "problems of dependency" sub-scale, "suggesting this area presented particular problems for the client" (p180).

Secondly, the notion of psychopathology as a more intense form of adaptive behaviour is an over simplification. Intense behaviour is not necessarily pathological, as Birtchnell (1993) points out. For instance, extreme forms of love or independence from others cannot be seen as maladaptive unless they create problems for the person. Signs of pathology are not so much when there is high intensity (although this may well be associated with pathology) as where there is excessive rigidity, instability and inappropriateness. Again, some of the sophistication of Leary's original model (Leary 1957) is lost in the interpretation of the more recent interpersonal theorists such as Kiesler. A view of maladaptive relating which can incorporate the concepts of defence and avoidance and which can augment the consideration of intensity by the addition of a notion of inappropriate "stuckness" adds a complexity to the model which does more justice to the diversity of human behaviour.

5. Developing theoretically based scales from the IIP

a. *Introduction*

The most accurate way of finding items to correspond to a theoretical model would arguably be to design a questionnaire with custom built questions:

> "In developing a scale, the psychologist must first decide what is to be measured by the scale and how many items are to be written and must then write them. Alternatively, he or she may attempt to select items for a scale from an available item pool. This latter procedure is not recommended because it requires that all the needed items in the right form be available in the pool" (Comrey 1988, p754).

The former is what Birtchnell has done with the PROQ (1993), which has the advantage (presumably) of accurately describing the theoretical position, although potentially has the disadvantage of not corresponding so closely to problems as actually described by people. However, the design of a new questionnaire was not an option for this research because CSP had already been using the IIP for many years. It was essential to find a way of interpreting the IIP data which already existed within the Centre.

The alternative to building specific scales is to select from a pool of items such as the IIP. Although this can have the disadvantage of there being a lack of appropriate items[24], it could be argued that the original methodology adopted by Horowitz et al (1988) in building up the IIP pool is such that it is likely that all of the needed items will be found within the bank of 127 statements. That is, if the sample is large enough and the process of selection thorough enough, we might expect all possible interpersonal factors which were perceived as problems to emerge. The IIP methodology should also have the advantage of ensuring that the items are expressed in a way which is typical of real populations, rather than within the terminology of the theoretical model (although cultural and language factors could create problems in trying to apply this to non-US populations). The factor analytic approach, which has been discussed above, has the potential disadvantage of producing scales which do not conform clearly to a theoretical model, as was the case with the original Horowitz et al (1988) analysis and with the subsequent analyses of Savournin et al (1995) and the analysis of the CSP data. Barkham et al (1994), while

[24] Birtchnell (personal communication) early pointed out to me that using the IIP pool to develop scales for his model could be a frustrating process due to the shortage of appropriate and precise items to represent some of the octants.

adopting the factor analytic methodology, claim a match for their factor analysis with Gilbert's (1989) four biosocial goals and develop the IIP-32 short scales (Barkham et al, 1996) on this basis.

The alternative to the factor analytic method for building sub-scales from the IIP is to start from collections of items that seem to make theoretical sense individually and within scales, and consequently have a high face and content validity, and then refine these by testing empirically against a data set. This is the approach which will be discussed next.

b. Scales based on the Interpersonal Circle

Alden et al (1990) were interested in grouping the IIP items into an interpersonal circle model and to this end they ipsatized data collected from two samples (n = 207 and n = 297) of "normal" university students to eliminate the effect of the general complaint factor. They developed eight scales which "fell into a circumplex ordering around the dimensions of dominance (vs. submissiveness) and nurturance (vs. coldness)" (Alden 1990, p527). They then refined the empirically selected scales by reducing the items to 50 through a process of looking at inter-item correlations and thematic content. They added 14 IIP items not included in the original factor analysis to give 64 items in total: ie eight scales each of eight items, called the IIP-Circumplex (or IIP-C). They claimed that these scales revealed a clear circumplex structure, accounting for 65% of the variance using the ipsatised scores, around the two principal dimensions of dominance v. submissiveness and nurturance vs. coldness. The scales are used to make a geometrical calculation of the individual's location in the circumplex space, and thus give a precise and specific segment location on the interpersonal circle. It is difficult to evaluate their methodology and findings in detail since they do not publish details of the scale items and alpha scores.

The IIP-C has been used in subsequent research, mainly in the US where interpersonal theory is well established (Horowitz 1993, Matano and Locke 1995, Soldz et al 1993 and 1995). Horowitz et al (1993) tried to fit their data into the circumplex model developed by Alden et al (1990) and demonstrated this perspective for a single case, producing a graphical representation of a patient's interpersonal problems against the interpersonal theory circumplex. While the interpersonal circle scales do not match with the Horowitz et al (1988) original published scales, the authors point out that the two main

interpersonal dimensions postulated by interpersonal theorists did emerge clearly from the earlier analysis. They described further work trying to match improvements in the presentation of interpersonal problems against the frequency of the discussion of these problems in brief (20 sessions) psychotherapy and they also tried to match the findings of the IIP against an attachment model derived from Bowlby's theories. Although there was some match between the four attachment styles they describe and the interpersonal circle, the attachment styles do not relate clearly to the four pole positions (cold, nurturant, domineering, non-assertive) of the interpersonal circle. However, they concluded that a person with a "dismissing" attachment style was likely to exhibit problems of "hostile dominance" (this would correspond to Upper Distant in the Birtchnell model) and would not be a good candidate for brief dynamic psychotherapy; indicating instead longer-term dynamic therapy, cognitive therapy or drug treatment[25].

Soldz et al (1995) have developed a short form of the circumplex with 32 items, the IIP-SC. Like Barkham et al (1996), they argue that such short sub-scales (four on each of eight scales) are justified because of the difficulty of administering a longer questionnaire within a clinical research setting. They found that the short scales retained their reliability and their circumplex properties. Although there were some differences between the IIP-C and IIP-SC in showing treatment effectiveness through drops in the overall mean, the authors conclude that treatment responsiveness of the IIP-SC is comparable to the full IIP and the IIP-C.

An analysis of the IIP-SC using the CSP data produces only moderate support for their model, with alphas ranging from .61 to .84 and an average alpha over the eight scales of .76 (as against .79 for the IIP-32). Given the claimed circumplex properties of the IIP-SC, a factor analysis might be expected to show reasonably discrete groupings of items onto the eight sub-scales. However, using the CSP data for the 32 items showed far less clear groupings than for the IIP-32 discussed above. Translating the interpersonal circle nomenclature into the Birtchnell language for ease of comparison (thus PA Domineering is shown as UN, FG Socially Avoidant as LD, etc), it can be seen from the table below that the distribution of the scale items over the eight

[25] This is interesting in the light of the finding discussed later that high scorers on the Birtchnell sub-scale equivalent of hostile dominance (UD) find it difficult to engage in therapy.

factor principal components analysis only produces an unequivocally clear result for UC and LD:

Factor analysis of Soldz et al (1995) IIP-SC (loading > .4):

1	2	3	4	5	6	7	8
4 LN 3 LC 1 NC	4 LD 1 ND	4 UC	3 NC 1 LC	3 ND 1 UN	2 UN 1 UD	1 UN 2 UD	1 UD

The circumplex structure of the model is moderately supported, with only two paradoxical items: the inclusion of a single NC item within the mainly LN/LC Factor 1; and a UN item in a mainly ND Factor 5. Apart from these occurrences, items are only combined with those from another scale where it is adjacent on the interpersonal circle.

Since the short circumplex version of the IIP of Soldz et al (1995) was not developed from a factor analytic approach it could be argued that we should expect a less close correspondence to our data than for the IIP-32. What the authors are attempting is a structuring of the items into a coherent theoretical model which is thus readily interpretable. The vital issue is that the sub-scales adequately describe the interpersonal circle segments. However, given the claims that the IIP-C and IIP-SC demonstrate a circumplex structure (ie: higher correlations between items which are adjacent on the IPC; lower correlations between those items which are more removed), you would expect that in a factor analysis only adjacent items were present within each factor. It is therefore unsatisfactory that the items cluster together so badly when tested against the data, and particularly that two factors contain items which are more than one sector on the interpersonal circle away from each other[26].

c. *Scales based on the Birtchnell model*

Starting from the existing CSP data, it would obviously have been ideal if the scales which came out of the CSP factor analysis were either related closely to previously published analyses (Horowitz et al 1998, Barkham et al 1994) or to a theoretical position such as the IPC or the Birtchnell model. It was the starting point to investigate this, but attempting to match the CSP factors with any of the existing models was not successful. Birtchnell had already attempted to match the IIP items on Barkham's scales with his octagons but

[26] It would be interesting to know whether or not language or cultural factors cause US populations to be different from UK populations. This could go some way towards explaining why Soldz et al (1995) report good circumplex properties for their sub-scales.

the correspondence had not been close[27]. Despite a close match between some of the CSP factors and the Birtchnell positions, particularly on the "neutral" pole positions (ie Upper Neutral, Neutral Distant etc.), in discussion with Birtchnell we were not able to agree a close match between each of the scales and one of his interpersonal octants.

The factor analysis could therefore not be used to point the way, both because there was no close match with the Birtchnell model and because some of the useful items within the IIP pool might not have loaded on any of the factors. (The latter is particularly problematic if we assume that the IIP pool may be short of items in some areas anyway, as discussed above.) Following an extensive discussion with Birtchnell to ensure that my understanding of the model was thorough, each of the 127 IIP items were scored according to his model. In subsequent discussion with Birtchnell we found a very strong correspondence between his classification and mine. There were only 10 items (7.9%) which were incorrectly classified first time around (although there were 26 other items which neither of us were able to classify).

Those that could not be classified seemed to involve a defence/avoidance activity (an ambiguity which Horowitz et al, 1993, draws attention to on page 559) or unclear wording. Even after extensive discussion with Birtchnell there were 26 items (20%) that we could not classify at all or which spanned more than two (usually adjacent) octants. Some of the items which spanned more than two octants seemed to suggest some kind of avoidant behaviour in relationships. For instance, "Hard to believe that I am loveable to other people" (31), which could suggest a pining for closeness but which also seems to imply distant behaviour. Or "Hard to let other people know what I want" (5): is this because it is hard to communicate or get close to others (LD), or because it is hard to get ones own needs met, which arises from over supportive behaviour (UC)? Some were just not clear - "Hard to give constructive criticism to another person" (69), which could imply over critical (UD) or unassertive (L) relating, depending on the assumed emphasis. Other items could not be classified, even into multiple octants with any certainty. Any items that were not clearly located within one of the octants were not used for the scale building. The level of agreement of the theoretical location of the

[27] Birtchnell (personal communication) does maintain, however, that the Barkham factors match his model better than they do the the Gilbert model.

items which were used for the sub-scales should therefore give confidence in the face and content validity of the sub-scales.

The scale building was started from the factor analysis sub-scales which did have a close correspondence with the Birtchnell model, extracting items that did not contribute positively to the scale and substituting with those which performed better. For the purpose of measuring reliability the Cronbach alpha test in the reliability programme in SPSS was used. Items where one was a close paraphrase of another within the scale were also eliminated. Five items on each of the eight scales were used in order to reduce the IIP to a manageable size. Using less would have reduced reliability of the sub-scales. Using more ran into the difficulty of finding sufficient items which accurately describe each of the eight octant positions[28]. As Barkham et al (1996) have pointed out, we are having to balance considerations of breadth and reliability of instruments against considerations of clinical utility. A reduction in the number of items inevitably decreases reliability, but an instrument which is too long is difficult to administer alongside other measures in every day clinical practice. It is also more expensive to score and to analyse.

Despite the risk of loss or reliability, the issue mentioned by Savournin et al (1995), that more or less any sub-scales with a large number of items will have good alphas, quickly became obvious. The reason for this phenomenon is the high correlations between most IIP items: a phenomenon that has been explained by Horowitz et al (1988) as arising from a "general complaints factor". As has been discussed above, an alternative explanation for this is that the more severe the pathology, the more likely it is that interpersonal problems are encountered over a wide range of areas. It is not necessary, therefore, to see this as being a tendency to complain: it can instead be seen as a reliable indication of overall severity. However, the high correlations over all IIP items makes it more difficult to tease out the items which best encapsulate the specific octant characteristics, and to eliminate this problem the alphas were tested also on the ipsatized data (which was derived by deducting the case mean from each item). Some of the scales which had been developed on the unipsatized data had substantially reduced alphas when tested on the ipsatized data. This is consistent with the observation of Saville and Willson (1991), who argue that alphas from ipsatised data, rather than being over-estimated as

[28] It is suprising that Alden et al (1990) were able to find eight items for each of their scales which they were confident accurately described each of the eight positions on the interpersonal circle.

some writers suggest (Johnson et al 1998), tended to be lower than alphas for normative data. In particular, the alphas for Lower Neutral and Lower Close were reduced to .31 and .07 respectively. Lower Distant was also badly affected with an alpha when ipsatized of .44[29]. Clearly the LD, LN and LC scales needed to be adjusted to ensure that the items selected were sensitive to the specific octants which they were meant to represent.

The final set of scales (called hereafter the IIP-40) is shown in Appendix 5. It can be seen from this list that all except one of the scales (UD) has an alpha of .8 or over and all except one (LC) have an alpha when ipsatised of over .65. The correlation coefficient between the individual item and the sum of the scores of the remaining items on the scale are also shown to indicate those items which integrate least with the scale. In practically all cases each individual item contributes positively to the reliability score (ie the alpha score would be lower if the item were deleted). This is not the case with 55 "Hard to feel like a separate person when I am in a relationship" on the Neutral Close scale, which has a correlation with the other scale items of only .38. However, this item has been included: both because it fulfils the criterion of being an item agreed by myself and Birtchnell as on the NC scale; and because the shortage of NC items within the IIP makes it the best choice from a poor set of remaining items. The overall reliability of the NC scale remains acceptable.

Before proceeding to look at some of the characteristics of the sub-scales when tested using the CSP data, it is important to acknowledge that they must be seen as a best attempt to represent the Birtchnell model using the available IIP items. The methodology for deriving them from the IIP was sound, but there was nothing that could be done about shortages of precise items. In particular, Birtchnell was unhappy about the use of aggression items in the UN and UD octants, given that aggression could be seen as a non-interpersonal characteristic, and hence one which could be associated with any of the octant positions. We eventually settled on only two items (79 "I fight with other people too much", and 116 "I argue with other people too much") which were explicitly aggressive, both of which were within the UD octant. It is clear from

[29] This seemed to suggest that some of Lower items are more strongly affected by the general complaint factor: maybe that they are more sensitive to general lack of happiness or underlying pathology. This could be a reflection of their relationship to self esteem or it could merely be that they demonstrate more overt problems, as argued by Barkham et al (1994). The fact that some sub-scales may tap the general complaint factor more than others was observed by Horowitz et al (1988), who also ipsatize the data to eliminate this problem.

Birtchell's description of UD (Birtchnell 1993, p222) that this is the position most closely associated with aggression.

In order to provide an independent test of the face and content validity of the 127 IIP items as originally classified by the author with Birtchnell, and in particular the 40 items which were used for the IIP-40 sub-scales (shown in Appendix 5), an experiment was set up using three raters. The methodology and detailed outcomes of this experiment is described in Appendix 7. The experiment showed moderate to good reliability (with Cohen's kappa scores of .51 - .65) between each of the three raters and the original for the entire set of IIP items, and also between the independent raters. The kappa scores for the set of 40 items used for the IIP-40 were good to strong, with a range of between .71 and .91.

In order to test whether the scales retained their reliability when the dataset was split by gender, the alphas for the raw scores were calculated for each gender group:

Scale	Female (n=106)	Male (n=46)	All (n=152)
LN	.86	.89	.86
LC	.84	.79	.83
NC	.80	.80	.80
UC	.78	.80	.81
UN	.83	.69	.80
UD	.76	.74	.76
ND	.86	.78	.85
LD	.84	.87	.85

It can be seen that, with the possible exception of the Upper Neutral scale for men, the alpha scores remain good over both gender groups. Testing for the alphas on deletion of particular items within the UN scale for men shows that no single item is particularly problematic for the scale: although 96 "I criticise other people too much" is the least well integrated item. It is interesting to speculate on the reduced reliability score for UN with men, but no obvious explanation is apparent.

Testing the reliabilities with the datafile randomly split into two equal halves showed the alpha scores to remain at acceptable levels within each half:

Scale	Half 1 (n=76)	Half 2 (n=76)	All (n=152)
LN	.83	.90	.86
LC	.81	.84	.83
NC	.83	.75	.80
UC	.77	.84	.81
UN	.81	.80	.80
UD	.76	.74	.76
ND	.84	.86	.85
LD	.84	.87	.85

The next investigation of the Birtchnell model scales was their circumplex properties. Despite Birtchnell's rejection of the concept of strict bipolarity which is implicit in later interpersonal theory models, we would expect adjacent octants to have in general higher correlations than those which are more distant, if only because the intermediate octants are blendings of two pole positions. We would not, however, expect there necessarily to be a negative correlation between opposite octants, as one might expect with opposite segments in the interpersonal circle, or opposite scales in Barkham's IIP-32. The correlations of the scores for each of the Birtchnell scales are shown below:

Birtchnell model scales - correlations

	LN	LC	NC	UC	UN	UD	ND	LD
LN	1	.65	.38	.53	.18	.34	.52	.66
LC	.65	1	.50	.68	.32	.27	.36	.62
NC	.38	.50	1	.47	.46	.38	.12	.30
UC	.53	.68	.47	1	.30	.26	.20	.40
UN	.18	.32	.46	.30	1	.48	.06	.17
UD	.34	.27	.38	.26	.48	1	.27	.38
ND	.52	.36	.12	.20	.06	.27	1	.76
LD	.66	.62	.30	.40	.17	.38	.76	1

The inter sub-scale correlations are shown in the form of pie charts for each of the sub-scales in Appendix 6.

The scales show a predictably rough circumplex structure, although it can be seen that for half the scales the next but one octant shows a higher correlation than the immediately adjacent one on one of the sides. Of these cases, it is particularly noticeable that there is a high correlation (.68) between the UC and the LC scales. This implies that pathological over-caring or controlling behaviour (UC) is strongly related to dependency and over-sensitivity to what others think (LC). This is maybe not surprising if over-caring behaviour is seen as a way of avoiding the rejection of others.

As discussed by Comrey (1988), it is good practice following the construction of scales to seek confirmation through a factor analysis of the scale items. However, given the attempt to provide a broad range of items which adequately describe the Birtchnell octant, and the space within the Birtchnell model for "paradoxical" features (which, it has been argued, is what makes the model attractive from a psychoanalytical viewpoint), a factor analysis should not necessarily be expected to produce such clear and discrete clusters as was found in the analysis of the IIP-32 detailed above. Despite this note of caution, a factor analysis was carried out on both the raw and the ipsatized items for the scales. Both factor analyses clustered the scale items into a single factor or with positions that are adjacent on the Birtchnell model: for instance, ND and LD were grouped together in the analysis of the raw scores. Using the raw data, the factors and the number of items loading at >.4 within each of the Birtchnell octants are shown in the following table:

Factor analysis of IIP-40 - (loadings > .4)

Factor	1	2	3	4	5	6	7	8
	3 ND 3LD	5 LN 4 LC 1 LD	5UC	4 UD	4 NC	4 UN	2 UD 1 LC(r)	2 ND

It can thus be seen that four of the scales - for UD, UN, UC and NC - emerged fairly clearly. The remaining (lower and left) positions on the Birtchnell octant - LC, LN, LD, ND - are less discretely clustered, with high correlations between ND/LD and LN/LC. Assuming that the theoretical model is sound, this could indicate that the available IIP items are not good at differentiating these adjacent positions[30]. However, given the mainly circumplex features of the Birtchnell model, it is encouraging that most of the factors only contain adjacent items. The one exception, with an LD item included with LC items, is factor 2.

The empirical test of the IIP-40 scales against the CSP data thus produced mainly satisfactory results, with good alpha scores on both raw and ipsatised data and an eight item factor analysis which provides general support for the groupings of the items, and hence for the construct validity of the sub-scales. However, while it is clear that the scales are better on both counts against the

[30] In view of the fact that in the original construction of the scales most items which Birtchnell and I had judged to be clearly within his octants were sampled, this would seem more likely than that other combinations of IIP items would produce a better scale.

CSP data than the IIP-SC, the IIP-32 clustered more discretely in the factor analysis than the IIP-40. This is despite the fact that the initial factor analysis of all of the 127 items did not replicate the Barkham et al (1994) factor structure. This seems to imply that the IIP-32 has a better fit with the CSP data. This does not, however, undermine the usefulness of the IIP-40, given the main aim to develop a set of scales with a good correspondence to the Birtchnell model.

d. Conclusion

The main reason to develop the IIP-40 was to see if interpersonal theory and Birtchnell's theoretical model could be used to structure our understanding of the CSP IIP results. The main reason for deriving scales based on the Birtchnell model, rather than the interpersonal circle based sub-scales developed by Alden et al (1990), was the preference for a model which did not rely on bipolarity. The bipolarity on the IIP found by Barkham et al (1994) and Alden et al (1990) is not convincing: either for the theoretical reasons discussed above, or as empirically tested by Savournin et al (1995) and in the factor analysis of the CSP data.

However, the main test of the IIP-40 comes from its application to patients seen for psychotherapy. Given the impossibility of interpreting IIP results without a sub-scale structure, we would hope that the Birtchnell derived sub-scales would give a better understanding of the patient profile and process of change. In particular, we would hope that the application of the sub-scales for patients before initial assessment and at the end of psychotherapy would provide some greater information on which interpersonal problem areas make it difficult for the patient to engage in, and benefit from, psychotherapy. In the final analysis it is the clinical usefulness of the IIP and shortened versions of it that will determine its continued use by CSP. The next stage of the research is thus to look at the IIP-40 sub-scales in relation to a group of patients who presented for a course of psychotherapy with a view to establishing the concurrent and predictive validity of the instrument.

6. Application of scales to investigate change in CSP patients

a. *Introduction*

Having developed scales which would seem to have reliability and which conform to Birtchnell's variant of interpersonal theory, it remains to evaluate whether they add anything to our understanding of therapeutic change or to the description, diagnosis and treatment of patients. It is proposed to consider this in three main areas. Firstly, the relationship between the IIP and the symptom-based instrument used by CSP, the DSSI(R), will be examined with a view to establishing whether the IIP main scale or sub-scales are sensitive to and consistent with the change demonstrated by the DSSI[31], and whether the IIP main scale results correspond to those for the IIP-40. A good correspondence with change as measured by the DSSI and by the IIP main scales will be used as evidence for the concurrent validity of the IIP-40.

Next the IIP-40 will be used to examine pre-therapy patient profiles to examine whether there is a correspondence between the patient profile and the subsequent maintenance of therapy and eventual demonstrable benefit. In particular, some of the predictions of interpersonal theory about the consequences of personality type for interaction in therapy will be examined in the light of the sub-scale scores. This will therefore provide an evaluation of the predictive validity of the IIP-40. Finally, we will examine changes within the IIP sub-scales to see if therapy promotes changes in particular segments rather than others.

b. *Concurrent validity*

There has not yet been enough work done to give us well established population norms for the IIP, although figures are provided by Barkham et al (1996) for the full scale and the IIP-32. Obviously norms do not exist for the IIP-40, so it is necessary to compare its results with another indicator of therapeutic benefit. For the CSP sample there were two possibilities for this apart from the IIP main scale mean: one was the DSSI, which had been collected for all of the patients from before the time that the IIP was adopted;

[31] A poor correspondence between the IIP and the DSSI would not necessarily indicate a weakness in the IIP: it could be a weakness in the DSSI, or merely evidence that the two instruments are measuring different aspects and that they don't change closely together. However, previous studies of the IIP have found a moderately close correspondence with symptom-based instruments.

the other was a patient evaluation questionnaire administered post-therapy that had been more recently introduced by the Centre and which was available for a smaller group of 39 patients who had undergone therapy of varying lengths. Given the problem of the group size and the different lengths of therapy, the DSSI was used.

Since the IIP and DSSI were collected pre-assessment for therapy, there were a large number of patients who completed the questionnaires on the first occasion: this was the group of 150 used for the factor analysis and scale building described early. The number of patients within each successive administration of the questionnaires (which were sent out broadly at six monthly interval) naturally became less:

Position of questionnaire	**Number of completions**	**%**
First	150	47%
Second	68	21%
Third	51	16%
Fourth	31	10%
Fifth and greater	19	6%
Total	**319**	100%

The size of the sample for analysis of therapeutic gain was thus much smaller than the original 150. The CSP sample included some patients who had been in therapy for four or five years, but most were seen for one year periods, and some dropped out of therapy or did not start at all.

Full DSSI and IIP results were available for a group of 48 CSP patients who had completed both questionnaires pre-therapy and approximately one year after commencement (third collection) and it was decided to use this sample rather than the slightly larger number who had completed the questionnaires only twice. It was felt that the one year results would give a better opportunity for the effects of the therapy to be observed. Many CSP treatments are limited to one year for practical purposes, and one year in psychoanalytic psychotherapy (which is normally a medium to long-term treatment) could be seen as providing the opportunity for therapy to have an effect. However, the implication of using a test result within the course of therapy needs to be noted. We would not expect issues in the therapies to have reached the state of resolution which they should ideally have reached on termination and we therefore might expect effect sizes to be smaller. Given that we are not

attempting to evaluate the effectiveness of the therapy - but rather the validity of the instrument - this should not be a problem.

The 48 patients were classified into the DSSI illness classes as follows:

One year therapy	**0**	**1**	**2**	**3**	**4**	**5**	**Total pre-therapy**
Pre-therapy							
0	11	2					**13**
1	9	4	2				**15**
2	3	1	3		1		**8**
3		2	1	3		2	**8**
4	1						**1**
5	1	1		1			**3**
Total one year	**24**	**10**	**6**	**4**	**1**	**2**	**48**

The above diagram shows an overall improvement in the group, in that the totals in each of illness classes 1 to 3 decline between the pre-therapy test and the one year test, and the number within illness class 0 increase from 13 to 24. In terms of the Jacobson and Truax's (1991) criteria for significant clinical change, the most clinically significant change could be seen as moving from an illness class pre-therapy to illness class 0 after therapy: ie to a "normal" population. However, any patients to the bottom left of the diagonal have improved in terms of their illness class, since their illness class was lower than it was pre-therapy. (The exceptions to this are those in illness class 5, which is used for those who were symptomatic but did not conform to Foulds' (1976) hierarchical model, and they are therefore more difficult to interpret.)

The DSSI also provides a total score, which is a weighted count of symptoms: more severe symptoms (in a higher illness class) score higher. Patients who stay within an illness class (particularly within illness class 0) can still show substantial symptomatic improvement. Investigating the total scores in addition to the illness class can be used to divide patients into six groups as follows:

"Cure"[32]	moved from an illness class into illness class 0
Improvement	moved from an illness class into a lower class
Positive	stayed in same illness class but showed improvement in total DSSI score

[32] The inverted commas are used to emphasise that whether or not such patients have really been cured is far too complex to be indicated by a questionnaire. The use of the term is thus somewhat contentious.

Negative	stayed in same illness class and showed neutral or negative change in total DSSI score
Worse	moved into a worse illness class
Unclassified	illness class 0 and asymptomatic on both occasions

There were only three patients who came into illness class 5 category in the pre-therapy group and two in the one year group. For the purposes of classification, a move from Class 5 to 0 was considered a "Cure", whereas a move from Class 5 to anything other than 0 was considered as within the Positive or Negative category according to total DSSI score.

Using this classification, the 48 patients fall into the groups as follows:

Category	Number	Percentage
Cure	14	29.2
Improve	4	8.3
Positive	16	33.3
Negative	5	10.4
Worse	5	10.4
Unclassified	4	8.3

It can be seen from this that 37.5% of patients showed a definite improvement in illness class and that 70% of patients showed an illness class or symptomatic improvement. If you exclude the Unclassified category, all of whom were asymptomatic both at the start and one year into treatment, these percentages rise to 41% and 77% respectively.

Excluding those in Class 5 and the unclassified group, the relationship between the starting illness class and total DSSI score is shown in the following table:

Category	DSSI score Mean (SD)	Illness class Mean (SD)
Cure (n=14)	23.86 (20.71)	1.46 (1.27)
Improve (n=4)	39.25 (13.28)	2.75 (0.50)
Positive (n=16)	35.81(24.77)	1.53 (1.53)
Negative (n=5)	13.00 (11.79)	0.5 (2.07)
Worse (n=5)	16.60 (16.61)	0.8 (0.84)
Total (n=44)	**27.86 (21.81)**	**1.68 (1.41)**

It can also be seen from this that those in the "improve" group are substantially higher symptomatically than those in the "cure" group: a reflection of the fact that those who move to a lower illness class (but not to 0) were clearly on average in higher illness class to start with. It is interesting that

those who got worse or had symptomatic deterioration had on average both a lower illness class and total DSSI score to start[33]. There was no statistically significant relationship between benefit from therapy as categorised above, or in total DSSI score, and gender.

The general improvement in DSSI scores is not really surprising, since it has been observed that psychotherapy produces rapid improvements in symptom scores (for instance, Malan 1979, p193). The main task for the evaluation of the IIP as a viable improvement measure is to explore how the IIP scores accord with the above results or, indeed, provide further insight into the process of therapeutic change.

In order to measure the relationship between DSSI and the IIP scores, the variables were correlated. The IIP main scale score correlated with the IIP-40 at .96. The correlation coefficients of the illness class with the full IIP mean was .4007 (p=.009), and with the IIP-40 mean was .4006 (p=.009). Calculating this for the DSSI total score gave .4922 (p=.001) for the full scale and .5063 (p=.001) for the IIP-40. There is thus not any significant difference for this sample between the IIP full scale and the IIP-40 in relation to the DSSI scores; and overall level of correspondence between the IIP and the DSSI is reasonable. This is consistent with Horowitz et al's (1988) observation that the IIP corresponded fairly closely with their symptom-based measure, the SCL-90.

However, while there is a strong statistical correlation between the DSSI illness class and total scores with the IIP full and IIP-40 means, this could conceal important individual differences. Assuming that people enter therapy in response to real problems, the fact that a small number of the CSP patients were unclassified by virtue of being asymptomatic before and after therapy implies that there is a group being missed by the symptom based questionnaire. Looking at the breakdown of IIP full and IIP-40 means within each of the DSSI groups listed above demonstrates this:

[33] This could be regression to the mean. It conforms to the observation that some patients with few observable symptoms at the start of therapy can develop them as the therapy starts provoking change: this does not necessarily mean that they will not gain from therapy in the longer term, but that they become less defended and more sensitised to their situation.

Category	IIP full mean	IIP-40 mean	Number
Cure	1.49 (.47)	1.46 (.58)	14
Improve	2.04 (.99)	2.11 (.92)	4
Positive	1.61 (.50)	1.66 (.50)	16
Negative	1.56 (.41)	1.71 (.46)	5
Worse	1.31 (.75)	1.31 (.76)	5
Unclassified	1.00 (.40)	0.99 (.40)	4
Total sample	**1.52 (.57)**	**1.55 (.61)**	**48**

The total sample IIP full mean of 1.52 compares with an out-patient mean quoted by Barkham et al (1996) of 1.56 on the full scale and 1.54 on the IIP-32. The IIP-32 item mean for Barkham's general population sample was given as 0.98.

The unclassified group of asymptomatic patients before and after therapy is (as might be expected) substantially lower than the full sample on the mean IIP scores, and the IIP full scale mean is only marginally above the .98 general population mean quoted by Barkham et al (1996). This would seem to indicate that the group that is "missed" by the DSSI (albeit a small group from which it is difficult to draw firm conclusions) are anyway within the general population norms for the IIP (as well as for the DSSI) and are therefore difficult to identify as a patient group[34].

There are no large differences between the means on the IIP full scale and the IIP-40 for any of the groups, except the small group of five patients in the "Negative" category. Both the IIP full and the IIP-40 show the "Improve" group to be substantially worse at pre-therapy, which is a reflection of the fact (as shown above) that this group are on average in a higher illness class before they start therapy. The above tables would indicate that for the bulk of the group - those who show symptomatic improvement - there is a fairly close correspondence between the illness class on starting therapy and the IIP main and short scale scores. However, the lower symptom and illness scores of the smaller group of ten patients who got worse is not reflected in the IIP scores: for instance, those in the "Negative" group have higher IIP scores that those in the "Cure" group, even though they have a lower mean DSSI score. This

[34] Although this group does not come within the range of a "patient" population, it does seem to benefit substantially from therapy, with a substantially reducted one year IIP mean of .57 and IIP-40 mean of .48. With such a small sample it is difficult to draw conclusions, but this would seem to correspond with the notion that substantial self-development benefits can derive from psychotherapy for patients who would not come near to psychiatric populations in terms of symptoms or interpersonal problems.

could indicate that there is a group of largely asymptomatic patients with significant inter-personal problems who show symptomatic deterioration in therapy, and the interpersonal features of this group will be looked at in more detail when considering the sub-scale scores.

The IIP-40 shows a close correspondence with the IIP main scale, and a moderate correspondence with the DSSI illness and total symptom scores. This would seem to provide reasonable evidence for the concurrent validity of the IIP-40 full scale.

c. *Predictive validity - therapeutic engagement*

The relationship of initial pathology and therapeutic success has long been accepted. Freud was narrow in his definition of the groups who could benefit from psychoanalysis (Freud 1916), and psychotherapy is sometimes thought to be inappropriate to people who have more severe psychiatric illness. General measures of psychological health pre-treatment have been shown to provide a reasonable prediction of therapeutic effectiveness (Luborsky et al 1988 p269, Luborsky et al 1993c). This does not emerge clearly from the above DSSI figures since, while it is clear that those in the "cure" category are substantially less severe than those in the "improve" and "positive" categories, it is also true that those in "negative" and "worse" categories have significantly lower starting illness class and total score than those who benefit. Those with a high total DSSI score seem to benefit from psychotherapy in symptomatic terms (although the true effect would need to take account of the starting position, in the form of a residual change score). Out of the "worse" category there was only one patient who moved into a substantially higher illness class (from 2 to 4) as a result of therapy. The other four in that category moved one illness class from 0 or 1. The IIP full scale and IIP-40 scores correspond fairly closely to the DSSI scores and therefore do not provide any additional insights.

The Birtchnell-derived sub-scales could provide more information about which groups benefit from psychotherapy and in what interpersonal areas this benefit is demonstrable. The sub-scale means[35] were available for the full group of 150 CSP patients who had completed the IIP on the first occasion: ie before assessment for psychotherapy. First it is necessary to see whether there are significant differences between males and females. This is shown in the following table, which shows the effect size of gender: calculated as an effect

[35] The sub-scale scores used throughout are the mean value of the five sub-scale items.

size, with the mean for females taken from the male mean for each sub-scale and then divided by the standard deviation for the combined sample:

Scales	Combined means (SDs) (n=150)		Female (n=104)	Male (n=46)	Effect size
LN	2.03	(1.05)	2.04	2.03	-0.01
LC	2.07	(1.00)	2.07	2.07	0.00
NC	1.29	(0.97)	1.35	1.17	-0.19
UC	1.82	(0.99)	1.98	1.44	-0.55
UN	0.99	(0.88)	1.02	0.92	-0.11
UD	1.05	(0.86)	1.10	0.95	-0.17
ND	1.59	(1.08)	1.46	1.90	0.41
LD	1.72	(1.12)	1.65	1.88	0.21
IIP-40	**1.57**	**(0.68)**	**1.58**	**1.54**	**-0.06**

Testing the significance of these findings is problematic because the sub-scales (particularly UN and UD) do not all show a normal distribution, with a large group scoring nought[36], and therefore parametric tests such as the t-test are not appropriate. It was therefore decided to use the Mann-Whitney test within SPSS, which does not require the assumption of normal distribution.

There are statistically significant differences in the sample between males and females on two sub-scales: UC and ND. The most significant difference is on the UC scale (p=.0022), which is related to excessive care-giving or the "helping profession syndrome" in Malan's terms (Malan 1979, p139). Females have substantially higher self perceived problems within the UC area, as might be expected. Males within this sample have significantly higher perceived problems on the neutral distance scale (p=.0178), which is mainly concerned with problems in socialising and being close to others. These findings are consistent with those of Barkham et al (1996), who found on the IIP-32 sub-scales that females had significantly higher scores on "Too Caring", while males scored significantly higher on "Hard to be Sociable", "Hard to be Supportive", and "Hard to be Involved". Savournin et al (1995) also found substantial gender differences in sub-scale structure. Gender differences need to be kept in mind when interpreting the findings in relation to therapeutic adherence and sub-scale change, particularly since the sample is has a gender bias (69% female for both the whole group of 150 and the treatment group of 48).

[36] This is arguably what should be expected from sub-scales that are designed to show problems in specific segments: if they have any circumplex characteristics there should be a large group for any particular sub-scale with very low scores.

However, maybe a more intriguing question is whether different personality types, as shown by the IIP sub-scales, benefit more or less from psychotherapy. Leary (1957) observed that those in the "managerial-autocratic" and "competitive-narcissistic" segments on the Interpersonal Circle are less able to stay in psychotherapy:

> "Managerial patients do not tend to enter or remain in psychotherapy. They are seen in treatment on the average of six sessions... They are, therefore, not initially well motivated for psychotherapy." (p329)

> "Narcissists are not especially motivated for psychotherapy. One sample of these patients came on the average for six therapeutic interviews. This ties them for last place among diagnostic groups [with managerial-autocratic"] in terms of length of treatment." (p339)

These two IPC segments correspond to upper neutral (UN) and upper distant (UD) on the Birtchnell model. Since the number of sessions that each patient stayed in therapy was available for the complete CSP database, the individual sub-scale scores and the overall mean was calculated for three groups: the whole sample for which full data existed; those who started therapy and stayed for less than 20 sessions; those who stayed in therapy for 20 sessions or more. Although 20 sessions was a fairly arbitrary cut-off point, it was chosen in the light of the practice of the Centre to encourage patients to be in medium term therapeutic contracts. Less than 20 sessions would clearly be seen as a premature withdrawal given that the normal expectation was for therapy to last one year or more. While there are inevitably some good reasons for premature withdrawal it can be assumed that it mainly relates to lack of therapeutic engagement.

The table below shows the differences between the whole sample (which includes those that did not start therapy for various reasons) with those in the two groups of less than 20 sessions, and 20 sessions and over:

Sub-scale	**Sample (n=150)**	**> = 20 (n=68)**	**< 20 (n=21)**	**Difference <20 from >=20 (%)**
LN	2.03	2.07	1.95	-5.80%
LC	2.07	2.06	2.16	4.85%
NC	1.29	1.18	1.42	20.34%
UC	1.82	1.87	1.88	0.53%
UN	0.99	0.94	1.12	19.15%
UD	1.05	0.94	1.30	38.30%

ND	1.59	1.60	1.55	-3.13%
LD	1.72	1.76	1.66	-5.68%
IIP-40	1.57	1.55	1.63	5.16%

The effect sizes (taking account of the standard deviation for the two groups combined) are shown below:

Sub-scale	**Total (n=89) Mean (SD)**		**> = 20 (n=68) Means**	**< 20 (n=21) Means**	**Effect size**
LN	2.04	(1.04)	2.07	1.95	**-.12**
LC	2.08	(.98)	2.06	2.16	**.10**
NC	1.24	(.88)	1.18	1.42	**.27**
UC	1.87	(.95)	1.87	1.88	**.01**
UN	0.98	(.89)	0.94	1.12	**.20**
UD	1.03	(.84)	0.94	1.30	**.43**
ND	1.59	(1.05)	1.60	1.55	**-.05**
LD	1.74	(1.07)	1.76	1.66	**-.09**
IIP-40	1.57	(.65)	1.55	1.63	**.12**

There are no significant differences between the overall or sub-scale means of the large groups, the group that started in therapy, or of the group of patients who engaged in therapy for 20 sessions or over.

The main differences in between those groups and those that didn't engage in therapy: specifically on the sub-scale scores for UD, NC and UN. In the case of UD the mean score is some 38% higher than for the group who engaged in therapy, giving an effect size of .43. The high UD and UN scores for the non-engaged group are consistent with Muran et al's (1994) argument that those whose problems centre in the hostile-dominant area are less able to form a positive alliance. The therapeutic relationship entails some element of lowerness in Birtchnell's terms - being helped, cared for, taking advice is a lower position - and those who are stuck in the upper and upper distant segments are therefore less able to take part in the process. The higher score on NC for the drop-out group is maybe less immediately obvious. However, this segment does correspond to Leary's "cooperative-overconventional" type: the only other personality type that he lists as not tending to remain long in psychotherapy. The Mann-Whitney test fails to indicate a good significance level for any of the sub-scales, although UD comes closest with p=.07. The above results must therefore be regarded as trends.

Given that it is the high scores on sub-scales which can be seen as indicating the kind of interpersonal pathology that could interfere with therapy, the sub-scale scores were next used to generate dichotomised variables for each subscale, with "1" indicating normal scores within the lower approximate three quartiles (75-80%) of the sample and "2" to indicate high scores of the approximate top quartile (20-25%) of the sample. The cut off point was varied between 75% and 80% because it was usually not possible to find a point which divided the sample precisely. Out of the total group of 150 patients there were thus about 35 who were scored as high. Using the dichotomised variables to cross-tabulate against engagement showed that only UD gave a significant prediction of engagement:

	Normal UD	**High UD**
Not engage	14 (66.7%)	7 (33.3%)
Engage	59 (86.8%)	9 (13.2%)

There is thus 2.5 times the proportion of patients in the group which did not engage in therapy with high UD: 33.3% against 13.2%. The chi-square test gave a Mantel-Haenszel score of 4.34586 and significance level at p=.037[37]. Using logistic regression, which is a method within SPSS for assessing the ability of independent variables to predict a dependent variable into either of two values, only UD reached the level of significance (p=.0348). These figures suggest that patients with high UD scores are a high drop out risk. Given the composition of the UD sub-scale, with items concerned with the inability to get along with those in authority, and general aggression and argumentativeness, it is maybe not surprising that people with these characteristics find it difficult to form a good therapeutic alliance.

It is worth observing at this point that it was also found that the proportion of high UD patients within the group who started therapy was slightly lower than for the sample of 150 patients[38]. Since patients would have not been taken into therapy for a variety of reasons - therapist unavailability, personal unsuitability etc. - it is impossible to draw any firm conclusions from this. However, it could be speculated that the same tendencies which make it difficult for the patient to engage in therapy might well operate in assessment and before commencement.

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[37] It is good that this reached an acceptable level of significance. Neither Horowitz et al (1988) nor Lovaglia & Matano (1994), using the original Horowitz subscales, were able to find a scale which discriminated treatment dropouts from completers at a statistically significant level.

[38] 18.7% ND against 21.1% in the full sample.

The predictive validity of the IIP-40 sub-scales is supported by the fact that UD is a significant predictor of engagement. The other sub-scales are less predictive of engagement, although UN and NC would seem to give some indication of likely engagement. These results would seem to be consistent with Leary's (1957) generalisations about which interpersonal types were able to engage in therapy.

d. Predictive validity - effectiveness

Given that engagement and therapeutic bond is generally agreed to be strongly related to outcome (Horvath & Luborsky 1993, Orlinsky 1994), those IIP sub-scales will next be used to predict outcome for those patients that do engage sufficiently to stay in therapy for a year or more. Using the group of 48 patients who remained in therapy for at least a year and categorising into "better" and "worse" according to improvement on DSSI total scores (excluding the uncategorised patients) gives the following result:

Sub-scale	Sample (n=44) Mean (SD)		Better (n=34)	Worse (n=10)	% diff worse - better	Effect size
LN	2.05	(1.08)	2.09	1.94	-7.18%	**-0.14**
LC	2.05	(1.01)	2.14	1.74	-18.69%	**-0.40**
NC	1.28	(0.82)	1.28	1.25	-2.34%	**-0.04**
UC	1.93	(1.01)	1.99	1.72	-13.57%	**-0.27**
UN	0.90	(0.84)	0.88	0.98	11.36%	**0.12**
UD	0.99	(0.75)	0.98	1.00	2.04%	**0.03**
ND	1.70	(1.10)	1.75	1.56	-10.86%	**-0.17**
LD	1.93	(1.09)	1.95	1.88	-3.59%	**-0.06**
IIP-40	**1.60**	**(0.6)**	**1.63**	**1.51**	**-7.36%**	**-0.20**

Given the lower average scores for the worse group, there is therefore still a clear tendency for this group to have a higher than expected score on UN and UD, which would suggest that patients of that personality type find it more difficult to benefit from therapy. It is also notable from the above figures that the group of patients who did worst in therapy have considerably lower than average scores in the LC segment: the "docile-dependent" group in IPC terms who tend to be "well motivated for treatment" according to Leary (1957, p298). The LC scores are proportionately higher in the "Better" group, although this tendency is not pronounced. Despite these observations, it

should be noted that none of these sub-scale differences reach the level of statistical significance and that they too should be regarded only as trends.

The dichotomised variables for indicating whether a sub-scale scores was within the highest 20-25% of the sample were then used to see if high sub-scale scores predicted therapy benefit. None of the sub-scales associated with poor engagement were significantly associated with poor outcome, although in each of these categories there was a higher percentage of high sub-scale scorers within the "worse" group. Out of the eleven within this group who had high scores on UN and UD, seven got better and four got worse (63% as against 77% on the whole group). However, it should also be noted that there was a lower overall proportion of patients within this sample who were in the high UD, UN and NC categories, which is to be expected given their poorer chance of engagement. It would seem that those UD, UN and NC patients who did manage to remain in therapy for a year or more have a reasonable chance of benefiting.

The one statistically significant result that did emerge from this analysis was that high LC patients were significantly more likely to be in the "better" group, as shown in the cross-tabulation below:

	Normal LC	**High LC**
Better	21 (61.8%)	13 (38.2%)
Worse	10 (100%)	0 (0%)

The chi-square test showed the Mantel-Haenszel to be 5.30, p=.02. There was also a trend for high UC patients to be within the "better" group. It would appear that high LC scores significantly predict benefit from therapy. This result is consistent with the interpersonal theory model and with empirical investigations of the IIP. For instance, Horowitz et al observed that "problems of friendly submissiveness [LC] seem to be more easily treated in brief dynamic psychotherapy than problems of hostile dominance [UD]" (Horowitz et al 1993, p558). While distance and upperness might seem to be contra-indications to therapy, and hence the difficulty of high UD, and to a lesser extent high UN, patients in engaging in therapy, closeness and lowerness might be seen to be conducive to the therapeutic relationship. This tendency has been observed by Muran et al (1994), whose results indicate that patients with problems in the friendly-submissive (LC) area are positively related to the development of an alliance; those in the hostile-dominant (UD) area are

negatively related. In terms of Kiesler's model of complementarity, the LC patient hooking into the UC therapist would seem to be a natural match (Kiesler 1983, 1992). Asking for help is a lower activity in terms of Birtchnell's model, and the ability to form a close therapeutic bond would appear to be a good indication of likely benefit. Thus, with some caution, it is possible to say that the relationship of starting sub-scale scores to therapeutic engagement and benefit do support the predictions of interpersonal theory and are mainly consistent with related research findings.

e. *Change on the IIP-40 sub-scales*

It has been shown that changes in the overall mean scores on the full IIP and IIP-40 relate fairly closely to change as measured by the symptom-based DSSI. It has also been shown that there is some evidence that high scores in particular segments affect therapeutic engagement and efficacy. The next area to consider is the actual level of observed change in the IIP-40 and the sub-scales. Do patients tend to change more on some sub-scales than on others, and are there significant differences in the sub-scale change scores between patients who fall into the various categories of cure as defined above?

To provide comparison, the DSSI change scores were first examined, both raw change scores and an effect size calculated to take account of the standard deviation within the group. Since we lack a control group to compare with our treatment group, this is the normal method for standardising the change scores. The effect size is calculated by dividing the measured change by the pre-treatment standard deviation, so that the figure describes the level of change as a proportion of the standard deviation (ie an effect size of 1.00 would indicate that the person who started in the middle of sample, 50th percentile, is expected to be with the 84th percentile at the end). Calculating the effect size for the DSSI shows that the average change in DSSI total score is 11.57 which gives an effect size of .52 when divided by the standard deviation of the DSSI total of 22.24. Dividing this over the different "cure" groups shows that the observed change between the "better" and the "worse" groups is pronounced[39].

[39] This is obviously mainly because the DSSI was used as the basis for dividing between the groups.

Group	DSSI mean change	Effect size
Cure	20.15	0.91
Improve	19.00	0.85
Positive	19.25	0.87
Negative	-3.40	-0.15
Worse	-17.00	-0.76
Unclassified	0.00	0.00
Total	**11.57**	**0.52**

The means, standard deviations, change scores and effect size on the IIP-40 for the group of 48 patients are shown below:

Sub-scale	Mean (SD)		Mean change	Effect size
LN	2.02	(1.06)	0.33	0.31**
LC	2.01	(0.99)	0.28	0.28
NC	1.20	(0.84)	0.24	0.29*
UC	1.86	(1.00)	0.42	0.43**
UN	0.85	(0.83)	0.00	0.00
UD	0.95	(0.74)	0.07	0.09
ND	1.68	(1.08)	0.32	0.30**
LD	1.85	(1.10)	0.40	0.36**
TOTAL	**1.55**	**(0.61)**	**0.26**	**0.43****

** p<.01, * p<.05

The mean changes are well below one standard deviation on each of the sub-scales and are therefore modest as defined by Barkham (1990, p290), but reach the level of statistical significance for all sub-scales excepts LC, UN and UD. The effect sizes compare with average effect sizes detailed from various studies by Luborsky et al (1988) of .53 to 2.58, so are also small compared to these studies (albeit using different outcome measures). One reason for this could be point at which the "outcome" is measured: for this group of patients it is not in most cases at the end of therapy but in the middle.

With the exception of UD and UN, the effect sizes are fairly uniform, at around .3, although UC shows higher change than the other sub-scales. The comparisons between sub-scales are interesting in the light of the observation earlier that higher UD and UN scores mitigate against successful engagement in therapy. It would seem that interpersonal problems within the UN and UD area are also less helped by therapy than are problems in the other areas. This is not predominantly an "upperness" feature, since UC shows the highest

change out of any of the sub-scales. However, this is not a finding that is consistent with those of Soldz et al (1995) who, using the circumplex model, find a fairly uniform change in each of the IPC segments for their largest patient group. It is, however, somewhat supported by Horowitz et al (1993) who, using the circumplex sub-scales, find a lower level of change in the IPC equivalents of UN, UD and ND. The CSP findings do not, however, support Horowitz's 1988 finding that there is less change on intimacy (ND) and more on assertive (LN) problems (Horowitz et al 1988, p891).

The data was next divided into those that showed some overall improvement as demonstrated by the DSSI ("better"), those who showed DSSI deterioration ("worse"), and the unclassified group of patients who were asymptomatic pre- and post- one year therapy. The change scores, given as standardised scores, are shown below:

	IIP sub-scale effect sizes between groups			
Sub-scale	Better (n=34)	Worse (n=10)	Unclass (n=4)	Total (n=48)
LN	0.39**	-0.06	0.61	0.31
LC	0.42*	-0.38*	0.76	0.28
NC	0.26*	0.37	0.30	0.29
UC	0.54**	-0.08	0.75	0.43
UN	-0.01	0.05	0.06	0.00
UD	0.01	0.19	0.47	0.09
ND	0.36**	-0.19	0.93	0.30
LD	0.53**	-0.18	0.27	0.36
TOTAL	**0.52****	**-0.08**	**0.84**	**0.43**

** p<.01, * p<.05

It is interesting to note from these tables that the change in the unclassified group that did not show up on the DSSI is higher than average measured on the IIP-40 and on all of the sub-scales except LD. Change within this asymptomatic group, which is probably typical of a significant proportion of non-psychiatric populations seeking psychotherapy, is clearly better indicated by the interpersonal relationship problems picked up by the IIP than in the more commonly used symptom based measures. We need to exercise caution in drawing conclusions from the above figures because of the small size of the group (none of the effect sizes reach the level of significance because of this) but clearly in terms of the IIP results this group should be considered along with the others within the "better" category.

The comparisons of the sub-scale change scores for the two groups are interesting. The "better" group shows fairly consistent change over each of the sub-scales except UN and UD, but the "worse" group shows some minor improvement on the UN and UD sub-scales. Given this, it is even more striking that in each of the sub-scales on which there is a good effect size for the "better" group (LN, LC, UC, ND, LD) there is negative change for the "worse" group. It would seem that therapy is working in opposite directions for these two groups, with the only sub-scale showing improvement for both groups being NC. To summarise the direction of change (counting <.05 as no change, >.25 as ++ or --, >.5 +++):

Sub-scales	Direction of change - Better group	Direction of change - Worse group
LN	++	-
LC	++	--
NC	+	++
UC	+++	-
UN	no change	+
UD	no change	+
ND	++	-
LD	+++	-
TOTAL	+++	-

It is worth returning to the theoretical meanings of the sub-scale items to try to understand this pattern.

The NC sub-scale comprises items which are mainly around problems associated with not managing to keep an adequate distance from people. It would seem from the above figures that all groups gain a better sense of personal boundaries as an outcome of therapy. This is an area in which the "worse" group would seem to do somewhat better than the "better" group, even though there is little difference in pre-therapy scores on this sub-scale.

As to the UD and UN sub-scales, these are mainly concerned with problems associated with trying to control other people too much, criticising and arguing with others, and finding it hard to accept authority. It would seem that there is negligible change in these areas for those who appear to derive overall benefit from therapy. However those that do badly in therapy, in symptomatic terms and with an average rise in mean IIP sub-scale scores, do seem to gain

some amelioration of their problems in these areas (although the small size of this group makes impossible to generalise this with confidence). Simplifying, this group would seem to gain from the therapy some moderation of their UN/UD controlling and aggressive tendencies while suffering overall symptom deterioration and worsening perceived interpersonal problems in the other segments.

The segments in which the "worse" group does significantly badly is LC and it also shows deterioration in ND and LD. Each of these sub-scales show good improvement for the "better" group. The LC sub-scale is mainly concerned with over-sensitivity about the feelings of others, and this is a sub-scale on which the "worse" group showed substantially lower initial scores (18.69%) than did the "better" group. We also need to remember that none of the high LC scorers were in the "worse" group. It would seem that high LC is a good indicator for therapy, but that problems within this area show less overall average improvement: it was the only sub-scale apart from UN and UD which did not show significant improvement for the whole group. Is it possible that therapy sensitises those in the "worse" group to the feelings of others and that it therefore increases problems within this area, particularly mid-way through a course of therapy? The tendency of psychoanalytic therapy to unpick defensive structure, causing short-term symptomatic deterioration, could explain this pattern. This would be somewhat consistent with the profile on this group as tending more to the UN/UD area, which could be seen as comprising patients who are defended in a more distant and controlling way. By contrast, the "better" group (including all of the high LC scorers within the sample) would seem to gain from therapy a better sense of themselves and their own needs: a move from anxious attachment to better autonomy.

f. Conclusion

The sub-scales clearly provide more information about the profile of patients than does the IIP mean score. The gender differences - women have greater levels of perceived problem in the upper close octant, and men in the distance octant - are statistically significant and consistent with other research in the field. There are also interesting findings in relation to engagement in, and benefit from, therapy. In particular, there is a tendency for patients with high UD, UN and NC scores to have difficulty engaging in therapy. In the case of UD this is especially pronounced. The difficulties in therapy of high UD and UN scorers would seem to continue as a trend when we look at demonstrable

benefit for patients who remain in therapy, although it is not possible to state this with any confidence. These observations are consistent with the recent research on IPC based sub-scales of IIP by Horowitz et al (1993) and with some of the predictions of interpersonal theory, particularly those of Leary (1957). An opposite tendency - high LC scores - would seem to be a good indication for therapeutic benefit. Again this is consistent with the predictions of interpersonal theory and with recent research.

The usefulness of the sub-scales in understanding the actual process of change within therapy - which areas are amenable to change - is less easy to evaluate and conclusions within this area are more speculative. However, the absence of significant overall change in the UN and UD segments for the group is indisputable. This is consistent with Horowitz et al's (1993) observation that patients don't improve readily in the dominating (UN) and vindictive (UD) segments, although his finding that there is little change in the cold (ND) segment is not supported. Initial findings by Birtchnell (personal communication), using the PROQ questionnaire, also indicate that the lowest change is within the UN and UD segments and further research on sub-scale change would be needed to confirm whether or not this is generally true.

7. Conclusion

The Inventory of Interpersonal Problems has so far not lived up to its early promise. There is as yet little evidence that it has fulfilled the expectation that it might be an outcome measure that is more sensitive to change in psychodynamic and interpersonal therapy. Some eight years after its introduction there is no consensus on a suitable sub-scale structure, and it has no unique value without sub-scales. The two main contenders for a sub-scale structure are the factor analytic, predominantly based in the UK, and those which start from interpersonal theory, predominantly based in the US.

The sub-scales drawn from Horowitz et al's (1988) original factor analysis have not been widely adopted, and Horowitz himself has now published research using the Alden et al (1990) scales. The methodology of the original factor analysis has been challenged by Barkham et al (1994) and the sub-scales based on this analysis have become the focus for UK research into the IIP. There were a number of reports of research in progress using the IIP-32, which was published by Barkham et al in 1996, at the 1996 UK Society for Psychotherapy Research conference. Unfortunately the Barkham sub-scales are only loosely based on a theoretical model (Gilbert 1989) which does not integrate well with any therapeutic models or with wider interpersonal theory. It is thus inconsistent with the Alden et al model. Also, the empirical basis of these sub-scales has been challenged in the Savournin et al (1995) article, which suggests that different scale structures might be appropriate for different populations. The CSP research also fails to confirm the Barkham sub-scales, and, like the Savournin research, also fails to confirm a meaningful bipolar structure using ipsatized data.

Bipolarity is not attractive on theoretical grounds either, and this is a problem in adopting the Alden et al (1990) or the Soldz et al (1995) short circumplex scales based on them (the IIP-C and IIP-SC). While there are many features of the original interpersonal circle of Leary (1957) and others which are convincing, the insistence of later interpersonal theorists on a uni-dimensional bipolar model is unnecessarily restrictive. It does not make theoretical sense; nor is it consistent with the widely observed phenomenon of co-morbidity. The sub-scales based on the Birtchnell model (the IIP-40) are an attempt to remedy this. Their face and content validity are reasonably established

through the procedure of developing them with John Birtchnell. There is some empirical confirmation of their construct and predictive validity through the factor analysis and their ability to confirm the predictions of interpersonal theory in relation to therapeutic engagement and efficacy. The IIP-40 mean correlates highly with the main IIP, and is as good as the main IIP in terms of correspondence with the DSSI, so some concurrent validity is established.

It is difficult to imagine that the IIP-40 could become a major contender as a viable sub-scale structure over the IIP-32, the IIP-C or IIP-SC. However, there are directions for further research which could be productive. One of these would be the application of the sub-scales to individual cases to see if they have good descriptive power. It would be interesting to see whether change on sub-scale scores seems consistent with the change observed by therapists or observers. Sub-scale scores could be used to provide focus for assessment or to further inform therapists. Another area of development would be into the "complementarity" discussed by interpersonal theorists; whether interactions within the therapy session conform to the expectations which follow from the sub-scale scores. Do therapists tend to hook into LD interactions with UD patients, for instance? This could also provide an interesting perspective on the sadomasochistic structure of the transference-countertransference relationship, as discussed by Gear et al (1981). These areas of research would move consderation of the IIP into the main arena of current research: that of the psychotherapy process and outcome.

Finally, there is the scope for further developmental work on the sub-scales in relation to interpersonal theory. While the Birtchnell model is different is some of its assumptions, it is not incompatible with interpersonal theory and there is the possibility of adopting the IIP-SC, or a modified form of it. It would be interesting to see if the IIP-SC sub-scales produced the same results as the IIP-40 in relation to prediction of engagement and outcome. This could also be compared with the predictive validity of the IIP-32. It should be remembered that all of the instruments seem to find some convergence in significant gender differences, and that the IIP-40 results are very consistent with both the general predictions of interpersonal theory and the findings of researchers using the IIP-C. There would thus seem strong reasons to continue to pursue lines of research in relation to interpersonal theory and outcome in psychotherapy.

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Appendix 1 - The DSSI(R)

D S S I QUESTIONNAIRE

Name: .....

Date: .....

INSTRUCTIONS

This section contains descriptions of how you may have felt, thought, or acted recently.

After reading each statement you have to put a circle round either "False" or "True" depending upon which is the correct answer for you. On the occasions when you have marked "True" you then have to indicate how much this upset you. Do this by putting a circle round the one phrase or word which best explains this.

Examples

1. Recently I have been getting frequent headaches.

   A True B False If true, this has upset me:-

   C Unbearably D A Lot E A bit

   The first example would mean that you have been getting frequent headaches which upset you a lot.

2. Recently my concentration has been poor.

   A False B True If true, this has upset me:-

   C A bit D A lot E Unbearably

   The second example would mean that recently your concentration has been poor, which upset you a bit.

3. Recently people have been getting on my nerves.

   A False B True If true, this has upset me:-

   C Unbearably D A lot E A bit

   The third example would mean that recently people have not been getting on your nerves.

4. Recently I have worried about family troubles.

   A False B True If true, this has upset me:-

   C A bit D A lot E Unbearably

   The fourth example would mean that recently you had worried about family troubles, which has upset you unbearably.

1. Recently I have been breathless or had a pounding of my heart.

A False B True If true, this has upset me:-

C A Bit D A lot E Unbearably

2. Recently I have lost the use of one of my arms or legs for a time.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

3. Recently I have felt that an organisation or group has been planning my downfall.

A False B True If true, how sure are you?

C Not very D Fairly E Certain

4. Recently I have been very excitedly happy for no particular reason.

A False B True If true, how often?

C Nearly always D Often E Seldom

5. Recently I have been unnecessarily careful about carrying out even simple everyday taks.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

6. Recently I have seen visions of strange things which no-one else could see.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

7. Recently the future has seemed hopeless.

A False B True If true, how hopeless?

C A bit D Very E Completely

8. Recently I have been afraid of heights.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

9. Recently I have considered myself superior to everyone.

A False B True If true, how sure are you?

C Not very D Fairly E Certain

10. Recently I have had nagging doubts about nearly everything that I have done.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

11. Recently I have harmed people because I am unclean or evil.

A False B True If true, how sure are you?

C Not very D Fairly E Certain

12. Recently I have been sleep-walking.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

13. Recently for no good reason I have had feelings of panic.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

14. Recently I have lost my sight or hearing for a while and then it came back.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

15. Recently there have been people trying to poison me or do me very great harm.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

16. Recently I just have not been able to stop laughing and joking with everyone.

A False B True If true, how often?

C Seldom D Often E Nearly always

17. Recently I have been unable to stop myself from counting or tapping things, or uttering phrases quite pointlessly.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

18. Recently I have felt that I have been interfered with sexually or electrically.

A False B True If true, how sure are you?

C Not very D Fairly E Certain

19. Recently I have lost interest in just about everything.

A False B True If true, how much loss?

C Complete D A lot E A bit

20. Recently I have had a fear of some harmless animal or insect.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

21. Recently I have felt that I am a very much greater person than most people think.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

22. Recently I have been afraid of the thought that I might make a physical attack on someone.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

23. Recently people have been talking about me because of my wicked deeds.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

24. Recently I have lost my memory and forgotton who I was, or where I lived.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

25 Recently I have been so "worked up" that I could not sit still.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

26. Recently I have had pains which moved about to different parts of my body.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

27. Recently someone has deliberately tried to make me ill.

A False B True If true, how sure are you?

C Fairly D Not very E Uncertain

28. Recently new ideas and schemes have been rushing through my head one after another.

A False B True If true, how often?

C Seldom D Often E Nearly always

29. Recently I have had to keep on checking things again and again quite unnecessarily.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

30. Recently I have wondered whether I am male or female.

A False B True If true, how puzzled are you?

C A bit D Very E Extremely

31. Recently I have been so depressed that I have thought of doing away with myself.

A False B True If true, how seriously?

C Completely D Very E Not very

32. Recently I have been afraid of handling some weapon or sharp object.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

33. Recently I have felt that I have been sent to save the world.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

34. Recently I have had an unreasonable fear that I might forget to do something and then something really awful might happen.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

35. Recently I have thought that the world is such an evil place that I, and those nearest to me, would be better out of it.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

36. Recently all my behaviour became like that of a young child for quite some time.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

37. Recently I have had a pain or tense feeling in my neck or head.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

38. Recently I have often had difficulty in keeping my balance.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

39. Recently people have been secretly plotting to ruin me.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

40. Recently I have had so much pep and energy that I could hardly stop doing things.

A False B True If true, how often?

C Seldom D Often E Nearly always

41. Recently I have kept having to wash myself again and again.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

42. Recently someone else has been doing the thinking that goes on in my head.

A False B True If true, how sure are you?

C Not very D Fairl E Certain

43. Recently I have been so miserable that I have had difficulty with my sleep.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

44. Recently I have had an unreasonable fear of germs.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

45. Recently I have felt I must tell the whole world of my brilliant ideas.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

46. Recently I have had nagging fears that someone close to me might be killed or seriously injured.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

47. Recently I have felt that I am condemned forever.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

48. Recently people around me have seemed strange, unfamiliar, or different.

A False B True If true, are they really?

C Not really D Not sure E Really are

49. Recently I have worried about every little thing.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

50. Recently I have been unable to control my violent shaking.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

51. Recently someone has had evil designs against me.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

52. Recently I have been absolutely "on top of the world".

A False B True If true, how often?

C Seldom D Often E Nearly always

53. Recently I have felt compelled to do things in a certain order, or a certain number of times, to guard against something going wrong.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

54. Recently voices have spoken to me when no one was there at all

A False B True If true, how sure are you?

C Not very D Fairly E Certain

55. Recently I have been so low in spirits that I have sat for ages doing absolutely nothing.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

56. Recently I have had a fear of enclosed spaces.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

57. Recently I have felt that I have a mission to carry out of great importance to the world.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

58. Recently nasty thoughts or words have kept running through my mind against my will.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

59. Recently I have felt that I have committed the unforgivable sin.

A False B True If true, how sure are you:-

C Certain D Fairly E Not very

60. Recently things around me have seemed odd, unfamiliar, or changed.

A False B True If true, are they really odd or do they just seem so?

C Not really D Not sure E Really are

61. Recently worrying has kept me awake at night.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

62. Recently I have had fits.

A False B True f true, this has upset me:-

C A bit D A lot E Unbearably

63. Recently I have thought that I was being followed for a special reason.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

64. Recently I have been so cheerful that I have wanted to decorate myself with much brighter, more cheerful things, that I usually do.

A False B True If true, how often?

C Seldom D Often E Nearly always

65. Recently I have had to wash things again and again to make absolutely certain that they were safe.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

66. Recently I have felt there was a special meaning in one side of my body being different from the other.

A False B True If true, how sure are you?

C Not very D Fairly E Certain

67. Recently I have been depressed without knowing why.

A False B True If true, how depressed?

C Extremely D Very E Fairly

68. Recently I have been frightened of going into crowds or social gatherings.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

69. Recently I have thought that I am the richest person in the world.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

70. Recently I have been worried by the thought that certain things might have been left lying around.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

71. Recently I have felt that I am the vilest, most wicked person alive.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

72. Recently I have lost consciousness for a few seconds without actually falling.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

73. Recently I have been so anxious that I could not make up my mind about the simplest thing.

A False B True If true, how anxious?

C Extremely D Very E Fairly

74. Recently I have had burning or tingling sensations under my skin which were much worse than "pins and needles".

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

75. Recently people have been trying to drive me insane.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

76. Recently things could not have been better in any way.

A False B True If true, how often have you felt that way?

C Now and again D Often E Nearly always

77. Recently I have felt compelled to keep on touching things.

A False B True If true, this has upset me:-

C Unbearably D A lot E A bit

78. Recently my feelings have been taken over by someone.

A False B True If true, how sure are you?

C Not very D Fairly E Certain

79. Recently I have gone to bed not caring if I never woke up.

A False B True If true, how serious was this?

C Desperately D Very E Fairly

80. Recently I have been quite unable to bring myself to go out alone.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

81. Recently I have felt that I have special, almost magical powers.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

82. Recently I have had persistent feelings of having left something unfinished without knowing what.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

83. Recently I have felt that my insides are all rotten.

A False B True If true, how sure are you?

C Certain D Fairly E Not very

84. Recently I have found myself in some place without knowing why I was there or how I got there.

A False B True If true, this has upset me:-

C A bit D A lot E Unbearably

Now please check that you have circled "False" or "True" for every statement; and when "True" was marked that one of the three choices is also circled.

Appendix 2 - the Inventory of Interpersonal Problems

Introductory text. Here is a list of problems that people report in relating to other people. Please read the list below, and for each item select the number that describes how distressing that problem has been for you. Then circle the number.

Not at all	A little bit	Moderately	Quite a bit	Exremely
0	1	2	3	4

Part I. The following are things you find hard to do with other people.

1 Hard to trust other people
2 Hard to say "no" to other people
3 Hard to join in on groups
4 Hard to keep things private from other people
5 Hard to let other people know what I want
6 Hard to tell a person to stop bothering me
7 Hard to introduce myself to new people
8 Hard to confront people with problems that come up
9 Hard to be assertive with another person
10 Hard to make friends
11 Hard to express my admiration for another person
12 Hard to have someone dependent on me
13 Hard to disagree with other people
14 Hard to let other people know when I am angry
15 Hard to make a long-term commitment to another person
16 Hard to stick to my own point of view and not be swayed by other people
17 Hard to be another person's boss
18 Hard to do what another person wants me to do
19 Hard to get along with people who have authority over me
20 Hard to be aggressive toward other people when the situation calls for it
21 Hard to compete against other people
22 Hard to make reasonable demands of other people
23 Hard to socialize with other people
24 Hard to get out of a relationship that I don't want to be in
25 Hard to take charge of my own affairs without help from other people
26 Hard to show affection to people
27 Hard to feel comfortable around other people
28 Hard to get along with other people
29 Hard to understand another person's point of view

30 Hard to tell personal things to other people (B - reversed)
31 Hard to believe that I am loveable to other people
32 Hard to express my feelings to other people directly
33 Hard to be firm when I need to be
34 Hard to experience a feeling of love for another person
35 Hard to be competitive when the situation calls for it
36 Hard to set limits on other people
37 Hard to be honest with other people
38 Hard to be supportive of another person's goals in life
39 Hard to feel close to other people
40 Hard to really care about other people's problems
40 Hard to really care about other people's problems
41 Hard to argue with another person
42 Hard to relax and enjoy myself when I go out with other people
43 Hard to feel superior to another person
44 Hard to become sexually aroused towrad the person I really care about
45 Hard to feel that I deserve another person's affection
46 Hard to keep up my side of a friendship
47 Hard to spend time alone
48 Hard to give a gift to another person
49 Hard to have loving and angry feeling towards the same person
50 Hard to maintain a working relationship with someone I don't like
51 Hard to set goals for myself without other people's advise
52 Hard to accept another person's authority over me
53 Hard to feel good about winning
54 Hard to ignore criticism from other people
55 Hard to feel like a separate person when I am in a relationship
56 Hard to allow myself to be more successful than other people
57 Hard to feel or act competent in my role as a parent
58 Hard to let myself feel angry at somebody I like
59 Hard to respond sexually to another person
60 Hard to accept praise from another person
61 Hard to put somebody else's needs before my own
62 Hard to give credit to another person for doing something well
63 Hard to stay out of other people's business
64 Hard to take instructions from people who have authority over me
65 Hard to feel good about another person's happiness
66 Hard to get over the feeling of loss after a relationship has ended

67 Hard to ask other people to get otgether socially with me

68 Hard to feel angry at other people

69 Hard to give constructive criticism to another person

70 Hard to experience sexual satisfaction

71 Hard to open up and tell my feelings to another person (B - reversed)

72 Hard to forgive another person after I've been angry

73 Hard to attend to my own welfare when somebody else is needy

74 Hard to be assertive without worrying about hurting the other person's feelings

75 Hard to be involved with another person without feeling trapped

76 Hard to do work for my own sake instead of for someone else's approval

77 Hard to be close to somebody without feeling that I'm betraying somebody else

78 Hard to be self-confident when I am with other people

Part II. The following are things that you do too much.

79 I fight with other people too much

80 I am too sensitive to criticism

81 I feel too responsible for solving other people's problems

82 I get irriated or annoyed too easily

83 I am too easily persuaded by other people

84 I want people to admire me too much

85 I act like a child too much

86 I am too dependent on other people

87 I am too sensitive to rejection

88 I open up to people too much

89 I am too independent

90 I am too aggressive toward other people

91 I try to please other people too much

92 I feel attacked by other people too much

93 I feel guilty for what I have done

94 I clown around too much

95 I want to be noticed too much

96 I criticise other people too much

97 I trust other people too much

98 I try to control other people too much

99 I avoid other people too much

100 I am affected by another person's moods too much

101 I put other people's needs before my own too much

102 I try to change other people too much

103 I am too gullible

104 I am overly generous to other people

105 I am too afraid of other people

106 I worry too much about other people's reactions to me

107 I am too suspicious of other people

108 I am influenced too much by another person's thoughts and feelings

109 I compliment other people too much

110 I worry too much about disappointing other people

111 I manipulate other people too much to get what I want

112 I lose my temper too easily

113 I tell personal things to other people too much

114 I blame myself too much for acusing other people's problems

115 I am too easily bothered by other people making demands of me

116 I argue with other people too much

117 I am too envious and jealous of other people

118 I keep other people at a distance too much

119 I worry too much about my family's reactions to me

120 I let other people take advantage of me too much

121 I too easily lose a sense of myself when I am around a strong-minded person

122 I feel too guilty for what I have failed to do

123 I feel competitive even when the situation does not call for it

124 I feel embarrassed in front of other people too much

125 I feel too anxious when I am involved with another person

126 I am affected another person's misery too much

127 I want to get revenge against people too much

Appendix 3 - Highest loadings on factor analysis of CSP data

Factor Load	Item	Item
1 - Hard to be assertive		
.78	74	Hard to be assertive without worrying about hurting the other person's feelings
.71	91	I try to please other people too much
.70	110	I worry too much about disappointing other people
.68	101	I put other people's needs before my own too much
.68	2	Hard to say "no" to other people
.65	120	I let other people take advantage of me too much
2 - Hard to be sociable		
.84	23	Hard to socialise with other people
.79	10	Hard to make friends
.77	27	Hard to feel comfortable around other people
.75	99	I avoid other people too much
.73	7	Hard to introduce myself to new people
.72	105	I am too afraid of other people
3 - Hard to be close/involved		
.64	38	Hard to be supportive of another person's goals in life
.62	40	Hard to really care about other people's problems
.59	39	Hard to feel close to other people (.45 on Factor 2)
.59	34	Hard to experience a feeling of love for another person
.59	15	Hard to make a long-term commitment to another person
.58	75	Hard to be involved with another person without feeling trapped
4 - Too open		
.69	113	I tell personal things to other people too much
.66	4	Hard to keep things private from other people
.62	88	I open up to people too much
.57	95	I want to be noticed too much
.57	84	I want people to admire me too much
-.53	30	Hard to tell personal things to other people (.44 on Factor 2)
5 - Too aggressive		
.79	112	I lose my temper too easily
.73	116	I argue with other people too much
.68	90	I am too aggressive toward other people
.64	82	I get irritated or annoyed too easily
.63	79	I fight with other people too much
.52	96	I criticise other people too much
6 - Hard to be supportive		
.72	64	Hard to take instructions from people who have authority over me
.70	52	Hard to accept another person's authority over me
.67	19	Hard to get along with people who have authority over me
.52	21	Hard to compete against other people
.47	50	Hard to maintain a working relationship with someone I don't like
.43	18	Hard to do what another person wants me to do

7 - Hard to be sexually close

.63	44	Hard to become sexually aroused toward the person I really care about
.55	59	Hard to respond sexually to another person
.51	104	I am overly generous to other people
.49	70	Hard to experience sexual satisfaction
.44	89	I am too independent

8 - Too controlling

.61	98	I try to control other people too much
.57	102	I try to change other people too much
.45	111	I manipulate other people too much to get what I want

Appendix 4 - Barkham et al (1996) short IIP - IIP-32

Hard to be sociable
23 Hard to socialise with other people
10 Hard to make friends
3 Hard to join in on groups
27 Hard to feel comfortable around other people

Hard to be assertive
9 Hard to be assertive with another person
33 Hard to be firm when I need to be
20 Hard to be aggressive toward other people when the situation calls for it
13 Hard to disagree with other people

Too aggressive
112 I lose my temper too easily
116 I argue with other people too much
79 I fight with other people too much
82 I get irritated or annoyed too easily

Too open
30 Hard to tell personal things to other people (reversed)
88 I open up to people too much
113 I tell personal things to other people too much
71 Hard to open up and tell my feelings to another person (reversed)

Too caring
101 I put other people's needs before my own too much
73 Hard to attend to my own welfare when somebody else is needy
104 I am overly generous to other people
126 I am affected another person's misery too much

Hard to be supportive
64 Hard to take instructions from people who have authority over me
40 Hard to really care about other people's problems
61 Hard to put somebody else's needs before my own
38 Hard to be supportive of another person's goals in life

Hard to be involved
15 Hard to make a long-term commitment to another person
75 Hard to be involved with another person without feeling trapped
34 Hard to experience a feeling of love for another person
26 Hard to show affection to people

Too dependent
117 I am too envious and jealous of other people
106 I worry too much about other people's reactions to me
84 I want people to admire me too much
86 I am too dependent on other people

Appendix 5 - The IIP scales based on the Birtchnell model

Item		Scale
Lower Neutral	Alpha = 0.87 Ipsatised 0.66	
2	Hard to say "no" to other people	.68
6	Hard to tell a person to stop bothering me	.65
8	Hard to confront people with problems that come up	.59
9	Hard to be assertive with another person	.79
33	Hard to be firm when I need to be	.75
Lower Close	Alpha = 0.83 Ipsatised 0.56	
91	I try to please other people too much	.60
106	I worry too much about other people's reactions to me	.68
108	I am influenced too much by another person's thoughts and feelings	.62
110	I worry too much about disappointing other people	.68
114	I blame myself too much for causing other people's problems	.56
Neutral Close	Alpha = 0.80 Ipsatised 0.70	
4	Hard to keep things private from other people	.65
55	Hard to feel like a separate person when I am in a relationship	.38
88	I open up to people too much	.71
95	I want to be noticed too much	.49
113	I tell personal things to other people too much	.72
Upper Close	Alpha = 0.81 Ipsatised 0.66	
73	Hard to attend to my own welfare when somebody else is needy	.63
81	I feel too responsible for solving other people's problems	.57
101	I put other people's needs before my own too much	.70
104	I am overly generous to other people	.54
126	I am affected another person's misery too much	.54
Upper Neutral	Alpha = 0.80 Ipsatised 0.77	
63	Hard to stay out of other people's business	.51
96	I criticise other people too much	.45
98	I try to control other people too much	.70
102	I try to change other people too much	.70
111	I manipulate other people too much to get what I	.59
Upper Distant	Alpha = 0.76 Ipsatised 0.67	
19	Hard to get along with people who have authority over me	.48
52	Hard to accept another person's authority over me	.52
79	I fight with other people too much	.59
116	I argue with other people too much	.52
127	I want to get revenge against people too much	.53
Neutral Distant	Alpha = 0.85 Ipsatised 0.74	
10	Hard to make friends	.68
23	Hard to socialise with other people	.71
26	Hard to show affection to people	.55
27	Hard to feel comfortable around other people	.78
39	Hard to feel close to other people	.57
Lower Distant	Alpha = 0.85 Ipsatised 0.67	
7	Hard to introduce myself to new people	.56
92	I feel attacked by other people too much	.53
99	I avoid other people too much	.81
105	I am too afraid of other people	.78
124	I feel embarrassed in front of other people too much	.80

Appendix 6 - Subscale correlations

Appendix 7 - Experiment on face validity of the IIP-40

The validity of the assignment of IIP items to the octants of the Birtchnell model was tested using three independent raters. The methodology and results of this experiment are described in this Appendix.

Each of the raters was a United Kingdom Council for Psychotherapy registered psychoanalytic psychotherapist with extensive clinical experience. None were familiar with the Birtchnell model or with the research on the IIP. Each rater was provided one week in advance with a description of the Birtchnell model, mainly taken from the current thesis, and with Birtchnell's own descriptions (from Birtchnell 1996) of maladaptive forms of relating within the eight octants. The documentation supplied to raters is given in Appendix 8. This was followed up with a meeting with the author and a discussion of the Birtchnell model. Some of Birtchnell's own items drawn from the PROQ2 questionnaire were used to have a "dry run" of assigning items to the octants, and this was then followed up with a brief discussion of the classifications.

Raters were then asked to classify each of the 127 IIP items without discussion. It was pointed out to them that in the original classification of the IIP items the author and Birtchnell were unable to agree on about 25 items. Raters were asked to leave the classification blank for an item if they had serious doubts about it. It was also pointed out to raters that items within each of the octants were not equally or evenly distributed within the IIP. The process of classifcation took about 45 minutes. Raters commented that they found this more difficult than the classifcation of the PROQ2 items and, specifically, that they found it easier to judge items in terms of the Upper/Lower axis than on the Distant/Close axis.

The number of unclassified items ranged from 6 (4.7%) to 21 (16.5%), compared to 26 (20%) in the original classification. Unclassified items were treated as missing data in the analysis of inter-rater reliability. The raters classifications were compared to the original classification by Birtchnell and the author (shown below as JB/NCR) and with each other for both the full 127 IIP items and the 40 items used within the IIP-40.

Cohen's kappa was used to show the level of agreement above that which would be expected from chance. In all cases this was at the $p<.001$ significance. Lambert and Hill (1994, page 93), in their discussion of the issue

of inter-rater reliability and the interpretation of kappa scores, argue that scores of between .4 and .75 are "fair to good", while scores of over .75 are "strong". The tables below show that for the full IIP the scores are at the middle to higher end of the fair to good level. Scores for the IIP-40 items are within the range of good to strong.

Kappa scores - full IIP

	JB/NCR agreed	Rater A	Rater B
Rater A	.51		
Rater B	.65	.59	
Rater C	.59	.62	.58

Kappa scores - IIP-40

	JB/NCR agreed	Rater A	Rater B
Rater A	.74		
Rater B	.91	.71	
Rater C	.74	.74	.71

The higher scores for the IIP-40 items is a result of the original selection of items for the IIP-40 sub-scales which describe the Birtchnell positions better. Many of the IIP items are more difficult to classify according to the Birtchnell model, and the difficulty of classifying some of the items was remarked on by the raters. It is thought likely that the lower percentage of unclassified items amongst the raters is probably a reflection of them feeling that they should try to force items into octant classifications if at all possible. However, the overall levels of the kappa scores are acceptable, particularly for the IIP-40 items, and it is argued that reasonable reliability has been established through this experiment.

A further test was undertaken on the rater scores to determine whether failures to agree between the original classificationand that of the raters (referred to below as mis-classifications) was mainly within adjacent octants. Given that the items are classified according to spatial criteria it would be expected that misclassifications would mainly be in adjacent octants, but the kappa scores given above do not take any account of how distant the misclassifications are. On inspection it was found that there were 94 misclassifications (out of a

potential total of 381) over the three raters. 78 of these misclassifications (83%) were only one octant removed from the original classification, showing that even the misclassifications provide some validation of the spatial properties of the model.

Appendix 8 - Briefing for raters of the IIP-40

Nick Riding - doctoral research - validity experiment for the IIP-40

25 May, 2pm

Birtchnell's spatial theory - introduction for IIP raters

Part of the research for my doctoral thesis was the extraction of 40 items from the 127 items Inventory of Interpersonal Problems to form eight sub-scales (each with five items) which were grouped to the octant positions within Birtchnell's "spatial theory". Spatial theory is a variant of interpersonal theory. An interpersonal theory approach had been implicit in work by Horney and Sullivan, was systematised in the 1950s by Leary and others, and developed and changed further by subsequent writers. Interpersonal theory classifies human relating on two main dimensions. These normally are a vertical axis corresponding to "dominate" (at the top) and "submit" (at the bottom), and a horizontal axis corresponding to "love" on the right and "hate" on the left. Leary and his co-workers argued that interpersonal behaviour - specific relatonship episodes, but also pathological "stuck" patterns which form part of the personality - can be categorised on a circle (the Interpersonal Circle) that conforms to this model.

A number of problems with this model have been identified. John Birtchnell in How Humans Relate: a new interpersonal theory (1993) claims to correct these deficiencies by building a "spatial theory", based on two axes of relating: the "power" one with the nodal points of "upper" and "lower" and a proximity dimension with the nodal points of "closeness" and "distance". The spatial theory axes clearly relate strongly to the interpersonal circle dominate/ submit and love/hate axes. Birtchnell draws on evolution theorists to point out that the issues of distancing in relation to others and in seeking or accepting power are fundamental for any life species. Unlike the interpersonal circle, the dimensions do not have a built in bias. Whereas "hate" and "submit" have clear negative connotations, the spatial theory equivalents don't. For instance, distant behaviour is often associated with creativity, achievement and personal space; lower behaviour with being nurtured, taught, accepting rational authority etc. Birtchnell argues that well adapted humans move between different "states of relatedness" freely depending on their different roles, life stages and tasks. He point out that:

> "The (good) states of relatedness associated with each of the four positions are equally desirable and equally pleasurable. In terms of relating skills or competencies, the good relater needs to be as skilful or as competent in one direction of an axis as s/he is in another. Conversely, the bad relater may be equally bad in both directions on a particular axis." (p42)

Spatial theory thus corrects another (arguable) weakness of the interpersonal theory model in that it does not assume bipolarity: ie that location at one end of an axis (ie hate) will preclude simultaneous location at another end (love). In my view the allowance of seemingly contraditory locations is essential if the model is to be able to embrace the subleties of a psychodynamic model. It can also be seen that this model is more able to explain the fact that more "severe" patients tend to score highly over a broad range of IIP questions: ie that they seem to often have relating problems in more than one or two of the sub-scales. This fits in with the common observation in more severe patients of co-morbidity, or breadth of pathology, and that these patients usually exhibit more than one Axis II DSM personality disorder.

Birtchnell blends each of the nodal positions with that of its neighbours to produce an octagon with eight positions labelled upper neutral (UN), upper close (UC), neutral close (NC) etc., and describes each of the octant position in more detail for both adaptive and maladaptive relationship patterns (Birtchnell 1993). Birtchnell has some reservations about producing an octant, in particular because he feels that the two axes may not be completely orthogonal - "It may be that upper people are more inclined to be distant and lower people are more inclined to be close." (p215). He also has some difficulty in describing the differences between segments and feels that developing reliable and valid methods of measurement is a priority. The octagon with the positions described for adaptive relating is shown in Figure 1.

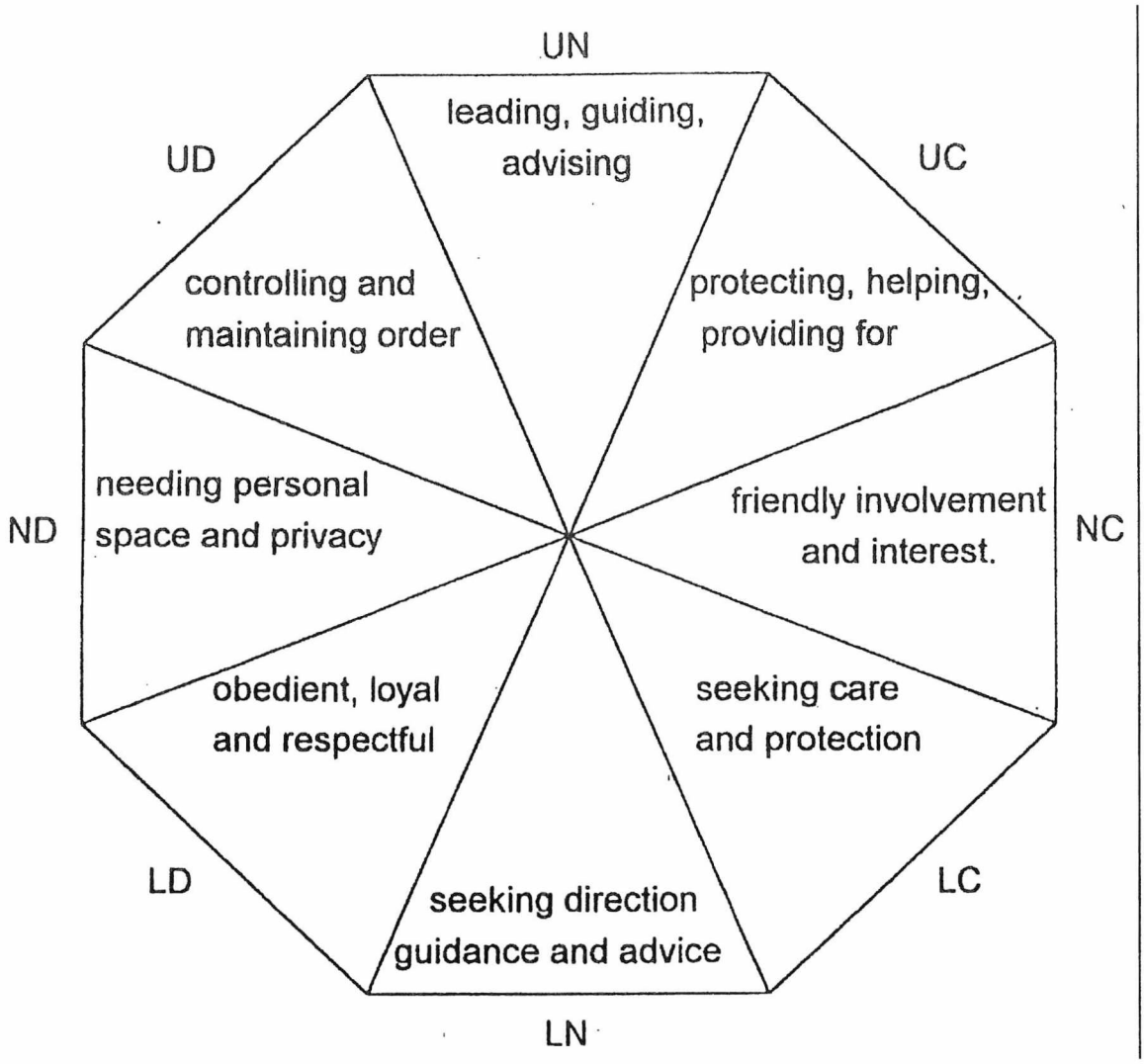

Figure 4 - The Octagon for normal relating

While adaptive relating is interesting, it is obviously the model of maladaptive relating that is essential for an understanding of the IIP, since the IIP items focus upon areas of relating that are perceived as problematic. Birtchnell argues for maladaptive forms being qualitatively (rather than quantitatively as in the interpersonal theory of "intensity") different from adaptive relating, and points out that they often arise from a lack of competence in that area, or a fear of the opposite. For instance, entrenched distant behaviour can been seen as arising from a fear of intimacy. The octagon of maladaptive relating is shown in Figure 2, and also attached are Birtchnell's descriptions of these positions.

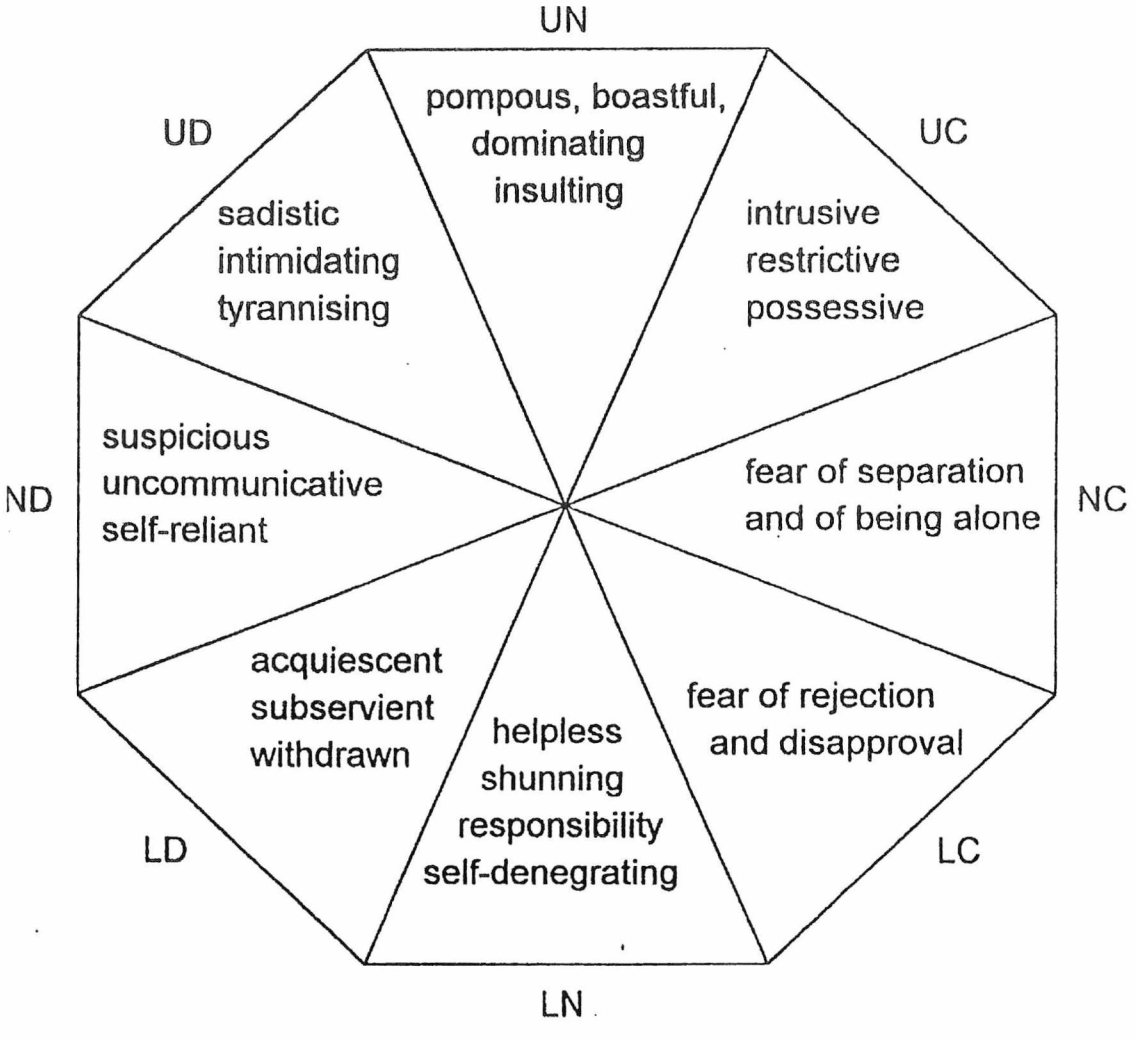

Figure 5 - The Octagon for maladaptive relating

Birtchnell defines three kinds of maladaptive, or negative, relating: "avoidant", "insecure" and "egocentric". The first two forms can be expected to show consistently in the IIP, since they clearly constitute behaviour which would be perceived by patient as problematic. In avoidant behaviour the person clings to one position out of fear of the opposite position, which can arise from a fear of the consequences of failing to attain the opposite position. For instance, distance can be used as a defence against the rejections that have been felt in the past which arose from trying to attain positions of closeness. Insecure relating is clinging to one position because of fear of losing it, and again this can arise because of failures to achieve, or maintain, a particular state of relatedness in the past. Needing to staying in dominance over others can, therefore, arise from a fear that, once relinquished, a state of upperness will

not be attainable again. The defence/ avoidance model implicit in these concepts approach a level of sophistication which enables the model to accommodate a psychodynamic or attachment theory model, as did Horney's and Leary's models.

For the purposes of classifying the IIP it is not necessary to be concerned with aetiology, although as psychoanalytic psychotherapists there is clearly an assumed link between early experience, particularly with principal care-givers, and later personality. Also, it should be pointed out that a full assessment of the interpersonal style of a patient would require far more than the completion of the IIP, which does not allow any scope for considering the internal world of the patient or, indeed, the perception of others as to the predominant relating patterns. Another problem is that the IIP items (which were originally generated empirically by examining transcripts of intake interviews) may not very precisely describe the octant positions. However, it is believed that many of the IIP items do seem to encapsulate the pathological relationship patterns described by Birtchnell and after a further description and discussion of the Birtchnell model you will be asked in the experiment to attempt to classify the IIP items accordingly.

An extract from Birtchnell (1996) follows, in which the forms of maladaptive relating corresponding to the eight octant positions are described.

Nick Riding
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Maladaptive (negative) forms of the octants (from Birtchnell J (1996) - "Personality set within an octagonal model of relating" in Plutchik R and Hope RC (eds) Circumplex Models of Personality and Emotions)

Brief descriptions will now be provided of the maladaptive (negative) forms of the four main positions and the four intermediate positions, starting from neutral close and moving clockwise round the octagon. It is a point of some importance that the negative relating of one position is frequently due to a lack of competence in, or fear of, the opposite position, or in the case of an intermediate position, of the opposite positions of both its components. Thus a person who exhibits negative closeness may be doing so out of fear or lack of competence for distance.

Neutral close. Negatively close people are afraid of being alone and afraid of being deserted. They try persistently to attract or maintain the attention of others, and are afraid that others will find other people more interesting or attractive. They experience separation anxiety (Bowlby, 1960), try to persuade others not to leave them and when they have gone, they long for their return. They are anxious and restless when alone and try to busy or distract themselves. Such anxiety sometimes amounts to panic, when they are impelled to make contact with someone by telephone or other means. They are inclined to press their attention upon others, ignoring their needs or requests for distance, and are unable to tolerate their secretes or their privacy. They are intrusive and inquisitive. They may seek compensatory closeness by keeping dolls or pets or having fantasy friends or lovers. A different form of maladaptive closeness results from having a poorly formed identity. The person may compensate for this by trying to become fused (Bowen, 1978) to another by a process described by some as symbiosis (Taylor, 1975).

Lower close. Laing (1965) described the condition of ontological dependence, not unlike the fusion of neutral closeness, in which a lower person so idolises an upper person that s/he lives for and through her/him. Negatively lower close people fear that those upon whom they depend will withdraw their protection, care or affection. They demonstrate what Bowlby (1973) called anxious attachment. They make repeated requests for assurances that they are approved of and will not be deserted. They may weep and plead with others not to desert them, maintaining (perhaps correctly) that they cannot live without them. They may feign or exaggerate illness, disability or hardship to

play upon the conscience of others. They cling so tenaciously, and so try the patience of others, that they risk bringing about the rejection that they dread. Fast (1967) wrote of a form of depression "involving rejection by the powerful other" and of the depressive being helplessly dependent upon the other to reinstate him as good, acceptable, loved and part of meaningful life". (page 262).

Lower neutral. Just as negatively close people fear distance (i.e being alone) so negatively lower people fear upperness (i.e having power or responsibility). They do not consider themselves to be worthy of such a position and contrive to fail if promoted. They expect others to assume responsibility for them, and require others to advise and direct them. They display what Seligman (1975) called learned helplessness. Whilst they may be afraid that the upper others could be untrustworthy, or could abuse their power by exploiting or misleading them, they have no option but to rely on them. The mentality of negatively lower neutral people is complicated by the fact that they carry within themselves the representations of past upper figures who have conditioned them to respond to upper people in certain ways. They may have been conditioned to view themselves as incompetent, clumsy or useless.

Lower distant. Negatively lower distant people are both afraid of having influence and afraid of being close. Therefore they remain on the periphery of life, maintaining a low profile and hoping others will not notice them. They are timid, shy, and easily intimidated. They readily submit to authority. They may be excessively deferential, self-effacing, apologetic and accepting of criticism and blame. They lack any sense of autonomy or self motivation and prefer only to act when instructed to do so. When they are insulted they do not retaliate and when they are attacked they back off. They are afraid to approach people for fear of rejection. They are afraid of speaking their mind for fear of retaliation. They suppress aggression and direct punishment on to themselves. Consequently they may be inclined to suffer from psychosomatic disorders.

Neutral distant. Negatively neutral distant people have a limited capacity for close involvement, creating strong external barriers (high walls, locked doors, concealing clothing) and strong internal barriers (preoccupation with secrecy and privacy, and the creation of an impenetrable ego boundary). They keep a safe distance from others and become anxious when others try to get close to

them. They are inclined to spend long periods of time alone and may be prone to fugues or dissociation. They shun offers of help and restrict their behaviour so as to manage without it. They are suspicious of the motives of others and fear that they may have the intention of doing them harm. They are clumsy in their dealings with others, say little and keep conversation at a formal level. They are reluctant to make personal revelations and dislike it when others do so to them. They are self-centered and self-preoccupied and take little notice of the opinions of others. They may live in a world of day dreams and fantasies. They read or watch television both to escape from others and to keep them at bay. They are more interested in things or abstract ideas than in people.

Upper distant. Negatively upper distant people use their upperness to enforce and maintain distance. They are therefore expelling and rejecting. They are self-obsessed and gain control of others in order to ensure that they get their own way. They are preoccupied by their own importance and are conceited, arrogant, pompous and boastful. They cannot allow other to assume responsibility for them. They suppress the identity of others and dictate what should be done and how it should be done. They treat people as thought they were things to be manipulated and exploited. They have no respect for the authority of others, but expects others to respect and obey them. They respond with rage and indignation to disrespect and disobedience and seek revenge or retribution. They are cruel, ruthless and unscrupulous, and are prepared to resort to actual or threatened violence. They have no concern for the suffering they cause and experience no remorse. They may even derive satisfaction from humiliating others and seeing them suffer, since this confirms them in their upperness. They may employ spies and body guards to defend or protect them against rivals or enemies.

Upper neutral. Negatively upper neutral people are not prepared to follow or to seek the advice of others, and they cannot entrust themselves to others. Therefore they try to take the lead and make decisions for them. They may become intoxicated with power, dream up ambitious plans, strive for ever higher status. they are disposed to bravado and may harbour fantasies, or even delusions, of omnipotence and grandeur. They need always to be right and will never apologise. If they do not know the answer to a problem they will pretend they do. They take pleasure in exposing the errors and faults of others. They are inclined to resort to insult, derision and ridicule and to look

for the weak points in others in order to expose their vulnerabilities and undermine their confidence. They enjoy watching others making fools of themselves.

Upper close. Negatively upper close people use their upperness to gain and maintain closeness. They may demand attention or force closeness upon others. This may result in rape or sexual abuse. They do not like others to have friends or interests of their own and will make efforts to sabotage these. The upper close husband will insist that his wife says exactly where she has been and whom she has been with, or may try to stop her looking attractive and even assault her to cause disfigurement. He may physically prevent her leaving the house or threaten violence if she does. One form of negative upper closeness is compulsive rescuing or care giving. People with this tendency thrive on others getting into difficulties or seeking their care. They may like to keep others weak so that they remain needful of them, or they may continue to do things for them so that they never learn to be independent. Another form is a need to be worshipped and adored. Insecurely upper close people may love only those who love them and try to keep people interested in them by exhibiting themselves. Public performers display themselves ever more extravagantly out of fear that their followers may lose interest in them.