The development and validation of the Adult Recollection of Parental Relating Questionnaire - a new instrument for measuring parental relating styles

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DECLARATION

I grant powers of discretion to the University Librarian to allow this thesis to be copied in whole or in part without further reference to me. This permission covers only single copies made for study purposes, subject to normal conditions of acknowledgement.

ABSTRACT

The aim of this project was the development of a questionnaire to measure retrospectively the relating of parents towards their children, from the perspective of the child. The two main dimensions of parenting agreed upon in the literature are support and control, and the present thesis proposes that these can be conceptualised as composites of proximity and power, which are considered the main constructs underlying interpersonal transactions. The design of the Adult Recollection of Parental Relating Questionnaire (ARPRQ) was governed by the principles of Birtchnell's relating theory (1987, 1993), the distinguishing features of which are the difference between positive and negative relating, and the absence of construct bipolarity. The ARPRQ comprises of 48 items distributed evenly over eight scales, and has a separate version for each parent. The items were generated and refined through an iterative process consisting of repeated piloting, item analysis and item rephrasing. The psychometric properties of the instrument were established in three main studies. Study One assessed the internal consistency reliability (*N=117*) and the concurrent validity (*N=75*) with the comparable Parental Bonding Instrument (PBI-Parker, Tupling & Brown, 1979). As anticipated, the scales of the ARPRQ correlated positively with the Overprotection scale and negatively with the Care scale of the PBI. Study Two assessed the internal consistency reliability (*N=104*) and the construct validity (*N=8*) of the revised version of the measure. Content analysis of interviews revealed patterns of parental relating similar to those obtained using the ARPRQ. The factorial configuration of the instrument was established in Study Three (*N=601*). The results of the principal component analysis showed the presence of four factors, corresponding with closeness, distance, upperness and Lowerness, as defined in relating theory. It was concluded that the ARPRQ has good internal consistency reliability, as demonstrated by Cronbach's Alpha coefficients, and compared favourably with the PBI and with interviews. Results are discussed with reference to implications for parenting research and potential applications of the instrument.

CHAPTER ONE
DIMENSIONS AND MODELS OF RELATING

The aim of this thesis was the development of an instrument for measuring the relating styles of parents towards children, based upon the dimensions proposed by relating theory (Birtchnell, 1987, 1993). Relating theory posits that all humans are born with general dispositions to relate to others in certain ways and relating is defined as an active process consisting of "that which an organism or person does to another or to others" (Birtchnell, 1993, p. 3). These general relating dispositions are of two classes: the adjustment of distance and the adjustment of status between self and others.

However, prior to presenting the principles of relating theory in more detail, an overview of its theoretical context will be described, as this will contribute towards a more informed evaluation of its merit. This context consists of a theoretical approach referred to as "interpersonal theory".

Mindful of the purpose of the project, this thesis will commence with a selective account of the existing models and measures of relating and parenting theories, which will be presented in Chapters One and Two, respectively. This chapter will present an overview of past and present theoretical models of behaviour, as viewed through the perspective of human interactions. The first section will offer an outline of the origins and main principles of interpersonal theory. Section 1.2 will introduce the interpersonal circle model and its variations. Section 1.3 will introduce relating theory, which is the approach chosen for this project. Section 1.4 will present the most widely used measuring instruments based on interpersonal and relating theories and Section 1.5 will put forward an evaluation of the models and principles presented.

1.1 The origins and tenets of interpersonal theory

The fundamental theoretical assumption of interpersonal psychology is that the focus of study should be on human interactions rather than on individual behaviour. Extracting from the literature, Kiesler (1982) articulated six principles of interpersonal approaches to the study of behaviour.

The first principle is that "interpersonal study focuses on human transactions, not on the behaviour of individuals" (Kiesler, 1982, p. 5). This principle is concerned with the view that human behaviour does not occur in isolation but as part of a system in which the elements continuously interact. The focus on transactions stems from Sullivan's (1953) beliefs that personality is predominantly manifest in interpersonal situations and that the concept of the individual as being separate from others is not a true reflection of reality. Kiesler (1982) further elaborates this point by emphasising that even impersonal situations have interpersonal components in the shape of symbolic presences. He offers as example the anxiety, which is a private experience, caused by the awareness of separation from others, which is an interpersonal event.

The second principle refers to the construct of self, as being "social, interpersonal and transactional in its development and function throughout life" (Kiesler, 1982, p. 6). This is rooted in Sullivan's belief that the self-system develops as a result of interactions with others and consists of symbolic representations of experiences of interacting with others. The functioning of the self-system, therefore, is dependent upon the anxiety experienced in transactions with "significant others". One of the main functions of the self-system is the presentation to others, which involves sending messages regarding emotional states and expecting reciprocal responses. These expectations pull others into a dyadic system-state that is the most comfortable and least anxiety provoking to the self-system and emotional states result from the degree to which these expectations are met. Sullivan (1953) maintained that anxiety

is a natural response to the awareness that there is incongruence between a current experience of interpersonal feedback and the current self-definition.

The third assumption is that patterns of interpersonal behaviour can be represented within a framework of two dimensions, named by Kiesler (1982) control and affiliation. This is a feature that was first described by Bakan (1966) as reflecting the two fundamental modalities of human existence, which he named "agency" and "communion". Agency refers to existence as an individual and includes motives such as autonomy, achievement and control, and communion reflects the participation of the individual in a larger organism and includes motives such as intimacy, sociability and belonging to a group (Horowitz et al., 2006). The two dimensions have also been referred to as "affiliation" and "dominance", with affiliation ranging from friendly to hostile and dominance ranging from dominant to submissive (Carson, 1969; Kiesler, 1983). Birtchnell referred to the two dimensions of "power" and "proximity", with power ranging from upper to lower and proximity ranging from close to distant (Birtchnell, 1987).

The fourth principle of interpersonal theory is concerned with its interactionist perspective, according to which social behaviour is the result of both a person's predispositions towards transactions and situational events (Kiesler, 1982). This particular principle is, in turn, accompanied by two qualifying statements. The first refers to the emphasis on subjective experience as the determinant of human transactions, since a person's perception of a given environment is the only experience to which the person can react (Kiesler, 1982). The second statement has been emphasised by Kiesler, Bernstein and Anchin (1976) and refers to the importance of other people as the most important class of situations for human behaviour.

Kiesler's fifth assumption of interpersonal theory is the concept of circular rather than linear causality. This refers to the process by which a person both affects and is

affected by a situation or, as Danziger (1976) describes it, "two individuals in interaction are simultaneously the causes and the effects of each other's behaviour" (p.184). The principle of circularity is the precursor for the notion of complementarity, which Leary (1957) conceptualised as emerging in interactions on the basis of either reciprocity or correspondence. For the dominance-submission axis complementarity occurs following the rule of reciprocity, where dominance evokes submission and submission evokes dominance. For the love-hate axis complementarity takes place following the rule of correspondence, where love evokes love and hate evokes hate.

Kiesler's sixth principle is that "the vehicle for human transactions is communication, including linguistic and nonverbal messages" (Kiesler, 1982, p. 11). Interpersonal communication is a circular process, in which non-verbal messages play the central role of conveying emotion. For this reason, Kiesler believes that the study of non-verbal communication is crucial for the understanding of human behaviour.

Although not always credited with belonging to the interpersonal movement, Karen Horney (1945) was the first to be interested in the development of both interpersonal and intrapersonal strategies for the avoidance of anxiety. According to Horney, anxiety develops as a result of emotional conflicts, which, in turn, initially emerge from early childhood experiences and subsequently arise from disturbances in interpersonal relationships. The strategies used for the avoidance of anxiety are compliance or "moving toward", aggression or "moving against" and detachment or "moving away". Her theory is concerned with the conflict between these interpersonal strategies and the influence of cultural and environmental factors on the choice of strategy. The concept of avoidance of anxiety has survived as a central motivating factor of behaviour and is present in most contemporary interpersonal models.

Unquestionably, the first articulation of interpersonal theory was presented by Harry Stack Sullivan (1953) and offered an interpersonal alternative to the intrapsychic or intrapersonal emphasis that prevailed in psychoanalytic theory at that time. Sullivan believed that behaviour is influenced by early childhood experiences and his theory of interpersonal behaviour emphasised two main components. The first is the importance of anxiety in the development of personality and interpersonal transactions, and the second is the concept of the self-system (Sullivan, 1953).

According to Sullivan, the fundamental motivating factor for interpersonal behaviour is the avoidance of anxiety. The absence of anxiety is considered a state of security and can be reached through status and power, as perceived by the self and others. Anxiety is generated by the possibility of rejection by others and can develop initially from the interactions with the mother. As a result, the psyche is deeply affected by anxiety, insecurity and avoidance, as experienced in the interactions with the mother and later with significant others.

The concept of self-system refers to the totality of self-perceptions of an individual and is an anti-anxiety system that serves the purpose of avoiding threats to self-esteem. The application of the two components, avoidance of anxiety and the self-system, to the development of personality led Sullivan to the conclusions that personality characteristics are determined by relationships and that personality can be conceptualised as the outward appearance of interactions with others. As a result, healthy relationships generate a healthy personality.

The pivotal concept proposed by Sullivan, on which the entire body of interpersonal theory was subsequently built, was that love and power are the fundamental interpersonal needs of human beings. This view was also influenced by Murray's (1938) categories of needs. These are, however, only the most fundamental and initial principles of interpersonal psychology. Later they have been fragmented and

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elaborated by various contributors, in some cases resulting in new strands of interpersonal theory in their own right.

1.2 The interpersonal circle

The most widely adopted system for the classification of relating behaviour has grown out of the school of interpersonal psychology, usually associated with Harry Stack Sullivan, who was, in fact, a psychiatrist. His book, "The Interpersonal Theory of Psychiatry" (1953), is frequently quoted but the system, which is called "interpersonal circle", is not included in his book and did not come into existence until after Sullivan's death in 1949.

The first account of the circle was published by Freedman, Leary, Ossorio and Coffey in 1951 and it was said to contain all the interpersonal mechanisms considered to be required for systematising interpersonal behaviour. It was more fully developed by Leary in his book called "Interpersonal Diagnosis of Personality" (1957), in which Sullivan's contribution was acknowledged (Birtchnell, 1993).

Leary's (1957) interpersonal theory is based on the assumption that interactions between people are motivated by the desire to achieve and retain self-esteem and avoid anxiety. Interaction patterns are constructed around two orthogonal axes representing Sullivan's (1953) interpersonal needs. The horizontal axis represents emotional contact, consisting of the opposing poles love and hate, and the vertical axis represents power and consists of the opposing poles dominance and submission.

The circle is constructed around two dimensions, independent of each other, which can be represented graphically as two intersecting lines, drawn at right angles to each other to make the diameters of a circle. A sixteen-segment circle is formed by inserting three intervening segments in each of the quadrants created by the two intersecting diameters, as shown in Figure 1.1.
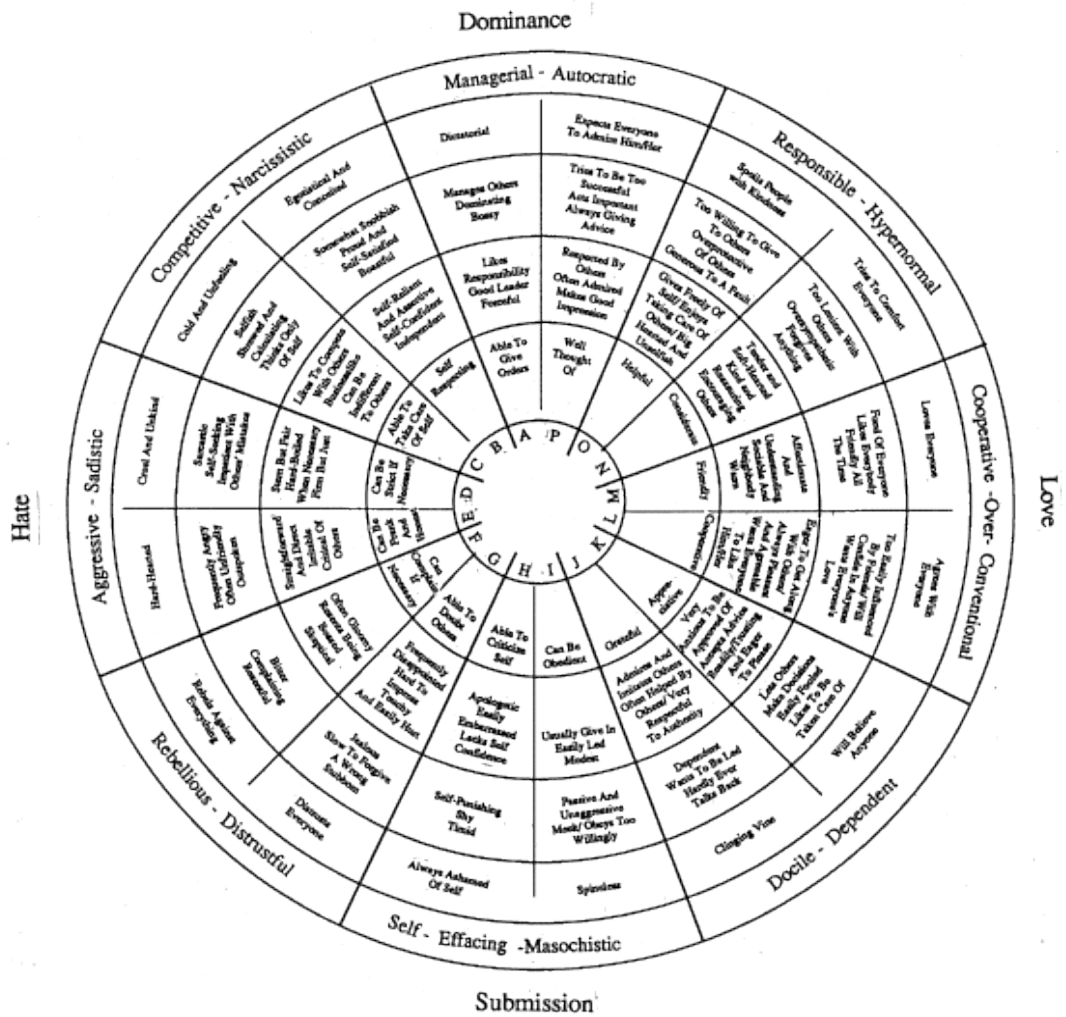
Figure 1.1: The Interpersonal Circle

From: Leary, T. (1957). *Interpersonal diagnosis of personality.* (p. 65) New York: The Ronald Press Company.

Leary referred to the sixteen segments of the circle as "generic interpersonal themes", implying that they could be interpreted in a variety of ways. As the title of his book suggests, Leary's main preoccupation was with the classification of personality types. He considered that the personality of most people could be

categorised according to one of the sixteen segments, which he called "the preferred interpersonal style". He acknowledged that the psychologically healthy person would be able to use a range of styles to suit various situations but that the maladaptive person would tend to rely upon a very rigid and intensely expressed style regardless of the situation, which would force others to respond to her/him in the same narrow way. In order to distinguish between healthy and maladaptive interpersonal styles, Leary (1957) introduced the concept of intensity, which refers to the degree to which a style is expressed. This is based on the assumption that normality and abnormality lie on a continuum and that they are quantitatively rather than qualitatively different, a view which will be challenged by other theorists.

Leary proposed that people express their interpersonal styles "reflexively", that is, in an automatic, spontaneous and involuntary fashion. He also proposed that interpersonal reflexes tend to initiate or invite complementary interpersonal responses from others in such a way as to lead to a repetition of the original reflex action. This has come to be called the "complementarity hypothesis", considered by some to be the most theoretically important and clinically useful idea to arise from the Leary model, because it articulates how disordered behaviour may be maintained interpersonally (Paddock & Nowicki, 1986).

A number of scholars (Carson, 1969; Kiesler, 1983; Duke & Nowicki, 1982; Wiggins, 1982) have tried to develop the complementarity hypothesis further. Orford (1986) maintained that it remains largely unsupported by the evidence and needs to be modified and retested. Birtchnell (1993) argues that, in the manner in which it was articulated by Leary (1957), the hypothesis seems rather simplistic, in that it takes no account of whether the initial act of relating was positive or negative, proposed or invited, accepted or declined. However, with the benefit of over 30 years of research on the matter, Kiesler (1983) revisits the concept of complementarity and offers a much more systematic account of the mechanisms involved. He lists 11 qualifying

and convincing propositions concerning the definition, theoretical justifications and empirical substantiations of complementarity.

Returning to the circle itself, in 1954 Guttman, who was a mathematician, made reference to a set of qualitatively different variables that may be ordered in such a way that they would have no beginning and no end. Such a set of variables would be best represented in a circular arrangement, which he called "the circumplex" (Birtchnell, 1993). Within such an arrangement any specified variable would have its highest correlation with the variables on either side of it and the correlations would decrease in size as the distance from the principal diagonal increases (Wiggins, 1979).

A number of psychologists, notably Wiggins (1982) and Kiesler (1983), have attempted to improve upon the original circle, both conceptually and statistically. Wiggins (1979) explained that, in principle, the "circumplex pie" can be sliced into sixteen, thirty-two or even sixty-four segments, depending upon the capacity of the human mind to distinguish between similar descriptive terms. Wiggins (1979) was concerned that some of the opposing segments of the original circle did not meet the requirement of bipolarity and, consequently, he replaced them. He also considered that the task of creating bipolar opposites for sixteen segments was too great so he reduced them to eight.

1.2.1 Kiesler's interpersonal circle

Kiesler's "1982" circle is a theoretical system intended to be an update of the original Freedman/Leary circle, in the light of the modifications made by Lorr and McNair (1965) and by Wiggins (1979). It reverts to the sixteen-segment format and re-introduces the moderate-extreme distinction but incorporates Wiggins' bipolar principle.

Kiesler, like Freedman and Leary, has no clear conception of positive and negative relating, therefore some of the segments are positive (e.g. warm-pardoning) and others are negative (e.g. cold-punitive), whereas the moderate-extreme distinction is simply a matter of intensity (Birtchnell, 1993).

The 1982 circle consists of 16 segments, which are given the letters of the alphabet and are ordered anticlockwise. The horizontal line represents friendliness and extends from friendliness to hostility and the vertical line represents dominance and expands from dominance to submissiveness. The 1982 circle incorporates the principle of complementarity, which means that, for the horizontal axis friendly behaviour elicits friendly behaviour and hostile behaviour elicits hostile behaviour, and for the vertical axis dominant behaviour elicits submissive behaviour and submissive behaviour elicits dominant behaviour (Kiesler, 1983). For each one of the sixteen segments there is a set of three to five moderate terms and three to five extreme terms and for each term there is a set of three to nine short descriptive statements.

1.2.2 The Strong and Hills interpersonal circle

Strong and Hills (1986) reported upon another variant of the interpersonal circle, which, in line with Freedman and Leary models, has a friendly-hostile horizontal axis and a dominant-submissive vertical axis. Superimposed upon these, is the Wiggins extravert-introvert axis extending from the upper right to the lower left quadrant and a separated-connected axis extending from the upper left to the lower right quadrant. In the spaces between these four axes, this creates eight octants, the proposed characteristics of which were described in a series of paragraphs. On the basis of these, a coding system was developed, by which trained raters could classify units of interpersonal behaviour.

Birtchnell (1993), however, argues that this system does not allow for pure forms of relating (e.g. pure separateness or pure connectedness), since all octants have to be intermediate octants and that some of its octants are positive (e.g. leading) and some are negative (e.g. distrustful). Also, he argues further, the circle is not based upon a sound theoretical system but simply draws upon existing systems.

1.2.3 The revised circumplex model based on interpersonal motives

The revised model proposed by Horowitz, Wilson, Turan, Zolotsev, Constantino and Henderson (2006) introduces the concept of motives in interpersonal transactions. The authors articulate a number of postulates, which they group into clusters regarding interpersonal motives, interpersonal behaviour, ambiguity of behaviour, the self and self-protective interpersonal motives, frustrated interpersonal motives, and personality disorders. However, only a brief outline of interpersonal motives and interpersonal behaviour will be described here.

Interpersonal motives are conceptualised as the driving force behind overt interpersonal behaviour and the first postulate of the model is that they can be organised hierarchically. A desire for intimacy or friendship is viewed as a higher order than the desire to spend time with a partner, which, in turn, is a higher order desire than that of making a date with a particular person (Horowitz et al., 2006). As a result, the term *motive* denotes a superordinate category, which causes behaviour in the intermediate category of *personal strivings*, which, in turn, causes behaviour in the narrow category of *goals* (Austin & Vancouver, 1996; Emmons, 1986). The concept of interpersonal motive appears to be similar to the concept of interpersonal objective or need, already proposed by Birtchnell (1987, 1993). However, Horowitz et al. (2006) do not seem to be aware of this similarity.

The second postulate is that interpersonal motives fall into two broad superordinate categories of *communion* and *agency*. The two categories were initially proposed by

Bakan (1966), who viewed them as the "fundamental modalities in the existence of living forms", and they were retained by all interpersonal theorists in various forms of the circle or octagon models. Communion represents a motive for connection with others and agency represents a motive for influence or control over self and others (Horowitz et al., 2006).

The third postulate is that communal and agentic motivation appear early in infancy, proposition which Horowitz et al. (2006) substantiate with the presence of two identical categories of motives existent in attachment theory (Ainsworth, 1982; Bowlby, 1969, 1973). The communal motive is manifested through the child's attachment system, which keeps the child close to the adult in order to increase his or her chances of survival (Horowitz et al., 2006). Once the child feels secure regarding the availability of the adult, the agentic motive is manifested through the child's desire to separate and explore the environment. Over time motives become differentiated into subordinate motives and, as a result, communion is expressed through motives such as intimacy, sociability and belonging to groups, and agency is expressed through motives such as autonomy, achievement and control (Horowitz et al., 2006). This postulate, however, also coincides with Birtchnell's (1987, 1993) proposal regarding the development of relating objectives, of which Horowitz et al., again, do not seem aware.

Regarding interpersonal behaviour, the revised model retains the principle that it may be represented graphically by two dimensions, corresponding to the constructs of communion and agency. However, the model comprises of eight segments, rather than 16, and *hostility* is replaced by *indifference,* which results in the new poles of the communion dimension being *disconnected/indifferent/distant* and *connected/loving/close* (Horowitz, et al., 2006)*.* This particular conceptualisation appears to converge with Birtchnell's (1993) model, in that it consists of eight

octants and the poles of the two main dimensions can be viewed as *upperness-lowerness* and *closeness-distance*.

1.2.4 Schaefer's classification of maternal behaviour

Schaefer's (1959) system is not strictly a modification of the interpersonal circle. As far as is known, when he developed it he was not aware of the work of the Berkley group and his system was designed specifically for the classification of a mother's relating to her child (Benjamin, 1974). However, he was aware of Guttman's (1954) writing, organised his system in the form of a hypothetical circumplex, constructed correlation matrices and fitted behaviour ratings into a two-dimensional circumplex. His horizontal axis concerned accepting versus rejecting and his vertical axis concerned being controlling versus encouraging autonomy. He later (1965) added the variant firm control versus lax control (Benjamin, 1974).

1.2.5 Becker and Krug's classification of children's behaviour

Becker and Krug (1964) developed a system for the classification of the relating of children towards their parents and teachers that complemented Schaefer's system. They too proposed a hypothetical circumplex, constructed correlation matrices of ratings and plotted these against the two main factors. Their horizontal axis concerned being loving and sociable versus being mistrusting and withdrawn and their vertical axis concerned being defiant and demanding versus being compliant and cooperative (Benjamin, 1974).

1.2.6 Benjamin's Structural Analysis of Social Behaviours

Particularly interested in the diagnosis and treatment of personality disorders as defined by the DSM-IV (APA, 1994), Lorna Smith Benjamin developed a new system for the classification of interpersonal behaviour. Her model was intended for

the operationalization of interpersonal and intrapersonal concepts relevant to therapy as well as for the classification of patients' perceptions of social interactions of themselves and others. This model is the "Structural Analysis of Social Behaviour" – SASB (Benjamin, 1994b). Influenced by both psychoanalytic and interpersonal theories, Benjamin tried to integrate the circles developed by Leary (1957) and Schaefer (1965) into her new circumplex model. One significant departure from Leary's principles is that normality and abnormality do not lie on a continuum but that they are qualitatively different concepts (Benjamin, 1994b). Especially referring to personality disorders, Benjamin believes that early relationships with significant others have a strong influence on the development of problematic relationship patterns in adulthood. Considering this point, the model emphasises the interactions with key figures in the present as well as the past and attempts to articulate the connections between them. Although Benjamin was concerned with the relating of adults, she recognised the importance of distinguishing between what she called "parentlike" and "childlike" behaviours (Benjamin, 1979a). The former she called active, i.e. concerned with doing things to or for another person and the latter she called reactive, i.e. concerned with having things done to or for oneself. This idea occurred to Benjamin whilst trying to reconcile the circles of Leary and Schaefer and she realised that the only solution was to construct two circles or "surfaces", one concerned with relating (the "other" plane) and one concerned with being related to (the "self" plane). She was the first interpersonal psychologist to consider the state of being related to by others (Birtchnell, 1993).

The SASB model consists of three surfaces, which refer to interpersonal as well as intrapersonal processes and each surface is conceptualised as a separate circumplex structure (Benjamin, 1996b). The first surface represents the parent-like behaviour towards another person, referred to as transitive action. The second surface represents child-like behaviour towards the self in relation to another person, referred

to as transitive behaviour. The third surface, which is unique to the model, represents the introjected aspect and reflects treating oneself as one has been treated. Each surface has the same two axes: the horizontal axis of affiliation, which Leary called love versus hate, and the vertical axis of interdependence, which Schaefer called control versus encourage autonomy. The extremities of the vertical axes, however, have different names for each of the three surfaces. For the first surface the vertical axis extends from emancipate to control, for the second surface it extends from separate to submit and for the third axis it extends from self-emancipate to self-control (Benjamin, 1996b). Benjamin was a firm adherent to Guttman's statistical approach. She demonstrated that opposite items were highly negatively correlated and that each surface conformed to a true circumplex. One point Benjamin did not attend to, however, was the distinction between positive and negative relating (Birtchnell, 1993).

1.3 Relating theory

Birtchnell (1987, 1993), working outside the more traditional interpersonal theory, proposed that all humans are born with general dispositions to relate to others in certain ways. He further considers that the other person may not necessarily be aware of being related to and, therefore, may not respond.

Birtchnell proposes that these objectives are innate, that they would be expected to carry advantages for the individual and that each state of relatedness carries equal advantages. Birtchnell argues that an emotional connection must exist between these objectives and their attainment or lack of attainment, similar to the concept of satiety when hunger is satisfied. For this reason, Birtchnell introduces the concept of *need* for a relating position and the experience of satiety when that need is met or fatigue when there has been overexposure to a position.

According to Birtchnell, the purpose of relating is the attainment of a state of relatedness, which will result in a subjective experience of satisfaction. The danger of it being lost causes anxiety or anger, whereas its actual loss causes sadness, defeat or despair (Birtchnell, 1993). These general relating dispositions are of two classes: the adjustment of distance and the adjustment of status between self and others. They are represented by two intersecting axes: a horizontal, proximity axis, the poles of which are called close and distant and a vertical, power axis, the poles of which are called upper and lower. An octagon is created by the insertion of the four intermediate positions between the four polar positions, the characteristics of which are a blending of the positions to either side of them. Each octant of the octagon has a two-word name, the first word referring to the vertical axis and the second to the horizontal axis. Thus, moving round the octagon in a clockwise direction, the names are upper neutral, upper close, neutral close, lower close, lower neutral, lower distant, neutral distant and upper distant (Birtchnell, 1993). The word *neutral* is used for the main four positions and refers to a pure relating state, rather than a combination of adjacent positions.

The advantages that each axis carries for the individual, as proposed by Birtchnell (1993), are briefly described here. *Distant* represents a need to be separate and self-sufficient, to have a strong sense of identity, to be distinct from others and have a clear boundary between oneself and others. *Close* represents a need for involvement with one or more others and, for both humans and animals, it is associated with forming social groups, working together, mating and rearing of the young. *Upper* represents competing with others, reaching a position of seniority, power, influence and responsibility, being stronger and wiser, leading, teaching, helping and caring for others. Upper animals are higher in the hierarchy and get first preference for food and mates. *Lower* represents a need to be helped, advised, led, guided, taught, protected and cared for by others and requires an attitude of trust. In hierarchies the

lower animals are protected by the upper ones, and young animals are protected and fed by their parents. Ideally, Birtchnell further argues, during the course of maturation the innate relating dispositions need to be converted into the full range of interpersonal skills that would enable the individual to attain any one of the states of relatedness. For any octant, those who have the appropriate skills are referred to as *competent* relaters and their relating is referred to as *positive*. A *versatile* person is capable of using a wide range of relating skills and is confident and able to adapt to different interpersonal situations. For example, a versatile relater would be able to relate sometimes from a close position and sometimes from a distant position. Those who lack appropriate skills are referred to as *incompetent* in a particular form of relating and their relating style for that octant is referred to as *negative*. Negative relating may assume one or more of three forms, such as *avoidant*, *insecure* and *inconsiderate*. For example, if applied to closeness, avoidant relating involves the person avoiding a form of relating in which they do not feel comfortable. A person may stay in closeness simply because they are avoiding being distant. Insecure relating refers to taking the risk of relating in a particular way but constantly fearing that it will not succeed. The person may risk getting close but will constantly fear that they will be abandoned. The term inconsiderate refers to adopting a form of relating with little regard for its impact on the other person (Birtchnell, 1993).

The three forms of negative relating described above have been conceptualised on the basis of their possible causes within the individual. However, their overt manifestation, and therefore perception by others, may not differ. For this reason, this thesis will only consider the distinction between positive and negative relating, without attending to the further division of negative relating into specific types.

The positive and negative forms of relating for each of the eight octants are briefly outlined below and represented in Figure 1.3. The upper diagram gives examples of

positive forms and the lower diagram gives examples of negative forms. The pairs of initial letters are abbreviations for the full names of the octants.

1.3.1 Characteristics of the eight octants

The positive upper neutral (UN) person is an inspirational leader, manager and teacher, and has assets that enable him/her to be useful to others. The negative upper neutral negative person is arrogant, pompous, insulting, ridiculing, bullying or humiliating.

The positive upper close (UC) person is nurturing, supportive, encouraging, sympathetic, consoling and comforting. The negative upper close person is possessive, restrictive and intrusive.

The positive neutral close (NC) person is open and willing to share experiences, is involved, friendly, cooperative and enjoys the company of other people. The negative neutral close person does not like being alone, clings excessively to others and does not respect others' need for distance.

The positive lower close (LC) person needs care and protection, therefore, appears weak and vulnerable. The negative lower close person needs constant reassurance of love, care and the others' presence, which may take the form of blackmailing the other person into providing these.

The positive lower neutral (LN) person needs protection, instruction and approval. The negative lower neutral person appears helpless, incompetent, confused, lost or self-blaming.

The positive lower distant (LD) person is compliant, respectful and obedient. The negative lower distant person is withdrawn, subservient and timid.

Upper octagon (positive):

UN

UD

UC

leading
guiding
advising

controlling
maintaining
order

protecting
helping
providing for

ND

needing
personal
space and
privacy

friendly
involvement
and interest

NC

obedient
loyal and
respectful

seeking care
and protection

seeking
direction
guidance and
advice

LD

LC

LN

Lower octagon (negative):

UN

UD

UC

pompous
boastful
dominating
insulting

sadistic
intimidating
tyrannising

intrusive
restrictive
possessive

ND

suspicious
uncommunicative
self-reliant

fear of
separation and
of being alone

NC

acquiescent
subservient
withdrawn

fear of rejection
and disapproval

helpless
shunning
responsibility
self-denigrating

LD

LC

LN

Figure 1.2: The Interpersonal Octagon

From: Birtchnell, J. (1994). The interpersonal octagon: An alternative to the interpersonal circle. *Human Relations, 47*, 511-529.

The positive neutral distant (ND) person is self-sufficient, self-reliant, and respects the space and ideas of other people. The negative neutral distant person has limited capacity for involvement with others, tries to restrict contact with others, and fears intrusion by others.

The positive upper distant (UD) person likes to be in control and expects to be obeyed and respected. The negative upper distant person is cruel, ruthless, exploiting and domineering.

The characteristics outlined here are only crude descriptions of the octants and do not provide a comprehensive account of the relating states proposed. A detailed description of each relating state is provided by Birtchnell (1993).

1.4 Measures based on relating and interpersonal theories

Considering the specificity of the interpersonal model, the efforts of theorists to generate measures have been prolific. Instruments have been developed to measure interpersonal traits, interpersonal problems, interpersonal values and motives, interpersonal self-efficacy, interpersonal behaviour as rated by observers, interpersonal impact, social support behaviour, and children behaviour, to name but the most widely used of the existing measures.

The first measure based on the principles of interpersonal theory was the Interpersonal Check List (ICL; LaForge & Suczek, 1955), which was developed in order to operationalize the interpersonal circle model proposed by the Kaiser Foundation. The ICL was constructed for the measurement of interpersonal traits, as depicted by the 16 characteristics of the interpersonal circle, which were combined to form eight octants. The eight segments structure was chosen due to the fact that the 16 segments model proved inadequate regarding its levels of internal consistency. The eight categories, as described by Leary (1957), were: Managerial-Autocratic, Competitive-Narcissistic, Aggressive-Sadistic, Rebellious-Distrustful, Self-effacing-

Masochistic, Docile-Dependent, Cooperative-Overconventional, and Responsible-Hypernormal. The ICL comprised of 128 adjectival items, with eight items for each characteristic. The eight items were intended to measure four levels of intensity, with one item each for levels 1 and 4 and three items each for levels 2 and 3. Guttman (1954) called this combination of a circular ordering and levels of intensity a "radex". The ICL has been criticised for its uneven coverage of interpersonal space (Locke, 2011) and, for this reason, other theorists have subsequently proposed alternative measures.

In 1963, however, Lorr and McNair replaced the Interpersonal Check List with the Interpersonal Behaviour Inventory (IBI), where therapists were asked to rate the behaviour of their patients (Paddock & Nowicki, 1986). The statistical analyses of their data generated a new circle, in which "nurturant" had shifted from the upper right to the lower right position and been replaced by "sociable" and a new construct, inhibited-reserved, now appeared in the lower left position. Their version of the circle, however, was subject to many subsequent rearrangements.

Wiggins (1979) placed the highest priority upon the construction of a circle that conformed precisely with the requirements of Guttman's (1954) circumplex. He later developed a new measure, based upon single adjectives, called the Interpersonal Adjective Scales (IAS; Wiggins, 1979). According to Paddock and Nowicki (1986), data from these scales generate four sets of bipolar variables (comprising eight octants), which are almost evenly spaced around the circle and show no significant gaps in any quadrant.

Wiggins and Broughton (1985) pooled the data from six different questionnaires and selected the most representative items. Birtchnell (1993) argues, however, that because this relied upon brief questionnaire items, their classification suffers from a paucity of detail and that it fails to distinguish between positive and negative

features. As a result, some factors are predominantly positive and others are predominantly negative.

In order to address these flaws, a new, and shorter, version of the IAS was developed later, the IAS-Revised (IAS-R; Wiggins, Trapnell & Phillips, 1988). This lists 64 interpersonal adjectives and respondents are required to rate each adjective on an eight-point scale in terms of accuracy of description of the relevant target, usually the self (Locke, 2011). For example, an item for the communal octant is "Sympathetic." The measure consists of eight octants, containing eight items each. The IAS-R is regarded by Locke (2011) as superior to the ICL and constitutes one of the present preferred measures of interpersonal traits.

Based on his relating theory, Birtchnell developed the Person Relating to Others Questionnaire (PROQ; Birtchnell, 1993), which comprises of 96 items and was subsequently refined several times. The present version is the PROQ3 (Birtchnell, Hammond, Horn & De Jong, 2011), which measures the relating tendencies of the respondent as conceptualised by the two main axes, closeness-distance and upperness-lowerness, and the intermediate positions. The PROQ3 measures negative relating only and consists of 48 items, five negative items and one positive for each octant. Statements are rated on a four-point scale. For example, an item for the closeness octant is "I hold on to people too much".

In the domain of interpersonal problems the first instrument developed was the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno & Villasenor, 1988), which focuses on the sources of distress reported by psychotherapy patients. Items pertaining to interpersonal problems are arranged in a two-dimensional space, which is divided into eight octants, with Affiliation-Nurturance and Control-Dominance as main dimensions. The data generated by the 127 items proved to be underlined by six dimensions, with the two higher order

circumplex factors proposed by Wiggins (1979), Hostile-Friendly and Submissive-Dominant.

Consistent with Wiggins' dedication to the true circumplex structure, the IIP has been modified by Alden, Wiggins and Pincus (1990), by factor analysing the original 127 items and choosing the 64 items with the highest loading for each octant. This version became the Inventory of Interpersonal Problems-Circumplex (IIP-C; Alden et al., 1990).

Other formats of the IIP have been developed, such as a 32-item version (IIP-32; Barkham, Hardy & Startup, 1996) and a 48-item version (Gude, Moum, Kaldestad & Friis, 2000). However, Horowitz, Alden, Wiggins and Pincus (2000) further refined the original instrument, which is the present most reported measure of problematic dispositions associated with the scales of the circle. The IIP has eight items on each of the eight octants and respondents indicate the level of their distress for each problem on a five-point scale. For example, an item for the communal octant is "I try to please other people too much."

The feelings, thoughts and tendencies that another person evokes in the respondent have been referred to as *interpersonal impacts* (Kiesler & Schmidt, 2006; Kiesler, Schmidt & Wagner, 1997) and as *being related to* or one half of the interrelating process (Birtchnell, Voortman, De Jong & Gordon, 2006; Kalaitzaki, Birtchnell & Nestoros, 2009). The Impact Message Inventory-Circumplex (IMI; Kiesler & Schmidt, 2006; Kiesler, Schmidt & Wagner, 1997) measures the interpersonal dispositions of a target person by asking the impact that the target evokes in the respondent. The measure consists of eight seven-item scales and respondents are asked to indicate on a four-point scale how well each item describes their reaction to the target. For example, an item for the dominant scale is "makes me feel bossed around" and an item for the submissive scale is "makes me feel in charge" (Locke, 2011).

The Couples Relating to Each Other Questionnaire (CREOQ; Birtchnell, Voortman, De Jong & Gordon, 2006) measures the interrelating of individuals in the specific context of the couple relationship as conceptualised by Birtchnell's relating theory (1993). It consists of a set of four questionnaires that assess the self-report of the woman's behaviour towards the man, the self-report of the man's behaviour towards the woman, the woman's report of the man's behaviour towards her and the man's report of the woman's behaviour towards him (Birtchnell, et al. 2006). The 96 items of each questionnaire are identical, apart from phrasing reflecting the appropriate gender, and are scored on a four-point scale. An example of an Upper Neutral (dominant) item for the man's report of his own behaviour towards the woman is "I can be critical of her". An example of an Upper Neutral item for the man's report of the woman's behaviour towards him is "Wants things done her way."

Individuals' reactions to interpersonal experiences can also be shaped by interpersonal values or motives. Locke (2011) argues that being told what to do may be a received with relief by someone who values submission but may be humiliating for someone who values dominance. The Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000) measure the worth respondents place on interpersonal experiences associated with each octant of the circle. For each item individuals indicate on a five-point scale the importance of a particular type of experience. For example, an item for the communal octant is "When I am with him/them, it is important that I feel connected to them."

The Circumplex Scales of Interpersonal Efficacy (CSIE; Locke & Sadler, 2007) assess a person's confidence that he or she can perform behaviours related to each octant of the interpersonal circle. The measure consists of eight scales with four items each, and respondents indicate on an 11-point scale their level of certainty regarding their ability to act in the manner described by the particular item. For

example, an item for the community octant is "Rate how confident you are that you can be helpful."

Within the domain of observed behaviour there are two measures that assess interpersonal transactions. The first to be developed was the Check List of Interpersonal Transactions (CLOIT; Kiesler, Goldston & Schmidt, 1991), which measures behaviours from each of the 16 segments of the interpersonal circle in particular situations of transactions. For each of the 96 items the respondent is asked to indicate if the target enacted that behaviour (Locke, 2011). An example of an item for the communal segment is "Act in a relaxed, informal, warm or nonjudgmental manner."

The Chart of Interpersonal Reactions in Closed Living Environments (CIRCLE; Blackburn & Renwick, 1996) measures the interpersonal behaviour of psychiatric inpatients or in settings where self-reports are likely to be invalid (Locke, 2011). The 49 items of the CIRCLE ask respondents to indicate on a 4-point scale the frequency of each behaviour. An example of an item for the agentic segment is "Dominates conversations."

Dispositions to provide agentic or communal support to those in need of assistance are measured by the Support Actions Scale-Circumplex (SAS-C; Trobst, 2000). The SAS-C consists of eight scales with eight items each. For example, an item of the agentic octant is "Give advice" and an item for the communal octant is "Give them a hug" (Locke, 2011).

Efforts to apply interpersonal models to children have produced the Child and Adolescent Interpersonal Survey (CAIS; Sodano & Tracey, 2006) and the Interpersonal Goals Inventory for Children (Ojanen, Gronroos & Salmivalli, 2005). The CAIS is a self-report instrument which measures interpersonal traits. Examples of items of the questionnaire are "I'm fun to be around", for the agentic-communal

segment, and "I call people names", for the agentic-uncommunal segment (Locke, 2011).

The Interpersonal Goals Inventory for Children was developed by modifying the Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000) in order to make the inventory more accessible to children. For example, the item "Not make a social blunder" was changed to "Not do anything ridiculous" (Locke, 2011).

An important finding by Birtchnell, Hammond, Horn and De Jong (2011) was that the scales of the octagon were shown to correlate positively with the equivalent scales of two circle-based measures, the ICL-R and the IIP-C. The implication of these findings is that, despite some differences in underlying theory, there is agreement between the constructs measured by their corresponding instruments.

1.5 Evaluation of interpersonal models and principles

All existing theoretical systems for the representation of interpersonal behaviour assume that interactions between people are motivated by two broad dimensions, communion and agency. Although different theorists proposed different systems, such as the circle (Leary, 1957), the octagon (Birtchnell, 1993) and three surfaces (Benjamin, 1994b), the two underlying dimensions emerging from their corresponding measures remained constant. Furthermore, the defining principles of the system, i.e., the circumplex structure, complementarity and vector length, are almost universally accepted by interpersonal theorists.

1.5.1 Interpersonal models and their explanatory potential

Although all interpersonal models have played important roles in understanding the links between personality traits, motives and social behaviour, not all have attempted to explain the existence of differences in interpersonal behaviour.

The notable exception is Birtchnell's (1993) relating theory, which sets the interpersonal octagon within the evolutionary paradigm (Darwin, 1859, 1871), according to which all animals have inherited brains and bodies that are equipped to respond to the environment in adaptive ways, resulting in increased chances of survival due to greater reproductive fitness. Birtchnell considers that both animals and humans are innately motivated to seek desirable states of relatedness, due to the advantages that these states carry for the individual in the fight for survival. This implies that the motivation to attain particular states of relatedness, also referred to as *relating objectives*, is a visceral function independent of conscious thought, similar to hunger or thirst. This, in turn, implies that relating behaviour has a neurophysiological basis and that some structure of the nervous system must be involved in the process (Birtchnell, 1993). This structure must be capable of recognising the attainment of the relating objective and, subsequently, generate the appropriate emotional response, that is, pleasure when it has been attained, displeasure or sadness when it has been lost and anxiety when there is danger of losing it (Birtchnell, 1993). It is highly probable that the brain structure in question is the *seeking system* identified by Panksepp (1998), which connects the midbrain to the limbic system and the frontal lobes. The function of the seeking system has been conceptualised as the *approach-avoidance motivational system* (Cacioppo & Berntson, 1994; Panksepp, 1998). Gray (1990) conceptualised the system as consisting of two parts: the Behaviour Activation System, which is responsible for promoting behaviour and positive affect, and the Behavioural Inhibition System, which is associated with inhibiting behaviour and negative affect. Gray (1990) further demonstrated that individual differences exist on both of these systems.

Although apart from Birtchnell other theorists have recently directed their attention to evolutionary theory and the biological origins of personality, no explicit link has

been established between these and the two dimensions, agency and communion, which were unanimously agreed as underlying interpersonal behaviour.

Simpson, Griskevicius and Kim (2011) argue for the advantages of placing interpersonal theory within an evolutionary context. Amongst ideas regarding evolution, life history theory, and personality, they cite the relevant evidence supporting the neurophysiology of emotion (e.g. Cacioppo & Berntson, 1994; Gray, 1990; Lang, 1995; Panksepp, 1998). However, their link between the biological basis of interpersonal behaviour and individual differences is limited to the study of personality traits, such as extraversion, treating the two dimensions of interpersonal behaviour as components of these traits.

Horowitz et al. (2006) introduce the concepts of *interpersonal motives* and *meaning of interpersonal behaviour,* which provide a new and welcomed dimension to the circumplex model. The concept of interpersonal motive is presented as having a biological basis, according to which the satisfaction of a motive results in the experience of a positive emotion, whereas its frustration results in the experience of a negative emotion. Lazarus' (1991) work on emotional regulation is cited in support of this proposition. Horowitz et al.'s introduction of the concept of motives represents a substantial departure from early ideas that the main purpose of interpersonal behaviour is the avoidance of anxiety. However, this has already been articulated by Birtchnell (1993) as the concept of relating objectives.

1.5.2 The principle of circumplex structure

As already mentioned, the circumplex structure requires that the scales ought to be arranged in a circular order, having the same distance from the centre of the circle and being equally distributed around the circumference of the circle (Guttman, 1954). Subsequent modifications of Guttman's definition have been proposed, the most recent being the statistical criteria articulated by Acton and Revelle (2002).

They argue that, amongst other criteria, a circumplex structure should be optimally represented by two dimensions, that there are always intermediate variables between the orthogonal pairs of axes, that variables are interrelated, that variables are uniformly distributed around the circle, and that variables have a constant radius from the centre of the circle (Acton & Revelle, 2002).

Whilst the principle of circumplex structure constitutes the fundamental assumption of the circle model, it does not feature with identical importance in the octagon model. For example, the octagon requires the existence of the two orthogonal dimensions, the existence of the intermediate dimensions and the relationship between dimensions. However, it does not require a uniform distribution of variables around the circle or a constant radius from the centre of the circle (Birtchnell, 1993). Although the essence of the interpersonal circle model offers a logical and convincing classification of human interactions, it can be argued that some of the statistics of the circumplex have been carried beyond the level of psychological usefulness, in that psychology has been fitted into the model rather than developing a model that would reflect the psychology. Indeed, some of the early models included amalgamations of segments, sub-segments, intensities and rigid positioning around the circle, in a manner so intricate that it appears to violate the principle of parsimony (Ockham, c. 1285-1347).

Directly connected with the principle of circumplex structure is the concept of bipolarity, which refers to the negative correlation between variables located at opposite poles. Bipolarity is not considered a necessary criterion for the circumplex structure, although some theorists, notably Wiggins (1979), argued for its necessity. Wiggins (1979) criticised Leary's (1957) model for the unequal distribution of traits around the circle and considered the lack of bipolarity to have been the cause of this distribution. As a result, Wiggins designed the Interpersonal Adjective Scales (IAS;

1979) paying particular attention to bipolarity and Wiggins, Trapnell and Phillips continued this effort in their revised version of the instrument (IAS-R; 1988).

Other theorists, particularly Broughton and Paulhus (1984) and Birtchnell (1993), considered that capabilities from opposing side of the circle are not necessarily mutually exclusive. Indeed, one of the assumptions of Birtchnell's octagonal model is that relating competence, or positive relating, in one octant does not exclude competence in the opposing octant and the same applies to incompetence, or negative relating.

Based mostly on the criterion of bipolarity, Broughton and Paulhus (1984) distinguish between ability-related measures, such as the ones based upon the octagon, and trait-related measures, such as the ones based upon the circle. The resulting dichotomy may assist theorists and instrument developers with acknowledging the importance of context, in that different measures may be suitable for different purposes. Regardless of its level of sophistication, it is highly unlikely that a model will have the ability to explain a wide range of psychological phenomena and, similarly, that an instrument will have the ability to measure a wide range of behaviours. The models based on the two dimensions of human needs converge in some areas and diverge in others.

1.5.3 The principle of complementarity

Leary (1957) already mentioned this principle, but Carson (1969) was the first to explicitly define the principle of complementarity concerning the interpersonal circumplex. Kiesler (1983) summarized and expounded the propositions Carson had articulated. In short, complementarity/reciprocity as defined by Carson means that concerning the horizontal axis, complementarity exists, i.e. friendly behaviour invites friendly behaviour, whilst hostile behaviour invites hostile behaviour. Concerning the vertical axis, anti-complementarity is assumed. Therefore, dominant behaviour

invites submissive behaviour, whilst submissive behaviour invites dominant behaviour. An individual reacts in these ways in order to avoid or minimize feelings of anxiety and to maximize feelings of security. If an individual reacts in a non-complementary way, feelings of anxiety and tension arise.

The principle of complementarity was tested by several studies (Horowitz, 2004; Kiesler, 1996; Markey, Funder & Ozer, 2003; Orford, 1986; Sadler & Woody, 2003; Strong et al., 1988; Tiedens & Fragale, 2003; Tracey, 2004) and support was found for the friendly but not for the hostile side of the interpersonal circle (Horowitz, et al., 2006). Orford (1986) found that people respond to hostile-dominant behaviour with hostile-dominant behaviour, rather than hostile-submissive as the principle of complementarity would predict. Strong et al. (1988) and Tracey (1994; 2004) found that friendly behaviour was a much more likely response even when the initiating behaviour was hostile, therefore contradicting the principle of complementarity. This contradiction may find further explanation using the revised model proposed by Horowitz et al. (2006), in which interactions are described using motives and expectations. As a result, Horowitz et al.'s revised model does not predict complementarity but realistically emphasises that an invited reaction may or may not conflict with other motives and may or may not result in a complementary response. Sadler, Ethier and Woody (2011) propose that complementarity may be viewed as a form of relational adaptation over time. They review the empirical evidence and argue that there are important subjective and objective effects of different pairings of interpersonal styles, that people modify each other's behaviour during interactions, and that these effects are mediated by a variety of cognitive and motivational processes. Their detailed and informative review implies that the principle of complementarity, far from being a simple cause and effect interaction, is a most intricate and sensitive mechanism that can be approached from a multitude of angles.

Sadler, Ethier and Woody (2011) also rightly challenge the terminology by pointing out that the term *complementarity* does not mean *similarity,* and the term *reciprocity* does not mean *oppositeness.* They cite research from the domains of communication (Burgoon, Stern & Dillman, 1995) and romantic relationships (Beach, Whitaker, Jones & Tesser, 2001) to substantiate their argument. Indeed, the definitions of the terms *complementary* and *reciprocal* are by themselves sufficient to demonstrate their unsuitability for the interpersonal principle in question, which makes their persistence of more than half a century rather intriguing.

Regarding the octagonal model, Birtchnell (1993) argues that complementarity would be present in positive relating, for example one person helping and the other accepting help. However, this is not the case for negative forms of relating, due to the assumption that imposing a state of relating upon a person would result in resistance (Birtchnell, 1993). However, it can be argued that the resistance referred to by Birtchnell can be viewed as the anti-complementarity response referred to by the circumplex theorists.

Although the term may be confusing, the principle of complementarity remains the pivotal one in interpersonal research due to its evident relevance and applicability to human transactions. Furthermore, whilst principles such as the circumplex structure may be found stimulating by the statistician, the principle of complementarity can also be found illuminating by the lay person, which is a feature worthy of consideration in the context of dissemination of science.

1.5.4 The principle of vector length

The principle of vector length refers to the feature that the score on any one scale is an index of rigidity, in that the higher the score the more rigid the behaviour. People showing rigid behaviour in general report more signs of psychopathology irrespective of flexibility or rigidity concerning a friendly or unfriendly direction. As

a result, vector length can be regarded as an index of psychopathology (Wiggins, Phillips & Trapnell, 1988). This conceptualisation is consistent with Sullivan's (1953) and Leary's (1957) views that adaptive and maladaptive forms of behaviour are located on a continuum and that the difference between normality and psychopathology is quantitative. Birtchnell (1993) considers the distinction between adaptive and maladaptive behaviour to be qualitative, since pathology, he argues, is not an extreme form of normality. This distinction constitutes Birtchnell's reason for constructing a positive and a negative version of the octagon. Within the negative octagon the vector length can be regarded as an indicator of rigidity and, therefore, psychopathology. It can be argued, however, that vector length is still a quantitative marker and, therefore, can only be regarded as an indicator of severity, rather than pathology per se.

1.5.5 The choice of model for the present project

Having briefly outlined and evaluated the theoretical assumptions of the main models of interpersonal behaviour, it was considered necessary to specify the choice of theoretical framework for the present project and the rationale for its suitability.

The model which served as conceptual framework for the new instrument was Birtchnell's (1993) interpersonal octagon. The primary reason for this choice was Birtchnell's uniqueness in articulating the biological basis of interpersonal behaviour and, therefore, positioning the relating of humans within the context of evolutionary theory. The presence of the explicit link with evolutionary theory provides the octagonal model with the explanatory power that is absent in other models. Directly related to the evolutionary explanation are the four constructs used by Birtchnell to define relating behaviour, in that, close, distant, upper and lower are concepts that can be applied to both animals and humans. In contrast, concepts proposed by circle theorists, such as love, hate, friendly or hostile, cannot easily meet this requirement.

Furthermore, the four constructs used by Birtchnell appear to refer to factors that can be regarded as pure, whereas the constructs used by circle theorists could easily be deconstructed into further and simpler constructs.

A secondary reason for considering the octagon superior to the circle was the parsimonious nature of the model, which provides an elegant and accessible conceptualisation of relating behaviour without recruiting convoluted statistical procedures.

1.6 Summary

This chapter presented an introduction to interpersonal theory and an overview of the principles on which the main models are based.

The first section presented a chronological account of interpersonal ideas, starting with Sullivan's postulate that human behaviour should be viewed as part of the system in which the elements continuously interact. Section 1.2 provided a description of the interpersonal circle model for conceptualising interpersonal behaviour, which was initially proposed by Leary and subsequently modified by Kiesler, Wiggins, Horowitz and, in a more radical way, Benjamin. Section 1.3 presented the interpersonal octagon proposed by Birtchnell. All these theorists agree that interpersonal behaviour can be conceptualised within the framework of two orthogonal dimensions, namely agency and communion.

Section 1.4 reviewed the measuring instruments based on interpersonal models. This described measures of interpersonal traits, measures of interpersonal problems, measures of interrelating and interpersonal impacts, measures of interpersonal values and motives, measures of self-efficacy, observer ratings of interpersonal behaviour, measures of social support behaviours, measures for children and adolescents, and the correspondence between three of the main measures used in the study of interpersonal transactions.

Section 1.5 presented an evaluation of the theoretical concepts and principles on which interpersonal models are based. Within this section, the first part addressed the explanatory potential of the circle and the octagon models in relation to the evolutionary paradigm and the biological origin of interpersonal behaviour. The second part of this section discussed the principle of circumplex structure, the concept of bipolarity, and the utility of high levels of abstractisation in relation to the concrete reality of human interactions. The following part presented the principle of complementarity and discussed possible reasons for the inconsistency of the evidenced obtained by several studies. The penultimate part of Section 1.5 discussed the principle of vector length and its potential interpretations. The last part of this section presented the rationale for the choice of theoretical framework for the present thesis by outlining the explanatory potential and parsimonious nature of the model.

CHAPTER TWO

DIMENSIONS AND MODELS OF PARENTING

Despite the risk of stating the obvious, the central role that parenting occupies in understanding the normal and abnormal development of children has to be acknowledged. The centrality of this formative role is the principal justification for yet another attempt to further the understanding of its essence through the exercise of the present thesis.

This chapter will present an outline of existing theoretical models and measures of parental behaviour. Section 2.1 will introduce the concept of parenting dimensions. Section 2.2 will describe the classification systems of parenting styles. Section 2.3 will present a chronological account of the instruments developed for the purpose of measuring various aspects of parenting. Section 2.4 will outline the rationale for the development of a new measure and hypotheses of the project.

2.1 Dimensions of parenting

Although the importance of parenting in child development research is widely acknowledged, the complex nature of the phenomenon is reflected in the paucity of answers regarding adequate parenting practices for all children, of all ages, in all situations (Maccoby & Martin, 1983). Even the consistent associations of parenting dimensions with desirable or undesirable outcomes in children have generated modest results in terms of the extent to which these differences can be explained by any single parenting dimension (Cummings, Davies & Campbell, 2000). Consequently, understanding the effects of parenting requires an intricate conceptualisation of parenting and contextual influences, and the separate investigation of parenting dimensions constitutes an intrinsic part of the process. To this end, efforts to understand the essence of parental interactions with children have resulted in conceptual frameworks based, almost invariably, on two main

components. Barber, Stolz and Olsen (2005) refer to the first component as *support*, which is defined as a combination of affective, nurturant and companionate type of behaviours, and the second component as *control*, which is defined as a range of regulating and disciplinary behaviours. The control dimension has been further differentiated into *behavioural* and *psychological*, for which there is also remarkable consensus in the literature (Barber, 1996; Barber, Olsen & Shagle, 1994; Cummings, Davies & Campbell, 2000; Patterson, DeBaryshe & Ramsey, 1989; Steinberg, Elmen & Mounts, 1989).

Similar concepts emerged in Symonds' (1939) parenting framework, which consisted of *acceptance/rejection* and *dominance/submission*. Baldwin's (1948) parenting framework consisted of *control, democracy* and *activity*. Sears, Maccoby and Levin (1957) referred to the concepts of *warmth* and *permissiveness*. Becker (1964) extracted from the literature three components, which he named *love versus hostility, restrictiveness versus permissiveness* and *anxious emotional involvement versus calm detachment*. Schaefer (1965) identified three dimensions, which he labelled *acceptance versus rejection, psychological control versus psychological autonomy* and *firm control versus lax control*. In a review of parent-child studies, Rollins and Thomas (1979) also identified two key dimensions of *support* and *control*. The following section elaborates the characteristics of these three dimensions.

2.1.1 Parental control

Managing children's behaviour and development are important components of child rearing and socialisation. They are the processes through which children internalise values related to conformity and acceptance of rules that promote social order and harmony (Cummings, Davies & Campbell, 2000).

Behavioural control consists of parental behaviours characterised by communication of a set of rules, enforcement of the rules, monitoring and supervision of children's

activities, and the use of inductive discipline techniques that emphasise the consequences of children's actions on others (Barber, 1996; Maccoby & Martin, 1983). Conceptual terms for behavioural control range from parental supervision (Kurdek & Fine, 1995; McCord, 1979) to parental monitoring (Brown, Mounts, Lamborn & Steinberg, 1993) to demandingness (Baumrind, 1991; Maccoby & Martin, 1983) to family management (Patterson & Stouthammer-Loeber, 1984) to structure (Grolnick, 2003).

Research studies consistently generate evidence that close supervision, strict enforcement of the family rules and a democratic recognition of the children's views are associated with desirable child outcomes (Denham, Renwick & Holt, 1991; Maccoby & Martin, 1983; Zahn-Waxler, Radke-Yarrow & King, 1979). The outcomes promoted by appropriate levels of behavioural control are consistently associated with lower levels of behavioural problems, particularly delinquency, externalising problems and affiliation with deviant peers (Loeber & Dishion, 1984; Maccoby & Martin, 1983; McCord, 1979; Patterson & Stouthamer-Loeber, 1984). Low levels or inconsistent patterns of behavioural control may result in increased risk of developing significant psychological problems, such as, aggression, delinquency or pathological levels of impulsivity (Barber, 1996; Baumrind, 1971a).

However, higher levels of parental control do not necessarily result in higher levels of compliance and desirable outcomes. The outcomes depend on the manner in which control is exerted. For example, the use of power-assertive disciplinary techniques, e.g., threats, excessive use of direct commands, deprivation and physical force, not only does not have the desired effect but, in fact, predicts an even wider range of maladjustment issues, including both internalising and externalising symptoms (Cummings, Davis & Campbell, 2000). By comparison, induction techniques that emphasise the painful consequences of the child's offence to others

have been reported to result in greater competence, empathy and pro-social behaviour (Hoffman & Saltzstein, 1967).

The mechanisms involved in successful behavioural control strategies have been approached from various theoretical perspectives. However, although a complete explanation has not been reached, the theoretical accounts of the processes that mediate the effects of parental control strategies suggest that it is important to further distinguish between such behavioural control strategies and their degree of use (Cummings, Davies & Campbell, 2000).

From a social learning theory perspective, the transactional interplay between parent and child during disciplinary encounters can escalate into a power struggle, in which the act of parental surrender would negatively reinforce the child's misbehaviour (Cummings & Davies, 1995). This interplay of coercive processes is associated with externalising symptomatology, which features aggression, noncompliance and conduct problems, and children's use of similar coercive techniques may subsequently extend to other contexts, eventually crystallising into a stable set of antisocial traits (Pettit, Bates & Dodge, 1997).

Another social learning perspective posits that, due to valuing predictability in interpersonal interactions, children experiencing unpredictable patterns of control would increase their levels of misbehaviour in order to increase the negative, but more predictable, responses from parents (Pettit, Bates & Dodge, 1997). Supporting this explanation, in comparison with non-aggressive children, aggressive children experienced more positive and fewer negative consequences for misbehaviour, and fewer positive and more negative consequences for positive behaviour (Cummings, Davies & Campbell, 2000).

From an affective-motivational perspective, the effectiveness of a disciplinary practice may be influenced by the meaning that the child attaches to the particular practice (Hoffman, 1960). Direct commands, threats and physical force may cause

frustration, hostility and tension, and may undermine the development of empathy. Hoffman (1994) further explains that, due to fearing for their own well-being, children may comply with the threats but they may have difficulty understanding and internalising the moral message and accepting it as their own value. The arousal and fear may disrupt the cognitive attempts to understand the consequences of the misbehaviour by redirecting attention towards the more immediate goal of preserving well-being and away from the transgression. The disruption of this cognitive processing causes the accumulation of hostility and tension towards the parents, which, in turn, may increase the likelihood of rejecting parental and societal values (Grusec & Goodnow, 1994a; Hoffman, 1994; Hoffman & Salzstein, 1967).

From a social information processing perspective, Grusec and Goodnow (1994b) are complementing the social learning and affective-motivational models by emphasising the primacy of children's social-cognitive processes in mediating the effects of parental disciplinary strategies. They focus on evaluating the effectiveness of specific techniques in relation to particular contexts and emphasise the benefit of exercising flexibility by selecting disciplinary techniques that are appropriate for the misbehaviour as well as the context. Grusec, Dix and Mills (1982) and Trickett and Kuczynski (1986) propose that the interplay between the contextual characteristics of the discipline encounter influences the probability that children will internalise values by affecting the accuracy of the perceived message underlying the parental discipline and the degree of acceptance of the message.

Psychological control is regarded as a strategy of controlling the child by negatively manipulating the parent-child relationship (Barber, 1996). Psychological control consists of approaches that inhibit or intrude upon the psychological development of the child through exploitation and manipulation of the parent-child bond, e.g., withdrawal of love and induction of guilt, criticisms and expressions of negative affect, e.g., disappointment and shame, and excessive personal control, e.g.,

possessiveness and protectiveness, (Barber, 1996). By attempting to control the child's psychological world, psychologically controlling parents prevent the development of psychological autonomy and a clear sense of identity in the child, as well as appraisal of the self as competent (Barber, Olsen & Shagle, 1994). Psychologically controlling mechanisms involve pressures that are insensitive to the needs of the child, suppress the autonomy of the child and do not encourage interactions with others (Baumrind, 1978; Hauser, Powers, Noam, Jacobson, Weiss & Follansbee, 1984; Maccoby & Martin, 1983). This type of family setting prevents the child from developing healthy awareness and perception of self due to implied disparagement, lack of healthy interactions that would promote adequate self-definition, and limited opportunities to develop a sense of personal efficacy (Barber, 1996). Psychological control has been consistently associated with patterns characterised by feelings of guilt, increased self-responsibility, inability to express aggression (Becker, 1964), dependency (Baumrind, 1978), social withdrawal (Baumrind & Black, 1967), inability to make conscious choices (Baumrind, 1978) low ego-strength (Houser et al., 1984), low self-esteem, passivity, inhibited and over-controlled conduct (Barber, 1996) and depressed affect (Barber et al., 1994).

2.1.2 Parental support

The dimension of parental support appears to be part of a set of parenting characteristics that include expressions of warmth, acceptance, positive emotional tone, sensitivity to children's psychological states and responsiveness to children's psychosocial needs (Cummings, Davies & Campbell, 2000). Parental acceptance and responsiveness have been found to predict positive development outcomes, including self-regulation (Stayton, Hogan & Ainsworth, 1971), pro-social behaviour and greater sociability (Clarke-Stewart, 1973), self-esteem and constructive play (Alessandri, 1992). By contrast, lack of responsiveness has been associated with

maladaptive consequences, including attention deficit disorder (Jacobvitz & Sroufe, 1987), aggression (Egeland, Carlson & Sroufe, 1993) and social withdrawal (Bakeman & Brown, 1980; Egeland, Pianta & O'Brien, 1993). Other positive conditions related to parental support are cognitive development, creativity, conformity, internal locus of control, moral behaviour, and social competence (Maccoby & Martin, 1983; Rollins & Thomas, 1979).

The association between parental support and sociability in children finds support from attachment theory, which distinguishes children on the basis of parental support they receive (Ainsworth, Blehar, Waters & Wall, 1978; Bowlby, 1969). Securely attached children differ from non-securely attached children in the degree and quality of their sociability, in that securely attached children have more friends, are more popular, more empathic, more confident and cooperative, more inclined to approach others and respond with more positive affect (Ainsworth et al., 1978).

The link between parental support and social competence in children can be explained by the concept of internal working models, which is also rooted in attachment theory, and posits that relationships have continuity and coherence and their template is carried forward to other relationships (Bowlby, 1969, 1973). As a result, children's relationships with others are a continuation of the attachment style experienced with their parents. A second explanation of this link is offered by social learning theory (Bandura, 1977), according to which social behaviours that are directed towards the child could serve as guiding model of social interaction. The child would then imitate this guiding model in interactions and relationships with peers and adults outside the home.

Barber et al. (2005) also propose symbolic interaction theory as explanation for this link. They refer to the concepts of *reflected appraisals* and the *looking-glass self,* through which children use parental behaviour as symbols of their own worth and competence. As a result, children who are consistently nurtured and supported learn

to believe that they are trusted, competent and effective, which, in turn, contributes to being more confident in engaging with others (Barber et al., 2005).

Studies investigating parental support and parental behavioural control revealed a general theme that these characteristics are related to higher levels of psychosocial functioning and lower levels of maladaptation (e.g., Brody, Dorsey, Forehand & Armistead, 2002; Beyers, Bates, Pettit & Dodge, 2003). Studies investigating parental support and psychological control found that high levels of both dimensions predicted risk of association with deviant peers (Goldstein, Davis-Kean & Eccles, 2005). Some studies have paired parental support with harsh or inconsistent parenting and showed links to internalising as well as externalising symptoms (Melby, Conger, Conger & Lorenz, 1993). Numerous other studies have assessed all three dimensions and results showed correlations between parental support and psychological maturity, self-esteem, academic achievement, internalised and externalised problem behaviour, and correlations between parental control and internalised and externalised problem behaviour, and peer associations (e.g., Brown, Mounts, Lamborn & Steinberg, 1993; Fauber, Forehand, Thomas & Wierson, 1990; Galambos, Barker & Almeida, 2003; Gray & Steinberg, 1999; Herman, Dornbusch, Herron & Herting, 1997; Soenens, Elliot, Goossens, Vansteenkiste, Luyten & Duriez, 2005; Walker-Barnes & Mason, 2001). Highlighting the various limitations of these studies, Barber, Stolz and Olsen (2005) suggested that the key processes underlying parental influence may not emerge by studying the constructs of support and control, but by investigating the correspondence between these constructs.

Although parental support has been regarded as a valid construct in the conceptualisation of parenting, it later emerged that it may refer to a more complex network of dimensions (Cummings, Davies & Campbell, 2000). Indeed, Pettit, Bates and Dodge (1997) found that strategies which were thought to aggregate into the parental support dimension, such as, warmth, proactive teaching, calm discussion,

are not generally related. As a consequence, research has also focused on the separate study of these dimensions and their effects on the interaction between parents and children. In one such study of process, Cohn and Tronick (1989) found that parental withdrawal and unresponsiveness elicit infant protest and distress, whereas intrusiveness and hostility cause withdrawal and disengagement. Cummings and Davies (1995) interpret the first sequence of events as holding short-term adaptational value by increasing responsiveness in unresponsive parents, and the second as attempting to reduce physiological and affective arousal by reducing contact with the source of stress. Based on these observations and interpretations, Parke, Cassidy, Burks, Carson and Boyum (1992) have proposed that different styles of parenting, e.g., stimulation, responsiveness, result in different outcomes in children's emotion regulation, interpersonal information processing in social-emotional situations, and understanding of emotions. These, in turn, may improve or impair children's ability to function competently in other interpersonal contexts (Denham, Renwick & Holt, 1991).

2.2 Classifications of parenting styles

Possibly the most recognised conceptualisation of parenting is that proposed by Baumrind (1967, 1971a), and later modified by Maccoby and Martin (1983), which rests on two general dimensions of *responsiveness* and *demandingness*.

2.2.1 The classification of parenting styles developed by Baumrind

Baumrind emphasised the parents' belief system as the overarching structure within which parenting takes place, and incorporated into her model the emotional and behavioural processes found in earlier attempts of explaining socialisation. Baumrind believed that the values and beliefs that parents hold about their roles as parents and the nature of children contribute to the definition of naturally occurring patterns of

affect, practices and values (Darling & Steinberg, 1993). For Baumrind, the pivotal element of the parental role was the endeavour to socialise the child towards conforming to the necessary demands of others while maintaining a sense of personal integrity (Darling & Steinberg, 1993). In order to achieve this, Baumrind (1967, 1971a) proposed that both, parent-child emotional relationships and parental control, are necessary, as emotional relationships foster individuality, including autonomy, self-worth and self-regulation in children, whereas control fosters the development of the child as a contributing member of the society (Darling & Steinberg, 1993).

Baumrind (1991) defines *demandingness* as "the claims parents make on the child to become integrated into the family whole by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys" (p.748). The concept of *responsiveness* is defined as "the actions which intentionally foster individuality, self-regulation and self-assertion by being attuned, supportive and acquiescent to the child's special needs and demands" (Baumrind, 1991, p.748). Based on these assumptions, Baumrind developed the *tripartite classification* (Cummings, Davies & Campbell, 2000), or the *configurational approach* (Darling & Steinberg, 1993), which distinguishes between three qualitatively different types of parenting styles.

Authoritative parents utilise firm and consistent control, which is focused on integrating the child into the family and society as well as emphasising increasing standards of maturity with the child's age (Cummings, Davies & Campbell, 2000). Communication styles with children are characterised by warmth, clarity, reciprocity and verbal negotiation, resulting in control, i.e., high behavioural control, taking place in the context of warmth, i.e., positive parent-child emotional relationship, and encouragement of the child's autonomy and individuality, i.e., low psychological control (Cummings, Davies & Campbell, 2000).

Children of authoritative parents have been found to possess a balanced combination of high levels of agency, i.e., independence, high self-esteem, achievement oriented, and communion, i.e., friendly, sociable, cooperative (Baumrind, 1967, 1971a). The positive effects of authoritative parenting appear to be consistent across developmental stages from early childhood to adolescence (Baumrind, 1991; Steinberg, Elmen & Mounts, 1989) and across ethnicity and socioeconomic status (Steinberg, Mounts, Lamborn & Dornbusch, 1991).

Authoritarian parents are also firm in their control practices but they use strategies that are qualitatively different from those used by authoritative parents. This parenting style consists of strict, unquestioned obedience to parental authority and no allowance for any assertion of the child's individuality, which attracts swift and severe punishment (Baumrind, 1967, 1991). As a result, although children may learn to understand rules through their strict emphasis and enforcement by parents, the absence of inductive disciplinary techniques, such as reasoning and explanation of rules, does not promote children's internalisation of the values of family and society (Cummings, Davies & Campbell, 2000). Authoritarian parent's detachment, lack of warmth and discouragement of autonomy prevent children from achieving a sense of personal integrity and efficacy (Cummings, Davies & Campbell, 2000). Baumrind (1991) found that, although children exposed to higher levels of restrictive control and authoritarian parenting styles are less likely to show externalising symptoms, delinquency, sexual promiscuity and drug use, their individuality and agency is compromised due to imposed conformity to the rules. As a consequence, children of authoritarian parents are more likely to develop internalising symptoms, low self-efficacy, self-devaluation and diminished autonomy (Baumrind, 1967, 1991).

Permissive parents are characterised by indulgence and acceptance of almost every behaviour of their children, including impulsive and disruptive behaviour, reluctance to impose any rules or authority, and frequent expressions of warmth and affection

(Baumrind, 1967, 1991). The lack of discipline and control causes children to regulate their own behaviour and make decisions regarding their activities (Maccoby & Martin, 1983). These high levels of warmth associated with low levels of control and demandingness for maturity foster high levels of agency and individual development at the expense of the development of communion (Baumrind, 1991). As a consequence, children of permissive parents are likely to exhibit high levels of self-worth and self-esteem, and low levels of maturity, impulse control, social responsibility and achievement (Cummings, Davies & Campbell, 2000).

2.2.2 The classification of parenting styles developed by Maccoby and Martin

Expanding the classification developed by Baumrind, Maccoby and Martin (1983) proposed that parenting styles can be defined by two dimensions, which they named *demandingness* and *responsiveness.* The orthogonal positioning of these two dimensions resulted in three parenting styles similar to the ones developed by Baumrind, i.e., authoritative, authoritarian and indulgent, and a new style referred to as *neglecting* or *indifferent-uninvolved.* According to Maccoby and Martin's (1983) two-dimensional classification, authoritative parents are high in both demandingness and responsiveness, authoritarian parents are high in demandingness and low in responsiveness, indulgent parents are high in responsiveness and low in demandingness, and neglecting parents are low in both demandingness and responsiveness.

The neglecting parenting style features lack of emotional involvement with the child, spending as little time and energy as possible with the child and overall neglect (Cummings, Davies & Campbell, 2000). Considered an inconvenience, interactions with children are dealt with in a manner that terminates the interaction quickly and effortlessly (Maccoby & Martin, 1983). The neglecting parenting style fails to promote either communion or agency and, compared with the other styles, predicts

the most maladaptive outcomes (Baumrind, 1991). Children of neglecting parents are at highest risk of displaying low levels of social and academic competence as well as prone to antisocial and impulsive behaviour, including delinquency, substance misuse, offending behaviour and sexual promiscuity (Lamborn, Mounts, Steinberg & Dornbusch, 1991).

The differences between the two classification systems of parenting stem from the theoretical assumptions on which they are constructed as well as from the range of populations investigated. Maccoby and Martin's (1983) scheme is influenced by a behavioural perspective, in which responsiveness refers to the frequency of behavioural contingencies that reward desired behaviours and reduce undesired behaviours (Cummings, Davies & Campbell, 2000). Baumrind's (1967, 1991) classification is based on the qualitative differences in which control is used, for example, physical punishment or explanation. These differences, however, are not captured by Maccoby and Martin's (1983) classification, which, due to the positioning of the two dimensions, implies that authoritarian and authoritative parents use comparable high levels of behavioural control. Steinberg, Elmen and Mounts (1989) further clarify this qualitative difference by distinguishing high levels of psychological control, as used by authoritarian parents, from high levels of behavioural control, as used by authoritative parents.

Regarding the populations studied, Baumrind (1967) limited the scope of her investigation to the influence of parenting variations within well-functioning families, whereas Maccoby and Martin (1983) were interested in a wider range of populations (Darling & Steinberg, 1993). This difference constitutes one of the reasons for the emergence of the neglecting parenting style in Maccoby and Martin's model, the other reason being the logical consequence of combining the two dimensions, i.e., demandingness and responsiveness.

Lewis (1981) pointed out the disadvantage of Baumrind's typological approach by highlighting the difficulty in distinguishing between the mechanisms that underlie differences between children from different types of families, due to the unavoidable intercorrelations of parent characteristics. Lewis proposed that it is not the high control characteristic of authoritative families that promotes the development of independent sense of self while conforming to rules, but rather the reciprocal communication that takes place in authoritative families. This communication, Lewis (1981) further elaborates, offers children the experience of successfully modifying parental rules through argumentation, which suggests that the positive outcomes evident in authoritative families are attributable to the parents' openness to bidirectional communication. In her reinterpretation of Baumrind's typology, Lewis (1981) redefined authoritative parenting as featuring mutual accommodation rather than a certain type of control.

Darling and Steinberg (1993) also draw attention to the limitations of the typological approach by indicating that Lewis' critique of Baumrind's work raised two further points. The first is that any parenting typology captures a configuration of parenting practices, which makes it difficult to ascertain which aspect of parenting affects which outcome. The second is that existent notions regarding the processes through which parenting style influences child development are speculative rather than empirically grounded (Darling & Steinberg, 1993).

The departure from the typological approach by Maccoby and Martin (1983) was an attempt to distinguish between the processes that underlie the influence of style and, therefore, address the two points that limited this approach. The authoritarian and authoritative parenting styles defined by demandingness and responsiveness do not correspond directly to the styles described by Baumrind. Although Baumrind (1967, 1991) identified reciprocity of communication and the use of explanation and reasoning as important features that distinguish authoritative from authoritarian

parents, Maccoby and Martin (1983) specifically separated their discussion of parental communication patterns from their discussion of parenting style (Darling & Steinberg, 1993). However, differences in the quality of control between authoritative and authoritarian parents may be difficult to locate using models based only on responsiveness and demandingness, due to their exclusion of other potential features, such as restrictiveness, warmth, autonomy granting or coerciveness (Darling & Steinberg, 1993).

Maccoby and Martin (1983) caution against the definition of configurational typologies using linear dimensions, due to the ensuing difficulties in the interpretation of the results. For example, differences in the development of children of authoritative and authoritarian parents can be defined as resulting from differences in parental responsiveness, since in Maccoby and Martin's conceptualisation both styles of parenting feature high demandingness. However, despite high demandingness found in both authoritarian and authoritative styles, Baumrind (1991) argues that the qualitative differences of the demandingness are not explained by variance in responsiveness but by distinguishing between two types of demandingness, i.e., restrictiveness and firm control. Restrictiveness appears to be a concept similar to the concept of psychological control proposed by Schaefer (1965) and Steinberg et al. (1989), whereas firm control appears to relate to the concept of behavioural control identified by Steinberg et al. (1989). According to Baumrind (1991) both authoritarian and authoritative parents exhibit high firm control but authoritarian parents are also highly restrictive.

2.2.3 Content, context and process in parenting – integrative models

The identification of parenting dimensions has been an essential step in the development of parenting models. However, after a few decades of research, this conceptualisation still fails to provide a satisfactory understanding of the intricacy of

the process. For this reason, a more integrative direction in research has been the investigation of parenting dimensions as component parts within other contexts of parenting. Since the present thesis is concerned with the development of a measure of perceived parenting dimensions, integrative models may not appear directly and immediately relevant, which is the reason for presenting here only a brief overview of the two most influential models in the field.

In his process model of the determinants of parenting, Belsky (1984) conceptualised parenting as part of a bi-directional transaction process, in which, not only parent but also child characteristics, family and wider social systems contribute to the network of factors involved in the outcome. The three determinants, or subsystems, identified by Belsky (1984) are personal psychological resources of parents, characteristics of the child, and contextual sources of stress and support. The model proposes that sources of contextual stress and support can influence parenting directly, or indirectly by firstly influencing individual psychological well-being, and that personality influences contextual support or stress, which in turn feeds back to shape parenting. Belsky's framework further proposes that the most effective buffers of the parent-child relationship from stress are the personal psychological resources of the parent, followed by the contextual sources of support, in turn followed by the characteristics of the child.

A similar model of parenting was proposed by Darling and Steinberg (1993), who emphasise the distinction between parenting practices and parenting style. Parenting practices are defined as behaviours specific to the socialisation goals, such as attending school functions, whereas parenting styles are defined as a constellation of attitudes towards the child, which create an emotional climate for the expression of parental behaviours. Darling and Steinberg (1993) further elaborate that parenting practices are the mechanisms through which parents directly influence specific child development outcomes, and parenting styles are viewed as contextual variables that

moderate the relationship between parenting practices and developmental outcomes. Parenting style is hypothesised to moderate the influence of parenting practices by transforming the nature of the parent-child interaction and by influencing the child's openness to parental influence (Darling & Steinberg, 1993).

From an interactional perspective, it appears that Darling and Steinberg (1993) allude, perhaps unknowingly, to the concepts of content and process. Although the terms are best known as referring to interactions in the context of psychotherapy, they are, in fact, two of the facets of any interaction between two or more individuals. Content refers to *what* and process refers to *how* is being communicated during an interaction. Parenting practices, therefore, can be viewed as the content of the interaction between parent and child, and parenting styles can be viewed as the process. This particular re-phrasing, of parenting practices as content and parenting styles as process, may prove useful for subsequent research and its possible applications, especially to therapeutic settings.

Whilst Belsky's (1984) framework offers the potential for identifying the direction of influence between the components of the entire eco-system, Darling and Steinberg's (1993) model offers the potential for investigating the interplay between content and process at the parent-child level. At the same time, Darling and Steinberg's model can be viewed as one of the component subsystems of Belsky's framework and, depending on the purpose of research, the investigation can focus on the micro- or the macro-system.

2.3 Measures of parental behaviour

One of the first instruments for the measurement of parental behaviour was designed by Champney (1941) and assessed the parent-child relationship in the home of the participants. Trained raters are used for assigning scores on 30 scales, such as, child-centredness, general babying, general protectiveness and restrictiveness of

regulations. Roff (1949) factor analysed data obtained using the scales and seven factors emerged, the first three being *concern for the child*, *democratic guidance* and *permissiveness*. Buros (1970) has shown that the scales are acceptable in terms of test-retest reliability but concluded that their use is limited to the skilled interviewer.

In his attempt to discover the variables that were important for the development of children, Becker (1964; Becker et al., 1959; Becker et al., 1962) used some items from Champney's (1941) scales and combined them with interview ratings of parents and children. Data from interviews with mothers and fathers were factor analysed separately and five similar factors were extracted, including *permissiveness versus restrictiveness* and *child rearing anxiety versus unsolicitousness*. Becker et al. (1962) labelled *restrictive* a parent who emphasised neatness, order, care of the house and furniture, was strict, demanded table manners and used rewards frequently. The *child rearing anxious* parent was showing interest in the child's welfare, had low self-esteem, was maladjusted, experienced significant levels of disciplinary tension, and was dissatisfied with the situation. Due to his interest in isolating critical parental characteristics and their relationship, Becker (1964) analysed data from his studies together with data from other research. The results of his factor analyses pointed towards three dimensions of parental behaviour of *warmth versus hostility, restrictiveness versus permissiveness*, and *anxious-emotional involvement versus calm detachment*. Becker (1964) further suggests that an overprotective parent displays high levels of both warmth and restrictiveness, and points towards a negative relationship between an overprotective and an anxious parent.

Roth (1961) designed the Mother-Child Relationship Evaluation, which measured parental attitudes of rejection, acceptance, overindulgence and overprotection. In an attempt to provide an objective assessment of a mother's behaviour to her child, Roth correlated the mothers' responses to the measure to the children's perception of how

the mothers would score themselves. However, the results did not support the validity of the measure.

Roe and Siegelman (1963) developed the Parent-Child Relation Questionnaire (PCR) in order to assess remembered parental behaviour in childhood. The measure consisted of 10 subscales and the three factors imposed on the solution were *loving-rejecting* and *casual-demanding,* which emerged as bipolar, and a unipolar factor labelled *overt concern for the child.* However, the reliability and validity of the measure were not assessed.

Pitfield and Oppenheim (1964) constructed an attitude inventory for the measurement of child-rearing practices, which consisted of 52 questions relating to 10 categories. The dimensions were generated using factor analytic procedures and the factors obtained were *strictness* and *acceptance-rejection*, which comprised of attitudes such as acceptance, overprotection and objectivity. From the study of the items and their loading, Parker (1983) concludes that overprotection was associated with both domineering and indulging behaviours. However, Parker points out that the authors did not state how the items were generated or which aspect of reliability was assessed.

Schaefer and Bell (1958) initially designed the Parental Attitude Research Instrument (PARI), which assessed maternal attitudes using a self-report questionnaire with 80 items. The items were arranged into three groups, which were named *democracy-domination*, *acceptance-rejection*, and *indulgence-autonomy*.

Subsequently, Schaefer (1959) extended his study of parental behaviour to include ratings from psychologists as well as children, and reported two orthogonal dimensions of parental behaviour, i.e., *love versus hostility* and *autonomy versus control*. As mentioned in Chapter One, Schaefer also arranged these dimensions to form a circumplex model of parental behaviour.

The influential Children's Reports of Parental Behaviour Inventory (CRPBI) was developed by Schaefer (1965) and was based on the concepts of the circumplex model. Ten items for each of 26 concepts were generated by psychologists and questionnaires were completed by clinical as well as non clinical populations of children and adults, rating both mothers and fathers. The principal component analysis revealed three factors labelled *acceptance-rejection*, *psychological control-psychological autonomy* and *firm control versus lax control*. The broad relevance of the configurational model of parental behaviours was supported by the similarity in the factor loadings obtained from analysing separately the scores for mothers, fathers, children and adults.

The CRPBI has subsequently been revised (e.g., Renson et al., 1968), shortened (Raskin et al., 1971; Schludermann & Schludermann, 1970), and widely used in research related to parental behaviour. Barber, Stolz and Olsen (2005) confess that, in a personal communication with Schludermann and Schludermann they discovered that the shortest version of the CRPBI has only 30 items, 10 for each of the three original dimensions. However, this version has not been published.

The Parental Bonding Instrument (PBI) was designed by Parker, Tupling and Brown (1979) in an attempt to define the parental dimensions more closely and to determine the accuracy of their measurement. The PBI was developed using a nonclinical sample of adults, who were asked to rate their parents as they remembered them in the first 16 years. The two factors that emerged from the analysis were *care* and *protection*, which were found to correlate negatively in subsequent studies, suggesting that overprotection is linked with insufficiency of care (Parker et al., 1979). Factor loadings revealed close agreement between mother and father scores for both care and protection. The reliability and validity of the PBI have been tested in clinical and nonclinical groups and was pronounced adequate (Parker et al., 1979).

The PBI will be revisited in Chapter Five, where it will be described in the capacity of concurrent validation instrument.

Perris, Jacobsson, Lindstrom, von Knorring and Perris (1980) developed the EMBU, which represents the Swedish acronym for "my memories of upbringing" (Egna Minnen Betraffande Uppfostran). The EMBU was developed using a nonclinical sample, it consists of 81 items and measures adults' perception of their parents' rearing behaviour. The factors found to underlie parental behaviour were *rejection*, *emotional warmth*, *protection,* and *favouring subject*. A shorter version of the instrument, the s-EMBU, was developed by Arrindell et al. (1999), which consists of 23 items, divided into three scales, i.e., rejection, emotional warmth and protection. The factorial structure and reliability of the s-EMBU was assessed using samples of students from Italy, Hungary, Guatemala and Greece, 2442 participants in total, and was found a reliable equivalent of the 81-item version (Arrindell, Sanavio, Aguilar, Sica, Hatzichristou, Eisemann, et al., 1999).

Buri (1991) developed a Parental Authority Questionnaire (PAQ) in order to measure the three parenting styles conceptualised by Baumrind (1971a), i.e., authoritative, authoritarian and permissive. The PAQ consists of 30 items, 10 for each style, which rate on a five-point Likert scale the participants' perception of their parents. Buri's (1991) analyses demonstrated that the PAQ is a reliable measure of Baumrind's parenting typology, with adequate internal consistency and test-retest reliability coefficients. The validity of the instrument was established using expert ratings and studies which confirmed correlations with other parenting variables.

The PAQ was later revised by Reitman, Rhode, Hupp and Altobello (PAQ-R; 2002) in order to provide a version for parents' self-report. This was achieved by converting the phrasing of the statements of the original PAQ into first-person statements.

The instruments presented here have been chosen for their frequency of use in the field of parental behaviour measurement, as well as for some degree of rigor with which their properties have been assessed. However, Parker (1983) expresses his reservations regarding the nature of these factor analytic studies by highlighting the limitations of the item pools used and the inconsistencies in the grounds on which items have been collected into scales. Parker (1983) further draws attention to the diversity of the samples used for the development of these measures, in that some studies have used the ratings of parents, some have used the recipients of parenting, clinical groups, non-clinical groups, and trained raters. For these reasons, comparisons and conclusions regarding the psychometric properties of the measures cannot easily be established. Despite the limitations, these measures deserve the credit for their contribution to the study of parenting behaviour. This contribution comprises of consistently discovering that two main dimensions underlying parental behaviour are support and control.

However, the fact that numerous questionnaires for the assessment of parental behaviour already exist may invite the questioning of the reason for a new instrument. The next section will attempt to elucidate this reason.

2.4 Rationale for the development of a new measure

The rationale for the development of the ARPRQ stems from the advantages of investigating perceived parenting from an interpersonal perspective, for which a measure does not yet exist. One of the themes emerging from the literature suggests that parenting can be conceptualised as consisting of two dimensions, support and control. The definitions of support and control appear to be remarkably similar to the definitions of proximity and power proposed by relating theory (Birtchnell, 1987; 1993) and, to some extent, by interpersonal theory (Horowitz, 2006; Kiesler, 1982; Leary, 1957; Wiggins, 1979). For this reason, this thesis proposes that parenting can

be regarded as an interpersonal transaction of proximity and power and, therefore, can be conceptualised using the same two dimensions postulated by relating theory.

2.4.1 Deconstructing the constructs – a new conceptualisation of parenting styles

The fact that similar dimensions have been extracted from the study of adult interpersonal interactions as well parental behaviour indicates that parenting may not necessarily require studying as a separate phenomenon but can be viewed as any interpersonal interaction. One of the reasons for choosing Birtchnell's (1987, 1993) relating theory as a configuration for parental relating is the simplicity of its labels and purity of its constructs, which allows their application to both animal and human behaviour. Existing measures of parental behaviour appear to be based upon aggregates of other constructs and, although semantically any construct can be deconstructed *ad infinitum* (Eysenck, 1983)*,* measuring constructs that are as pure as pragmatically possible would carry the advantage of establishing clearer links between parenting, or perceived parenting, and child outcome. As discussed in Section 2.2.2, the inability to establish these links has been considered the principal disadvantage of configurational models of parenting (Maccoby & Martin, 1983; Darling & Steinberg, 1993). Concepts such as acceptance, care, warmth, love, responsiveness, and especially support, not only appear to incorporate a range of constructs but also seem incompatible with an explanation from the evolutionary perspective. For example, whilst it may be possible to imagine a caring animal parent, envisaging a supportive animal parent may prove considerably more challenging. Although such parallels with animal behaviour may appear crude when applied to the conceptualisation of human behaviour, parenting, in all species, does have a crude and obvious relevance to survival, which is considered to justify the directness of the parallel.

The conceptualisation of parental relating as consisting of two main orthogonal axes of proximity and power would result in placing concepts such as acceptance, warmth, care and love on the *close* extremity of the proximity axis. The concept of support, however, appears to encompass closeness as well as a degree of power, due to its semantic connotation of *providing for, looking after* and *helping,* which all imply positions of greater ability compared to the target of behaviour. Consequently, support would be placed on the positive upper-close octant, which is thought to be the result of the combination of power and closeness, as shown in the upper diagram of Figure 2.1.

It appears that the positive upper-close octant is, in fact, the essence of parenting and the precursor to the formation of attachment in the young. Bowlby (1977) described attachment as any form of behaviour that results in a person attaining or retaining proximity to some preferred individual, who is perceived as stronger and/or wiser. Influenced by the work of ethologists, such as Lorenz (1957), Harlow (1958) and Hinde (1966), Bowlby (1969, 1973) observed that at birth the infant is completely helpless and could not survive independently. This condition places the infant in a position of lowerness compared to the parent on the power axis, and a position of closeness on the proximity axis. Consequently, Birtchnell (1987) argues, in order to ensure survival of the offspring, the natural relating position of the parent towards the young would be positive upper close.
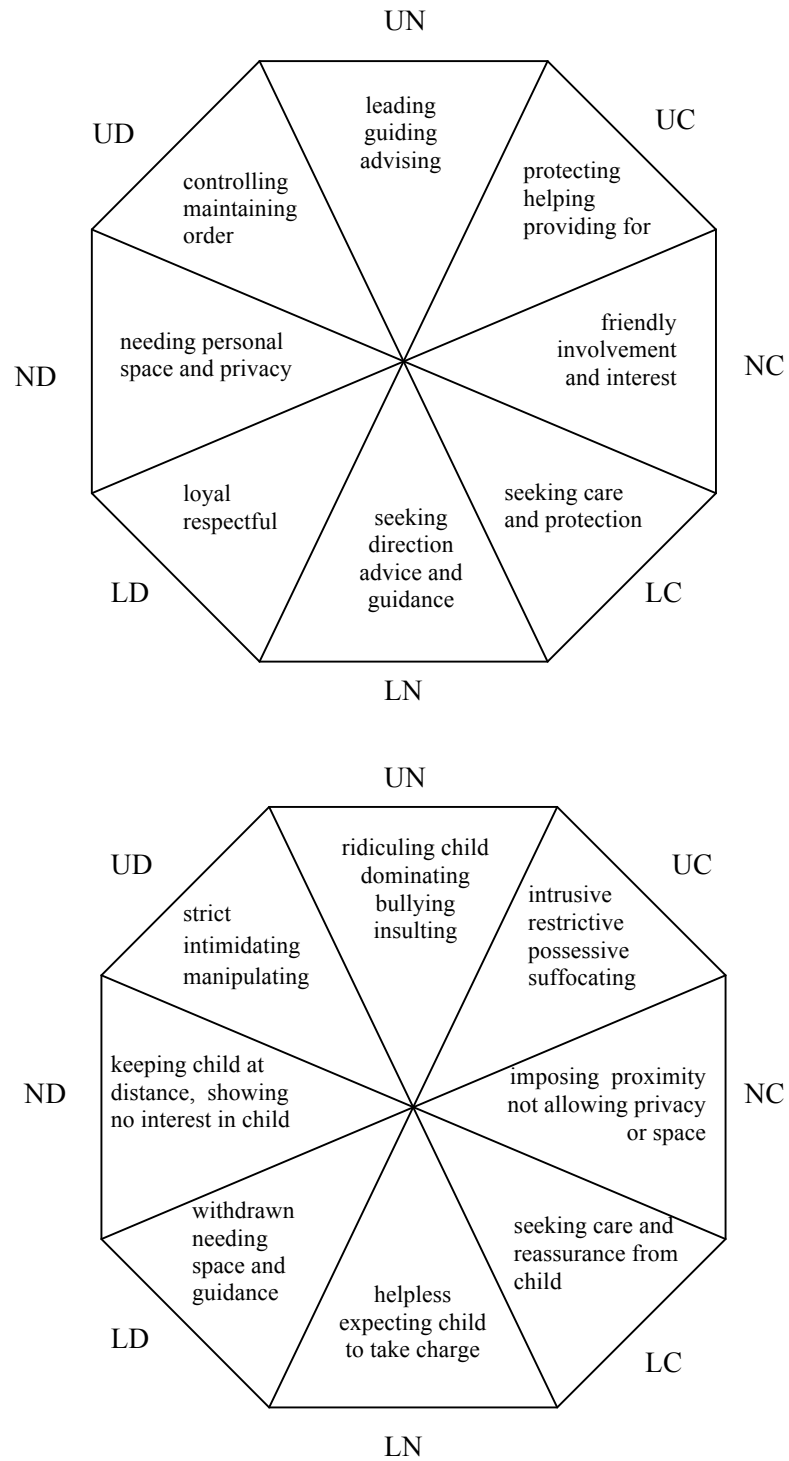
Figure 2.1: Proposed conceptualisation of parental relating as based upon relating theory. The upper octagon shows examples of positive relating and the lower octagon shows examples of negative relating.

The literature regarding the concept of control appears more fragmented than the literature addressing parental support. This may be due to the different perspectives from which the two constructs have been approached. The construct of behavioural control manifests through behaviours such as monitoring, supervision, disciplining, and enforcing rules, and the construct of psychological control consists of emotional manipulation, criticism, expressions of negative affect, and excessive personal control (Barber, Stolz & Olsen, 2005). Considering these manifestations in conjunction with the outcomes associated with each, and outlined in Section 2.1, it appears that, in broad terms, the literature is referring to "good control" and "bad control", or in marginally less judgemental terms, "positive" and "negative". The distinction between positive and negative forms of control coincides with one of the main principles of relating theory, i.e., the distinction between positive and negative forms of relating. In light of relating theory, the characteristics of behavioural control could be conceptualised as the positive form of upper relating styles, i.e., Upper Distant (UD), Upper Neutral (UN) and Upper Close (UC), and psychological control as the negative form of these styles. Examples of behaviours for each of these relating styles are shown in Figure 2.1. It appears that, although with different labels, the distinction between positive and negative forms of relating has been applied to the concept of parental control but not to parental support, which could be one of the reasons for the literature suggesting the existence of one type of support and two types of control.

Returning to the concept of parental support, according to relating theory this can also manifest in negative forms, such as, for example, intrusiveness or possessiveness, which could be conceptualised as negative Upper Close (UC) and negative Neutral Close (NC). As presented in Section 2.1, the literature associates these types of behaviours with psychological control rather than support, which can be explained in two ways. The first explanation could be the distinction between the

proposed positive and negative forms of support, which appears to be acknowledged in the literature as either existent or non-existent, with no reference to the possibility of variance in the degree of support or the consequences of this variance. The second explanation could be the identification of other relating dimensions underlying the concept of support, which, as mentioned above, already incorporates an element of power. Examples of manifestations of these relating styles are shown in the lower diagram of Figure 2.1.

Since it has been suggested that parenting is an essentially upper relating state, the proposal that it can also incorporate forms of lowerness may, justifiably, appear as a most intriguing contradiction. This apparent inconsistency can be explained using Birtchnell's (1993) principle of versatility or, more precisely, the development of this characteristic in the young. As the child develops, the power differential between parent and child changes, in that the child becomes increasingly self-sufficient and starts progressing towards the upper positions. At the same time, and due to the child progressing towards upperness, the degree of proximity between parent and child changes, in that the child gradually becomes able to explore the environment without the parent, and the parent gradually allows the child to do so. Eventually, the child becomes as self-sufficient as the parent and can detach from the parent completely, although in humans this detachment is not as abrupt and final as in other animals. Indeed, Bowlby (1977) qualified human attachment as a feature that persists "from cradle to the grave". In relating theory terms, this progression from secure base to independence is conceptualised as the necessity for the child to experience, and feel comfortable in, all relating states and, therefore, to become what Birtchnell (1993) calls a "versatile" relater. In order to facilitate the development of versatility in the child, the parent also needs to be a versatile relater. More specifically, in order to facilitate the development of positive upperness in the child, the parent needs to show the ability to relate from a position of positive lowerness. This state of relating

is likely to occur initially during pretend play and later it can progress to interactions in which the child is genuinely upper to the parent.

However, the negative form of lowerness in the parent has already been identified in the literature as *role reversal,* which has been classified as a relationship disturbance between parent and child (Macfie, McElwain, Houts & Cox, 2005). Role reversal has been defined as the inappropriate expectations of a child to meet the parent's needs (Boszormenyi-Nagy & Spark, 1973; Jurkovic, 1997; Kerig, 2005; Morris & Gould, 1963). Role reversal has been found to compromise the development of autonomy and individuation in the toddler period (Jacobvitz, Morgan, Kretchmar & Morgan, 1991) and is associated with identity issues in adults (Fullinwider-Bush & Jacobvitz, 1993). Role reversal relationships have been found to predict attention problems (Carlson, Jacobvitz & Sroufe, 1995; Jacobvitz & Sroufe, 1987), externalising symptoms and social problems (Macfie, Toth, Rogosch, Robinson, Emde & Cicchetti, 1999), as well as depression, anxiety and low self-esteem (Jacobvitz & Bush, 1996). This extremely brief outline of role reversal and its associated child outcomes suggests that the concept of lowerness of the parent in comparison to the child reflects not only its empirical roots but also its frequent occurrence. Consequently, the proposed conceptualisation may prove a useful framework for the study of parental relating in the normal population.

To this end, the conceptualisation of parenting as a form of relating could find a place in the literature at the context level mentioned in Section 2.2. It could reside within other models as "parenting style", which was described by Darling and Steinberg (1993) as the "moderating influence on the relationship between parenting practices and developmental outcomes and through its influence on the child's openness to parental socialisation" (Fig. 1, p. 493).

It can be argued that, due to its relevance and stability across species and times, the moderating potential of parenting style, or parental relating, may be more pertinent to

child outcome than parenting practices themselves. Whilst parenting practices can change from one generation to the next due to societal changes, parental relating, as based upon relating theory, is much more universal in nature due to its biological basis. As the principal feature of relating theory, the distinction between positive and negative forms of relating offers the potential to discriminate between populations and predict specific outcomes. Furthermore, and most importantly for its application to parenting, it has the potential to reconcile and integrate the various dimensions and configurations of parenting discussed in the literature.

2.4.2 The purpose of the instrument

The questionnaire under development, the ARPRQ, will be required to measure retrospectively the degrees of proximity and power exhibited by parents, as perceived by the child. The temporal frame of reference will be childhood, approximately until the age of twelve, after which it is assumed that children would commence puberty and parenting requirements would change.

The measurement of perceived rather than actual relating is considered of interest due to the significance of the interpretation of behaviour, rather than behaviour per se. In a succinct overview of models of interpersonal perception, Leising and Borkenau (2011) conclude that this may the case because the consequences of the behaviour will largely depend on the interpretation by the perceiver. Indeed, in as early as the first century, Epictetus (55 - 135 AD) thought that people are not affected by the events themselves but by their interpretation of the events (Dancy & Sosa, 1993). Consequently, the relationship between parenting styles and child outcome would depend, to a large degree, upon the perception of the parent's behaviour by the child.

A model of parenting that appears to resemble relating theory is the configuration that emerged from Parker et al.'s (1979) development of the PBI. Although rarely

acknowledged as a parenting model, the orthogonal positioning of the two resulting factors, care and over-protection, generated four parenting styles, referred to as "parental bonding possibilities" (Parker et al., 1979, p. 8). This configurational resemblance is the reason for using the PBI in the present project as concurrent validity instrument for the ARPRQ.

2.4.3 Research aims and hypotheses

The main aim of the present project was the development of a questionnaire capable of assessing parenting styles according to the proposed conceptualisation of parental relating. To this end, the instrument was required to demonstrate certain psychometric properties, which will be discussed in Chapter Three. These psychometric properties were formulated and tested as the hypotheses listed below. Regarding the reliability of the ARPRQ, it was hypothesised that each scale of the questionnaire would demonstrate adequate internal consistency reliability, as assessed by the value of Cronbach's Alpha coefficient, the item-total and inter-item correlation coefficients.

Regarding the requirement of validity, it was hypothesised that:

1) the scales of the ARPRQ would show satisfactory concurrent validity as demonstrated by negative correlations with the Care scale and positive correlations with the Overprotection scale of the PBI;

2) the scales of the ARPRQ would show good construct/concurrent validity as indicated by the positive relationship between perceived parenting styles assessed using the new questionnaire and perceived parenting styles generated using interviews;

3) the ARPRQ would demonstrate validity of the constructs under investigation as suggested by the nature of the factors extracted, which would coincide with either the

four main factors underlying relating theory, i.e., closeness, distance, upperness and lowerness, or the eight resulting combinations of these.

2.5 Summary

This chapter presented an overview of the literature regarding existing models of parenting and proposed a new conceptualisation of parenting styles as the principal justification for the development of the new measure.

Section 2.1 described the dimensions of parenting that consistently emerged in the literature over the past few decades, namely support and control, and the child outcomes associated with each. This section further discussed the division of the control dimension into behavioural and psychological types and offered various explanations for differences in child outcomes.

Section 2.2 presented an outline of the two main configurational models, or typologies, of parenting. The first model described was Baumrind's tripartite configuration, which consists of authoritative, authoritarian and permissive parenting. The second model was Maccoby and Martin's four-type configuration, which consists of authoritative, authoritarian, indulgent and neglectful types of parenting. These were followed by the process model proposed by Belsky, and by the context model developed by Darling and Steinberg, both of which were discussed in less detail due to their emphasis on the wider social system rather than the interaction between parent and child. This section also highlighted the inability to attribute child outcomes to specific parenting characteristics using only configurational models.

Section 2.3 outlined the most widely used measures of parenting in the normal population and highlighted the intricate and perpetual nature of instrument refinement.

Section 2.4 presented the rationale for the development of the new questionnaire and, implicitly, the justification for conducting the present project. This section proposed

a new conceptualisation of parenting styles based upon relating theory and introduced the advantages that this model would offer to the study of parenting. Finally, the hypotheses of the project were formulated in terms of the psychometric requirements of the new measure and in terms of the constructs underlying the new model of parental relating.

CHAPTER THREE
METHODOLOGICAL CONSIDERATIONS OF QUESTIONNAIRE DESIGN

The aim of the present project was the development of a questionnaire capable of measuring retrospectively the relating styles of parents towards children from the perspective of the child. The purpose of this chapter is to discuss the methodological issues that require consideration for the process of developing this type of measuring instrument.

Firstly, the characteristics of adequate questionnaire measures, with emphasis on validity and reliability, will be presented. Section 3.2 will present the principles of questionnaire construction and will be followed by a discussion regarding the advantages and disadvantages of questionnaire measures, in Section 3.3. The final part, Section 3.4, will introduce the medium of the Internet as a method of data collection in survey research and will discuss the merits and limitations of this method.

3.1 Psychometric requirements of questionnaire measures

The aim of questionnaire construction is to produce tests of high validity, reliability and discriminatory power (Kline, 1986). Such requirements are, in turn, informed by the classical measurement theory, which assumes that each person has a true score that would be obtained if there were no errors in measurement (Oppenheim, 1992). Due to the fact that, in practice, a true score can never be established, it is assumed that the observed score comprises of the true score combined with some error in measurement, therefore the aim of constructing highly reliable and valid measures is concerned with minimising the measurement error. In order to achieve this, questionnaires should meet certain criteria, as outlined by Oppenheim (1992) and

briefly listed here. The scale should be uni-dimensional or homogenous, meaning that it should attempt to measure one dimension, as uniformly as possible. The scale should meet the criterion of reliability, which refers to internal consistency as well as consistency over time. The scale should be valid, in that it should measure the concept it intends to measure. The criteria of linearity and equality of intervals (or equally appearing) should be met in order to allow quantitative scoring.

3.1.1 Uni-dimensionality or homogeneity

This particular criterion is concerned with the requirement that a set of items refers to the same underlying construct (Cortina, 1993; Green, Lissitz & Mulaik, 1977; Hattie, 1985; Schmitt, 1996) and is a prerequisite for the subsequent achievement of validity and reliability.

McNemar (1946) was one of the first authors to point out that measurement should refer to one characteristic at a time and that scores are most meaningful when only one continuum is involved. This would be the only option that could ensure a valid comparison between individuals and scores. Guilford (1954) added that scores would be difficult to interpret and ambiguous if the test measured more than one common factor. However, many popular scales are known to be multi-factorial and this feature is related to the breadth or level of the construct being measured (Briggs & Cheek, 1986). Eysenck (1983) reconciles the argument by pointing out that, although statistically factors could be subdivided "ad infinitum", the appropriate level of a construct should be questioned from a conceptual and empirical point of view. With this balanced view Eysenck (1983) emphasises the need for statistical results to be accompanied by pragmatic judgement. The issue of construct validity should assist in the decision regarding the meaningfulness and usefulness of a particular construct level (Briggs & Cheek, 1986). The underlying construct is usually established using factor analysis, which is a highly recommended procedure for new personality scales

(Nunnally, 1978). Factor analysis is viewed as a tool that enables questionnaire developers to differentiate between constructs by assessing the extent to which the items of a scale share common variance (Briggs & Cheek, 1986). There is no particular coefficient or index that would denote appropriate construct validity. However, the requirement that the items of a proposed scale load on only one factor, or only one component is extracted, should serve as an indicator that the scale measures one construct.

3.1.2 Reliability

In the context of scale construction, there are two types of reliability: internal consistency, and consistency over time or test-retest reliability. Nunnally (1967) defined reliability as "the extent to which [measurements] are repeatable and that any random influence which tends to make measurements different from occasion to occasion is a source of measurement error" (p. 206).

Possibly the most widely accepted formulation of reliability is encapsulated within the principles of generalisability theory (Cronbach, Glaser, Nanda & Rajaratnam, 1972), whose basic assumption is that aspects of tests (e.g., items, subjects and raters) are sampled from a predefined domain and that test variance can be divided into variance attributable to each of these aspects and the interaction between them (Cortina, 1993). For this reason, the estimate of reliability reported must depend on the sources of variance relevant to the purpose of the test (Cronbach et al, 1972). For example, if error factors associated with the passing of time are relevant, a test-retest or repeated administration of parallel tests may be recommended, whereas error factors related to the use of different items may be discovered by the use of internal consistency estimates or single administrations of parallel tests (Cortina, 1993).

Internal consistency refers to the degree of interrelatedness between items (Cortina, 1993; Cronbach & Shavelson, 2004; Hattie, 1985; Schmitt, 1996) and the index for this type of reliability is coefficient alpha or Cronbach's alpha (Cronbach, 1951). Alpha is expressed as a correlation coefficient and the more or less universally accepted requirement is that its value should be equal to or greater than .70 (Cortina, 1993).

Internal consistency and homogeneity share a certain amount of common ground in that internal consistency is necessary for homogeneity. This is possible due to the fact that items that are highly interrelated are also likely to refer to the same underlying dimension and this may be the reason why alpha coefficient has been erroneously used as an index of uni-dimensionality (Cortina, 1993). It is possible, however, to obtain a high alpha coefficient for a set of items that are multi-dimensional. This particular attribute is a reflection of the mathematical formula for alpha coefficient, meaning that alpha increases with the number of items. Cortina (1993) has demonstrated that this can be the case even when scales are multi-dimensional although noted that, in general, alpha does decrease as a function of multi-dimensionality and does increase as a function of item inter-correlation.

As an alpha value equal to or greater than .70 seems to imply adequate internal consistency, Cortina (1993) points to the fact that making a decision regarding the adequacy of a scale based on only this value would mean "missing the point of empirically estimating reliability" and that any judgement of adequacy needs to consider the context in which the scale will be used. This convincingly resonates with Eysenck's (1983) argument regarding the need for appropriate balance between the meaning of statistical values and the meaning of concepts.

Improving the internal consistency of a scale is concerned with reducing the error component that might produce inconsistencies and unreliability, such as error factors associated with the use of different items (Cortina, 1993). It has been argued,

however, that pursuing high internal consistency may compromise the validity of a scale (Kline, 1986) in that items would have to cover less ground than the criterion to be measured. This would lead to a narrow definition of the construct and the measurement of a variable with little variance (Kline, 1986), which would be theoretically pure but practically meaningless. Cattell (1973) argues that maximum validity would be obtained when items do not all correlate with each other but each correlates positively with the criterion. Kline (1986) however, realistically points out that, although Cattell is theoretically correct, no test constructor, so far, has managed to write items that correlate with the criterion without correlating with each other. Internal consistency reliability, therefore, is a concept sensitive to various sources of error and should be sought and interpreted with caution.

Consistency over time, or test-retest reliability, refers to the ability of tests to produce the same results, in the same sample, on different occasions. This type of reliability is much more straightforward and easy to assess and the index is expressed as a correlation coefficient between the scores obtained on the two occasions. The minimum requirement for this coefficient is .70 due to the fact that any lower value would reflect a standard error of measurement so large that the interpretation of scores would become dubious (Kline, 1986).

3.1.3 Validity

Validity indicates the degree to which an instrument measures what it is supposed to measure (Oppenheim, 1992). A widely accepted taxonomy of validity consists of predictive, concurrent, content and construct validity. The predictive and concurrent types form a category known as "criterion-related" validity (Kline, 1986).

Since common reference is being made to these three types of validity (criterion-related, construct and content), this view has been labelled the "trinitarian" view (Guilon, 1980). Landy (1986) reasonably fears that this might tempt test constructors

into thinking of separate types of validity and approach the validation process as a "stamp collecting" exercise, rather than integrating the results towards theoretically sound inferences. For clarity of reference, however, the concept of validity will be divided into these types.

Construct validity is perhaps *the* form that refers to the ability of an instrument to measure what it claims to measure. However, due to the fact that psychological constructs are not easily observable, their existence has to be inferred by demonstrating that a measure of a given construct relates to measures of other constructs in theoretically predictable ways (Cronbach & Meehl, 1955). Since psychology measures inferred constructs, the validity of a measure is dependent on the validity of the theory that led to that measure (Smith, 2005). Cronbach and Meehl (1955), the main contributors to the concept of construct validity, acknowledge the situation in which neither proven theory nor certain measurement can serve as starting point and propose that validation should consist of the examination of different theoretical and measurement possibilities. As such, construct validation is a dynamic process that is never finished or settled (Smith, 2005), activity which provides "a marvellous model of the scientific enterprise in general" (Westen & Rosenthal, 2005, p.409).

As psychologists, as well as test constructors, researchers should be interested not only in the properties of tests, but also in the attributes of people who take those tests (Landy, 1986). For this reason, Landy (1986) persuasively elaborates, validation procedures should be directed towards the inferences that can be made about people from the test scores and more towards a hypothesis testing rather than "collection of stamps" approach. As advocate of the hypothesis testing approach, Smith (2005) offers a five-step model for construct validity research. These are: 1) careful specification of the theoretical construct, 2) articulation of how the theory of the construct is translated into informative hypotheses, 3) specification of appropriate

research designs to test hypotheses, 4) articulation of how observations from samples pertain to one's predictions, and 5) revision of the theory and construct (Smith, 2005). As a result, the process involves multiple tests of construct validity, using different criteria assessed in different ways (Smith, 2005).

Content validity is the degree to which elements of a measure are relevant to and representative of the construct and purpose of an instrument and constitutes an important component of construct validity (Haynes, Richard & Kubany, 1995).

Content validity is relevant to all elements of an instrument, including item content, presentation of stimuli, instructions, coding and scoring (Haynes et al., 1995). However, this relevance depends on the method of assessment. For example, precision of wording is usually more important in questionnaires than in psychophysiology (Haynes, et al., 1995). One of the components of content validity is face validity. This refers to the degree to which respondents judge that the items of an instrument are appropriate to the targeted construct (Nevo, 1985). Content validation is a multi-method, quantitative and qualitative process, whose initial purpose is to minimise potential error variance associated with an instrument and maximise the probability of achieving construct validity (Haynes, et al., 1995).

Concurrent validity is the property of a test to compare to another validated instrument which measures the same construct (Kline, 1986). This comparison is usually assessed by examining the correlation coefficient between the two measures or relevant scales.

Predictive validity refers to the same property as concurrent validity, with the difference that the testing is carried out at different times, the questionnaire under construction being assessed first (Kline, 1986). The comparison is also expressed as a correlation coefficient between the two instruments, allowing, therefore, the first one to predict the second.

3.1.4 Type of scale

The prerequisite that questionnaires should be based on at least interval scales stems from the assumption that tests are to be subjected to statistical analysis, initially to establish their validity and reliability. It is from this quantification of scores that psychological tests derive their advantages over other forms of assessment (Kline, 1986).

By far the most widely used type of scale in social sciences is the Likert scale, initially developed for the measurement of attitudes (Likert, 1932), which asks respondents to place themselves on a five point attitude continuum for each statement, from "strongly agree" to "strongly disagree". Due to the range of answers offered to respondents, the reliability of Likert scales tends to be good, with coefficients of .85 usually achieved (Oppenheim, 1992). Although equality of intervals is not always possible to implement, the internal consistency method of item selection ensures that Likert scales approach uni-dimensionality in most cases (Kline, 1986).

One criticism against Likert scales is that the same total scores may be obtained in different ways, implying that the same scores can have different meanings. For this reason, the pattern of responses may be more interesting than the total score (Oppenheim, 1992). Another criticism is that, due to the lack of a neutral point as well as metric or interval qualities, it is not possible to establish where the middle scores change from mildly positive to mildly negative. However, Likert scales are able to separate between respondents within the same group and offer a reliable ordering of people with regard to a particular construct (Oppenheim, 1992).

3.2 Principles of questionnaire construction

Using the guidelines recommended by Anastasi (1988), DeVellis (1991), Haynes, Richard and Kubany (1995), Kline (1986), Nunnally and Bernstein (1994),

Oppenheim (1992), Rust and Golombok (2000; 2009), and Walsh (1995), the steps involved in questionnaire construction should be guided by the sequence described below.

The domain and facets of the construct to be measured should be carefully defined. A construct that is poorly defined, undifferentiated and imprecise will limit the content validity of the instrument (Haynes, et al., 1995). A precise differentiation between theoretically related constructs is particularly important (Ebel & Frisbie, 1991). For example, the difference between parental bonding and parental behaviour should be made explicit. The domain of the construct should be specified and aspects to be included and excluded should be clearly differentiated (Haynes, et al., 1995). The facets and dimensions of the construct should be made explicit, for example, factors of the construct, rate, duration, magnitude, thoughts, behaviour and situations (Haynes, et al., 1995). The intended function of the instrument should be specified. The validation process for a questionnaire used for research purposes will differ from that of a questionnaire used for diagnosis (Smith, 2005). The initial generation and selection of items should be made from rational deduction, clinical experience, theories and empirical literature relevant to the construct, other assessment instruments, suggestions by experts and suggestions by the target population (Haynes, et al., 1995). Multiple items should be generated for each dimension and proportional representation of items across dimensions should be ensured. The items should be distributed or weighted to reflect the importance of the particular construct (Anastasi, 1988). The structure, form, and content of each item should be carefully examined in order to establish the appropriateness of the item to the dimension or construct. The consistency, accuracy, specificity and clarity of wording and definitions should be thoroughly scrutinised and, possibly, redundant items removed. The quantitative parameters should be established, including response format and type of scale. The instructions to participants should be constructed, matching the

language with the domain and function of the instrument and striving for specificity and appropriate grammatical structure.

The results of the steps listed so far should be reviewed by experts, using formalised scaling procedures. Every element of the questionnaire should be judged by multiple experts, ideally obtaining a quantitative evaluation of construct definition and dimensions, relevance and representativeness of items, response formats, scales, and data reduction and a match of the instrument attributes to its function. Qualitative feedback, including suggested additions, deletions and modifications, should also be obtained from evaluators. The emerging instrument should be piloted on the target population and the quantitative and qualitative evaluations of items thoroughly reviewed. The modified instrument should be re-reviewed by the experts and target population. The psychometric properties of the instrument should be evaluated by performing item analysis, internal consistency reliability analysis and obtaining the factor structure.

3.3 Advantages and disadvantages of questionnaire measures

The validity and reliability of questionnaire measures may be decreased by various sources, such as differential interpretation of items, inaccurate recall, distortion of responses, length of questionnaire and instructions to participants.

3.3.1 Differential interpretation of items

Differential interpretation of items refers to the situation in which different respondents may interpret an item in different ways or to the situation in which the same respondent interprets an item differently on different occasions. The two situations are caused by different factors and can pose a threat to the psychometric properties of the instrument in different ways.

Differential interpretation of the same item by different respondents is likely to pose a threat to the validity and internal consistency of the measure, as data obtained would not be comparable (Kline, 1986). Strategies for reducing this source of error are based on careful choice of wording of items in order to minimise ambiguity of meaning, followed by repeated piloting and reviewing.

Differential interpretation of the same item by the same respondent on different occasion is likely to pose a threat to the test-retest reliability of the questionnaire. Strategies for reducing this type of error are based on ensuring that there will be no significant differences in test conditions between the two occasions (Oppenheim, 1992) and that participants will not experience any events that could influence performance between the two occasions. However, it is important to distinguish between unreliability or measurement error and real changes in the status of the variable tested (Kline, 1986).

3.3.2 Influences on recall

The reliability of retrospective reports has been regarded with scepticism and many objections to this method are fuelled by research concerning the association of memory deficits and psychopathology. Brewin, Andrews and Gotlib (1993) have grouped these objections into three categories: normal limitations of memory, general memory deficits associated with psychopathology and mood-congruent memory processes. Due to the fact that the questionnaire under development in the present study is intended to measure parental relating in the normal population, memory deficits associated with psychopathology will not be presented here (for a review see Brewin, et al., 1993).

The objection that memory is subject to normal limitations emerged from the claim that autobiographical memories are not just copies of experience but reconstructions

based on the individual's expectations and on generalised information in the form of "schemas" (Neisser, 1982).

Regarding memories of parenting and family life, Halverson (1988), amongst others, argues that the recall of events that happened so far in the past cannot be trusted and evidence regarding the constructive nature of memory "casts strong doubts about the meaning of retrospective data" (p.435).

Brewin et al. (1993) reviewed the literature concerning these claims and categorised the evidence as generated by four types of studies. These were studies in which recall was compared to that of other individuals, studies of the consistency of recall over time, studies in which recall was compared with independent records and experimental investigations of autobiographical memory. The main idea emerging from these studies was that, although some change in memory does occur over time, there is also clear evidence that memories for more significant experiences remain accurate even after a long period of time. An adult's memories will retain a certain amount of specific information from the original experience but, with time, there may be substantial change in the quantitative and qualitative judgements of that experience (Brewin et al., 1993). The authors further explain that, without clearly specified reference points, individuals may forget the precise time and sequence of events or their feelings and attitudes at the time (Brewin et al., 1993).

The evidence also supports the view that adults are generally accurate in recalling salient factual details of their childhoods, especially experiences that were unique (Linton, 1979; White, 1982), had important consequences (Rubin & Kozin, 1984), were unexpected (Rubin & Kozin, 1984) or provoked a strong emotional response (Rubin & Kozin, 1984; White, 1982). Furthermore, even theorists postulating the reconstructive view of memory admit that reconstructions are limited to a fraction of the autobiography (Ross & Conway, 1986) and that there is a fundamental integrity to autobiographical recollections (Barclay, 1986).

One memory bias relevant to the construction of a questionnaire that would rely on childhood memories is the point that recall appears to be strongly influenced by variability in one's experience. The evidence from studies investigating retrospective ratings of pain (Stone, Schwartz, Broderick & Shiffman, 2005), alcohol consumption (Perrine & Schroder, 2005) and mood states (Fredrickson, 2000) suggests that individuals with increased variability or instability in their experiences may demonstrate less accurate recall for processes that may change frequently over time. Since parenting is one such dynamic process that spans over a number of years, concerns regarding the influence of the variability bias may be justified.

The objection regarding mood-congruent memory processes stems from the claim that people sometimes recall events that are congruent with their current mood state (Blaney, 1986; Singer & Salovey, 1988), meaning that depressed individuals may recall a higher proportion of negative events and, therefore, may exaggerate the presence of childhood adversity (Burbach & Borduin, 1986; Gerlsma, Emmelkamp & Arrindell, 1990; Lewinsohn & Rosenbaum, 1987).

Evidence from mood-induction studies suggests that depressed individuals need more time than non-depressed controls to recall pleasant memories (Riskind, Rholes & Eggers, 1982; Teasdale & Fogarty, 1979; Williams & Broadbent, 1986). Others have found that induced depressed mood decreased the number of positive memories recalled but had no effect on the number of negative memories (Isen, Shalker, Clark & Carp, 1978; Natale & Hantas, 1982).

On evaluating the evidence regarding the effects of mood on recall of personal memories, Singer and Salovey (1988) observed that the evidence is "asymmetrical", in that happy moods lead to recall of happy memories but sad mood failed to show an effect, and concluded that mood tended to have less impact on the recall of negative memories.

More specifically pertinent to the present project is the literature linking mood congruence and childhood memories. Evidence from a number of studies in this area (e.g., Abrahams & Whitlock, 1969; Gotlib, Whiffen, Wallace & Mount, 1991; Lewinsohn & Rosebaum, 1987; Plantes, Prusoff, Brennan & Parker, 1988; Wolkind & Coleman, 1983) seems to suggest that mood may not affect recall of childhood memories.

In a re-evaluation of the literature concerning retrospective reports Brewin et al. (1993) concluded that there is little support for the claim that recall of childhood experiences is distorted by depressed mood. They observed that there is considerable stability in recall, that reliability of accounts of early separations is unrelated to psychopathology and that patients' and controls' memories do not differ in agreement with external criteria. Brewin et al. (1993) recommend that research must not lose sight of the limitations of retrospective reports and must take steps to improve their reliability. As possible strategies, they suggest obtaining accounts from other informants and using structured investigative methods that minimise the demands on the participant's memory.

3.3.3 Distortion of responses

Conscious or unconscious distortion of responses is a process which occurs mostly in investigations of sensitive topics. A topic is defined as sensitive if engaging in relevant disclosure is perceived as posing a threat to the participant (Lee, 1993). As a result, participants may withhold information or distort their responses, decision which could have implications for the quality of the data obtained (Lee, 1993).

Topics considered sensitive and, therefore, susceptible to distortion of responses are, for example, sexual behaviour (due to its private status and high possibility for the research to be perceived as intrusive), bereavement and traumatic events (due to the distress caused to the participant by revisiting emotional and painful events) and

stigmatising or incriminating attitudes or behaviour, such as marital violence or child abuse (Lee, 1993).

A well-documented occurrence in social research is the presence of the "social desirability" response set, term first coined by Edwards (1953), which refers to the tendency of respondents to present themselves in a favourable light. This is further elaborated upon by Goffman (1956), who identified that the reluctance to disclose sensitive information demonstrates the need for people to manage the impression they give in social situations. A possible cause of response distortion due to social desirability may be respondents' high need for approval and dependence on the acceptance of others (Crowne & Marlowe, 1964). Another cause suggested by Crowne and Marlowe (1964) is defensiveness, which may be due to respondents' suspicion rather than need for recognition or approval.

In order to facilitate the investigation of sensitive topics, researchers have generated various techniques aimed at encouraging disclosure, such as, "lie-scales" in questionnaires, question "loading" or simple re-wording of the items in the direction of normalising attitudes or behaviours that may be perceived as undesirable (Kline, 1986). Some strategies for encouraging more honest responses include: the use of familiar words in items or questions, a careful choice of the context in which a survey is framed and placing the more threatening items after a number of less sensitive ones (Dillman, 2007).

3.3.4 Questionnaire length

Although, due to its mathematical formula, reliability increases with the number of items in a questionnaire, it can also be decreased by fatigue and boredom (Kline, 1986). In this case the later items could be affected by participant disengagement and it is recommended that a balance is achieved between test length and reliability coefficient.

3.3.5 Instructions to participants

Instructions can easily change the difficulty level or meaning of items and, if ambiguous, reduce reliability (Kline, 1986). Therefore, they should be clear, unambiguous and specific.

3.4 Introduction to Internet-based questionnaires

Due to the explosion of the Internet, it is almost expected that researchers in the 21st century, will take advantage of this medium of data collection.

In June 2009 an estimated 15 million people accessed the Internet each day (Lewis, Watson & White, 2009) and reports show that this figure increases by a further 25% every three months (Rhodes, Bowie & Hergenrather, 2003). This medium promises to achieve further advantages for the experimental method as well as unprecedented ease of data collection for the survey method (Reips, 2002).

In a more romantic view, Benfield and Szlemko (2006) state that "advantages of Internet-based research have allowed us to dream a little bigger and pursue projects and research questions we would never have considered" (p. 15). However, the transition to Internet-based research also requires various degrees of procedural adaptation, poses new ethical dilemmas and involves thorough consideration of its advantages and disadvantages.

3.4.1 Procedural adaptations

Dillman, Tortora and Bowker (1999) introduced the concept of respondent-friendly web questionnaires, by which they refer to designs that improve the motivational aspects of responding and the technical user-interface between computer and respondent. The three main criteria of respondent-friendly design recommended by Dillman et al. (1999) are briefly presented here.

The first criterion is consideration for differences in technological facilities and refers to the necessity to take into account the availability of a wide variety of equipment, browsers, software and transmission types, which may limit the respondents' ability to complete the questionnaire. In a web study of plain versus fancy design, Dillman, Tortora, Conradt, and Bowker (1998) showed that respondents were less likely to complete the fancy version, which required much greater computer memory and suggested that advanced techniques should be avoided. Nichols and Sedivi (1998) found that the use of high-programming language also decreases the likelihood of questionnaire completion, possibly due to the respondents' browser not being compliant with the level of technology used in the construction of the questionnaire. This means that, although advanced design features are available, and not possible in a paper questionnaire (Dillman et al., 1998), designers of web questionnaires are required to "hold back" on the incorporation of advanced features and create more simple designs, within the limits of the respondents' technological facilities.

The second criterion is consideration of the logic of both computers and humans and refers to the necessity to take into account the wide variety of skills in operating computers as well as answering questionnaires. Dillman et al. (1999) explain that the exercise of completing a web-based questionnaire requires simultaneous thinking about the process of questionnaire completion and the process of computer operation. Connecting the two types of logic can prove challenging due to the differences in the physical actions required for completing paper versus computer questionnaires. One reason for these differences may be that, during completing a paper questionnaire, eyes and hands work in the same visual area of the page, whereas in computer surveys they work in different locations (Dillman et al., 1999). Another reason may be that there is considerable variation in the computer operating skills required for responding to web surveys. Addressing this variation requires effective

communication in order to assist respondents with efficient and accurate completion of the questionnaire (Dillman et al., 1999).

The last criterion is consideration for the likelihood of use in mixed-mode surveys and is based primarily on the fact that many members of the population do not have access to the Internet and, secondarily, on the possibility that allowing respondents the choice of data collection mode may be an effective way of increasing response rate (Dillman et al., 1999). As a consequence, in order for respondents to experience the same survey context, efforts should be made to create a common stimulus across survey modes.

3.4.2 Ethical dilemmas in Internet-based studies

The adaptations to Internet-based research generate ethical dilemmas in three main areas: absence of a researcher, informed consent, and confidentiality (Nosek, Banaji & Greenwald, 2002).

The absence of a researcher, although potentially perceived as a benefit due to the elimination of any source of coercion, can have a detrimental effect on the process of debriefing (Nosek et al., 2002). This can occur in situations in which participants end the study involuntarily, due to technical problems, or voluntarily, due to boredom or frustration, amongst other possible causes. Similarly, and perhaps more importantly, lack of adequate debriefing poses a poignant ethical question in situations in which participants find the experience unsettling (Nosek et al., 2002).

Regarding the issue of informed consent, one of the main obstacles in Internet research is the control over of the requirements for inclusion or exclusion criteria (Benfield & Szlemko, 2006). This can become a particularly controversial point in research that either involves children or contains material that is not designed for children (Nosek et al., 2002).

Although seemingly easier to achieve in Internet studies, confidentiality and anonymity may be compromised by the potential for recording IP (Internet Protocol) addresses or data security during transmission (Benfield & Szlemko, 2006). In order to eliminate or reduce these effects, various suggestions have been made, although, for the time being, a degree of uncertainty remains and complete control cannot easily be achieved (Nosek et al., 2002; Benfield & Szlemko, 2006), therefore, the researcher's judgement regarding the suitability of the medium for a particular type of study is paramount.

3.4.3 Advantages and disadvantages of Internet-based studies

Some authors expressed concern regarding the use of Internet methods and the quality of the data collected. These concerns refer to 1) the possible lack of diversity in Internet samples (Azar, 2000; Buchanan, 2000; Krantz & Dalal, 2000), 2) the possibility of maladjustment, isolation or depression in such samples (Kraut, Patterson, Lundmark, Kiesler, Mukophadhyay & Scherlis, 1998), 3) the assumption that findings are not consistent with other methods (Kranz & Dalal, 2000), 4) the assumption that findings may be negatively affected by non-serious respondents (Azar, 2000; Buchanan, 2000), 5) the possibility that findings may be affected by the anonymity offered by the method (Buchanan, 2000; Skitka & Sargis, 2006) and 6) the assumption that data may be affected by the presentation format of the site (Bowker & Dillman, 2000).

However, these concerns seem to be counterbalanced by the benefits of Internet methods, (Buchanan & Smith, 1999; Schmidt, 1997; Gosling, Vazire, Srivastava & John, 2004; Morhart, Henkel & Herzog, 2008), which can be divided into four main areas: 1) access to samples that would be difficult to locate using traditional methods, 2) efficiency of data collection, 3) efficiency of data entry and 4) cost (Gosling, Vazire, Srivastava & John, 2004). Indeed, Reips (2002) lists eighteen

advantages and only seven disadvantages of Web experiments. Furthermore, there is a growing body of evidence suggesting that results from web studies are consistent with those using traditional methods (Buchanan & Smith, 1999; Forster, Campbell & Twenge, 2003; Lewis, Watson & White, 2009; Pasveer & Ellard, 1998; Smith & Leigh, 1997).

3.5 Summary

This chapter presented the methodological considerations of questionnaire design.

The psychometric requirements of questionnaire measures were presented, with emphasis on validity and reliability. This section highlighted the need for careful judgement of the statistical values obtained in light of the conceptual meaning intended.

The basic principles of questionnaire construction were presented in the following section. This described the main steps involved in the process of questionnaire design, emphasising the iterative, rather than linear, nature of the process.

The advantages and disadvantages of questionnaire measures were discussed, presenting the potential sources of threat to validity and reliability. The main categories of threat were differential interpretation of items, inaccurate recall and distortion of responses. It was concluded that the evidence for these sources of threat was insufficient to warrant the use of questionnaires inappropriate for their purpose.

In the last section the main criteria for developing web-based questionnaires were introduced and the adequacy of this modality was discussed. The procedural adaptations required by this method were presented, highlighting the need for considering both human and computer logic. Ethical dilemmas encountered using the web medium as well as advantages and disadvantages of its use were also reviewed.

In conclusion, this chapter has presented the characteristics of adequate questionnaire measures, starting with psychometric science and followed by the psychometric

requirements of questionnaires, the principles of questionnaire construction, advantages and disadvantages of using questionnaire measures and, finally, the requirements of web-based measures.

Having reviewed the methodological considerations, the next chapter will demonstrate the task of constructing the questionnaire following these principles and recommendations.

CHAPTER FOUR

THE DEVELOPMENT OF THE ARPRQ

This aim of this project was to design an instrument for the measurement of parental relating, based on interpersonal theory. The task required the development of an instrument capable of measuring retrospectively the perceived relating of parents towards children, from the perspective of the child, based on the principles of Birtchnell's (1993) relating theory.

To this end, the task of constructing the Adult Recollection of Parental Relating Questionnaire (ARPRQ) consisted of two main stages: the development stage, which will be presented in this chapter, and the validation stage, which will be presented in the Chapter Five.

Having discussed the requirements of questionnaire construction, this chapter will present the steps followed in the development of the ARPRQ. The first section will present a clarification regarding the function and quantitative parameters of the instrument. Section 4.2 will present the definition of the construct under measurement and the generation of the initial pool of items. Section 4.3 will describe the process of evaluation of the items by relevant professionals, the results of the evaluation exercises and the decisions regarding the fate of each item. This will be followed by a description of the transition of the questionnaire to web format, presented in section 4.4.

4.1 The purpose and quantitative parameters of the instrument

The ARPRQ was designed for research purposes. At this incipient stage it was not intended to serve as a clinical or assessment tool for any other setting or purpose. At a later stage, however, the instrument may be considered for other purposes and adapted to fulfil the ensuing requirements.

The questionnaire was required to measure the relating of parents towards children in the normal population, therefore, the content of the items was not expected to reflect examples of parental behaviour found in the clinical population or beyond childhood. A necessary differentiation for the process of construct definition is that between positive and negative relating. The questionnaire under construction was required to measure negative relating only. Due to the scaling procedure, a score of zero would denote positive relating for that octant. Finally, the questionnaire was not intended to measure attachment, parental bonding, parental attitudes or other similar concepts.

This instrument, initially referred to as the Adult Recollection of Childhood Questionnaire (ARCQ), consisted of a questionnaire that assesses the negative relating patterns of parents towards children according to the eight relating states as defined by Birtchnell (1993).

Relating, as described in Chapter One, was defined by Birtchnell (1993) as "being aware of, adopting attitudes towards and attempting to influence others" (p. 3). It may manifest through direct action or conveying signals, which in humans can be translated into verbal and non-verbal communication, such as posture, gestures, tone of voice or facial expressions (Birtchnell, 1993). The theoretical context described here places relating to others on two main dimensions, namely upperness-lowerness and closeness-distance. Parenting, as described in Chapter Two, has been broadly conceptualised as comprising of two main dimensions, namely support and control (Cummings, Davies & Campbell, 2000). The application of the principles of relating theory to parental behaviour would result in a conceptualisation of parental relating based on the eight states described throughout this thesis. As such, the relating of parents towards children would comprise of an upperness-lowerness and a closeness-distance axis.

This decision regarding the quantitative parameters of the questionnaire was informed by the aim to add the new measure to the "family" of octagonal measures.

To this end, the measure was required to abide to the rules and format of other existing octagonal measures, such as the Person's Relating to Others Questionnaire-2 (PROQ2) (Birtchnell & Evans, 2003) and the Couples' Relating to Each Other Questionnaire (CREOQ) (Birtchnell, Voortman, De Jong & Gordon, 2006). This quality was considered in order to aid future comparisons between results obtained using the new measure and results obtained using the existing octagonal measures, therefore, in line with the other octagonal measures, the aim was to construct a questionnaire containing forty-eight items.

For each of the eight relating states, the final goal was the construction of five negative items and one positive. The purpose of the positive items was to avoid the possibility of participants' response set, by compensating for the lack of item reversal throughout the questionnaire, and to offer respondents the opportunity to make some positive statements about their parents. However, the positive items do not contribute to the calculation of the scores.

The rating scale used to capture participants' responses was a four-point Likert-type, identical to the one used by the other octagonal measures, with the options "nearly always true", "quite often true", "sometimes true" and "rarely true". The scoring procedure was also identical to that of the other octagonal measures, meaning that responses in the "nearly always true" option would have a value of three points, responses in the "quite often true" option would have a value of two points, the "sometimes true" option would have a value of one point and "rarely true" would have a value of zero. Due to the fact that there are five negative items on each octant, the total score for an octant would range between zero and fifteen. A score of zero would denote a parent with a positive relating style and a score or 15 would denote a parent who relates in a negative manner most of the time.

The task of developing the questionnaire consisted of a number of steps. The first step was the generation of items, followed by a sequence of steps alternating between

construct validation and item re-phrasing. Although from this description the procedure may appear a linear one, in practice it took the form of an iterative process of hypothesis generation, testing and evaluation. This dynamic process took place for each item as well as other aspects proposed for the questionnaire, such as title, instructions to participants, presentation layout or method of data collection.

4.2 The definition of the constructs and generation of items

The goal of this step was the development of eight pools of items consisting of ten items each. This followed from the recommendation that a pool of items should contain approximately twice the number of items as the final version of the questionnaire (De Vellis, 1991; Kline, 1986; Rust & Golombok, 2000). Each item pool referred to one of the eight relating states. The initial generation of items was made by rational deduction from studying the definitions of the characteristics of individuals for each relating state and applying these definitions to the relating of parents towards children. A second source used for item generation consisted of the theoretical and empirical literature regarding parenting dimensions and constructs, the most relevant of which were described in Chapter Two. A third source, used especially for the phrasing and formulation of items, comprised of other retrospective measures of parental behaviour, such as the Parental Bonding Instrument – PBI (Parker, Tupling & Brown, 1979), the EMBU - the acronym for the Swedish translation of "My Memories of Upbringing"- (Perris et al., 1980) and the Children's Reports of Parental Behaviour Inventory (Schaefer, 1965).

The phrasing of items was informed by the requirement to represent the perception of parental relating in the normal population, therefore, it was considered essential that the items should not contain words, expressions or constructs that could refer to parental relating in the clinical population.

Further guidance for item writing was obtained from test construction literature, of particular relevance and clarity being Kline (1986), DeVellis (1991), Guilford (1959), Dillman (2007), and Rust and Golombok (2000). Kline reminds the test developer of the importance of meticulous item phrasing by stating that a test can be "no better (but it can be worse) than its items" (Kline, 1986, p.63). A sobering thought for the entire project. Following these guidelines, each item was designed to capture the participants' perception of their parent's behaviour. For example, choosing the option "nearly always true" for the item "She put me in my place" would imply the presence of negative upper-neutral characteristics of the participant's mother. Following the procedure and guidelines outlined above, eight negative and two positive items were generated for each of the eight relating states. With the mother version of the questionnaire in mind initially, the items were phrased using the feminine format, as described in the following section.

Due to the observation that, in the normal population, the relating of parents towards children is a naturally upper process, considerable difficulty was encountered in the process of generating items for the lower scales. The items for the lower octants appeared to describe unlikely parental behaviour, therefore possibly decreasing the face and content validity of the questionnaire. However, the observation that parenting is an upper process refers only to the normal population, as the literature suggests the existence of role reversal in the clinical population (Boszormenyi-Nagy & Spark, 1973; Chase 1999; Jurkovic, 1997; Kerig, 2005). This dichotomy invites questioning of the necessity to construct a parental relating instrument containing scales that may prove redundant. Part of the answer to this question is that, although the instrument was designed to measure parental relating in the normal population, it was considered rigorous to explore all relating states proposed by the octagonal model and allow the statistical analysis to reveal the proof.

The other part of the answer refers to the criteria for belonging to either of the two categories, since inclusion into the clinical population group requires assessment by a mental health professional working in the National Health Service (NHS). According to this classification system, a participant from the normal population with presenting features similar to those of a participant from the clinical population will not be regarded as "clinical" due to the fact they have not been in contact with a professional working in the NHS. At the same time, only a fraction of the possible number of individuals in some form of distress make an attempt to use the services available (Personal and peers' experience as private mental health practitioners). As such, the attrition process required for the transition from the normal to the clinical category can substantially reduce the clinical sample, whilst allowing clinical features in the normal population to remain undetected. The implication for the construction of the present questionnaire is that the scales measuring lowerness in parental relating may not be as redundant as anticipated, as there is a high probability of encountering clinical features and, therefore, role reversal in the normal population.

Items for the Upper Neutral octant

The characteristics of the negative upper neutral parent would include self-assertion, arrogance, pomposity, bullying, pointing to the child's weaknesses, ridicule, insult, humiliation and keeping the child helpless.

From these proposed broad characteristics it was deduced that the items for this octant should reflect a parent who would control the child by using their power, whilst remaining neutral on the proximity dimension. The negatively upper neutral parent would ensure that the child knows who the boss is and would not allow the child to make any age appropriate decisions. They would make the child feel small, weak and helpless, by laughing at their failings, being impatient or showing

annoyance with the child. These types of behaviour stem from the upper neutral parent's need to control, dominate and feel superior, which they feel can be met by making the child feel inferior.

The eight negative items generated for this octant were: 1) Kept me weak and helpless, 2) Told me what to do or not to do, 3) Would not let me make my own decisions, 4) Laughed at my failings, 5) Tried to belittle me, 6) Made me feel small, 7) Made me feel helpless, and 8) Was too controlling. The two positive items were: 9) She taught me well, and 10) Was a good teacher.

Items for the Upper Close octant

The negative upper close parent would be possessive and would use their power to gain closeness. They would be over-protective and would fear that the child could not manage without them. They would restrict the child's natural tendency towards independence or fuss too much over them.

These characteristics imply that the items for this octant should reflect a parent who would control the child by using their power in combination with closeness. The negatively upper close parent would be overprotective and suffocating. They would exhibit an exaggerated helping behaviour, which would prevent the child from making decisions, developing initiative or taking action. These types of behaviour stem from the upper close parent's need to nurture the child, regardless of the child's need to be nurtured. They feel this need can be met by attempting to keep the child dependent on them.

The eight negative items generated for this octant were: 1) Fussed over me too much, 2) Was always trying to protect me, 3) Never encouraged me to be independent, 4) Would not let me do anything for myself, 5) Would not let me grow up, 6) Was trying to look after me too much, 7) Seemed afraid of letting me grow up, and 8) Did

not think I was capable of looking after myself. The two positive items were: 9) Was supportive and encouraging, and 10) Was a good carer.

Items for the Neutral Close octant

The negative neutral close parent would use strategies to keep the child close, they would not respect the child's needs for distance and privacy, they would force their company on the child, they would be intrusive and inquisitive and they would not like the child to have friends or interests of their own. They might make incorrect assumptions regarding the child's interest in them. The characteristics of the parent with a negative neutral close relating style imply overuse of closeness in the absence of power and should contain items which reflect an overall theme of intrusiveness. The behaviour of the negatively neutral close parent is caused by their own need for closeness and inability, and perhaps fear, of being alone. This need can be met by imposing closeness on the child, meaning that the negatively neutral close parent would be spending a substantial amount of time in the physical proximity of the child and would not allow the child to venture very far. They would not respect the child's privacy or need for personal space and they would worry if they child would be out of their sight.

The eight negative items generated for this octant were: 1) Liked to have me near her, 2) Tried to keep me at home too much, 3) Did not give me enough time for myself, 4) Did not allow me any privacy, 5) Worried when I was out of the house, 6) Could not bear to let me out of her sight, 7) Hated me to keep anything from her, and 8) Tried to pry into my private life. The two positive items were: 9) Was warm and loving towards me, and 10) Was a good listener.

Items for the Lower Close octant

The negative lower close parent may seek reassurance that the child loves them, may assume the identity of the child and live through them or may attempt to increase the interest of the child by openly weeping, declaring that they cannot live without the child or, in extreme cases, making suicidal gestures. The overall description of the parent with a negative lower close relating style implies a quest for closeness by employing submissiveness, reflecting, therefore, a central theme of dependence. The behaviour of the negatively lower close parent stems from their need for closeness and the belief of absence of power. This need can be met by seeking closeness from the child from a submissive and needy position, almost in a reversal of roles, therefore the negatively lower-close parent would like the child to look after them, would treat the child like an adult and would need constant reassurance that the child loves them.

The eight negative items for this octant were: 1) Liked me to make a fuss over her, 2) Expected me to be a little mother/father to her, 3) Needed me to tell her that I loved her, 4) Forced me to grow up too early, 5) Told me things a child should not hear, 6) Behaved towards me like a needy child, 7) Would talk to me about her problems, and 8) Treated me like an adult. The two positive items were: 9) Liked to snuggle up against me, and 10) Was able to let me comfort her.

Items for the Lower Neutral octant

The negative lower neutral parent may seek reassurance and approval from the child, may coerce the child into responding to their needs by making them feel sorry or guilty and they may present themselves as incompetent, lost, helpless or confused. The description of the parent with a negative lower neutral relating style entails a position devoid of both, power and proximity. The behaviour of the negatively lower neutral parent stems from their belief of absence of power and need to be guided.

However, this is not accompanied by a need for either closeness or distance, reflecting, therefore, a central theme of despondent helplessness. This need can be met by letting the child take control, therefore the negatively lower neutral parent would treat the child as an equal and would ask for the child's guidance or opinion. They would expect the child to take charge of things and would convey to them a message of helplessness.

The eight negative items generated for this octant were: 1) Wanted me to do things for her, 2) Never gave me the chance to be a child, 3) Expected me to take charge of things, 4) Asked for my opinion too often, 5) Behaved towards me as if we were equals, 6) I did not feel I could trust her to protect me, 7) Was a week person, and 8) Looked up to me for guidance. The two positive items were: 9) Needed my encouragement, and 10) Was grateful for my help.

Items for the Lower Distant octant

The negative lower distant parent may be shy, inaccessible, withdrawn, passive, easily led and controlled by the child. The characteristics of the parent with a negative lower distant relating style imply lack of involvement combined with a perception of submissiveness, reflecting, therefore, an overall theme of careless unreliability. The behaviour of the negatively lower distant parent stems from their need for physical and psychological space as well as a need for guidance. These can be met by allowing the child to make decisions and take action, without discussion and parental guidance, accepting guidance from the child in the processes of problem solving and decision making, and by protecting their personal space. The negatively lower distant parent would not feel comfortable in the parental, protective and caring role. They would tend to keep themselves to themselves and would be easily persuaded by the child.

The eight negative items for this octant were: 1) Seemed to look up to me, 2) Did not like the parent role, 3) Was never there when I needed her, 4) Was hopeless as a parent, 5) Tended to keep out of my way, 6) Allowed me to do anything I wanted, 7) Did whatever I told her to do, and 8) I did not feel protected. The two positive items were: 9) Was careful not to offend me, and 10) Was very considerate.

Items for the Neutral Distant octant

The negative neutral distant parent would be quiet, reserved, avoidant of contact with the child, ignoring the child, possibly withdrawn and uncomfortable with disclosing personal information to or by the child. The overall description of the parent with a negative neutral distant relating style implies a quest for distance whilst remaining neutral on the power dimension, reflecting, therefore, a central theme of withdrawal. The behaviour of the negatively neutral distant parent stems from the need for personal space, both physical and psychological, whilst having no particular requirement for power. This need can be met by, literally, keeping the child at a distance and conveying the message that they would feel uncomfortable if the child would invade their personal space. The negatively neutral distant parent would show no particular interest in the child and would avoid physical contact.

The eight negative items for this octant were: 1) Had no time for me, 2) Could not bear me near her, 3) Kept me at a distance, 4) Took no interest in me, 5) Rarely cuddled or touched me, 6) Seamed uncomfortable if I got close to her, 7) Pushed me away from her, and 8) Did not like to spend time with me. The two positive items were: 9) Encouraged me to be independent, and 10) Did not impose her ideas on me.

Items for the Upper Distant octant

The features of the negative upper distant parent would include being suppressive, rejecting, domineering, threatening, objectifying of the child, manipulating, imposing

and capable of cruelty and ruthlessness. The characteristics of the parent with a negative upper distant relating style suggest a position of power in combination with a quest for distance, reflecting, therefore, a central theme of intimidation. The behaviour of the negatively upper distant parent is motivated by their need to feel superior and control others without close involvement, causing the child to be afraid of them and feel inferior. The negatively upper distant parent would be strict, unforgiving and intimidating.

The eight negative items for this octant were: 1) Was very strict and harsh, 2) Said cruel things to me, 3) Intimidated me, 4) Hit me for no reason, 5) Was a bully, 6) Kept me firmly in my place, 7) Tried to put me down, and 8) Expected me to obey her. The two positive items were: 9) Was someone I looked up to with respect, and 10) She was strict but fair towards me.

Having generated the hypothesised characteristics of the negative parenting style for each octant and the initial pool of 80 items, the first step of the validation exercise consisted of the rating of item suitability by the relevant professionals.

4.3 The rating of items by relevant professionals – content validation

The items were initially critiqued and rated by Birtchnell, the author of the octagonal theory of relating. This process took the shape of a series of discussions, in which the concept of relating to others was analysed in the contexts of interpersonal and octagonal theories, object relations theory, evolutionary psychology and personal memories of being related to by parents, to name but a few of the fields from which knowledge was drawn.

The insight gained during this phase was instrumental for the development of the questionnaire. Combined with the acquisition of knowledge in the science of psychometrics, the discussions with Birtchnell resulted in a more thorough understanding of the octagonal theory and its application to the process of

questionnaire construction. This included more subtle points, which, although not always entirely relevant to the present thesis, assisted with the construction of a wider context in which the research question could be refined. Some of the subtle areas of discussion referred to the basis for differentiation between octagonal theory and other interpersonal theories, points which were presented in Chapter One. Other areas were concerned with assessing the merits and limitations of interpersonal measures, a topic which assisted with establishing a more clear rationale and strategy for the present project.

Asking Birtchnell to rate the items may be considered to invite criticism regarding the objectivity of the exercise. The decision to use Birtchnell's expertise was based on the consideration that the rating of items is a subjective exercise in any case. This is the reason for which more than two raters are usually required and an inter-rater reliability coefficient should be calculated. Following from this and, since the process would require potential raters to become competent in distinguishing between the characteristics of the octants, it was concluded that the author of the theory was the professional most suited for assessing the relevance of the items. The discussions were followed by a sequence of steps alternating between rating by Birtchnell and item re-phrasing.

4.3.1 Step I: First rating of the items

The first step of the rating started with a pool eighty items. These were divided into eight sub-pools of ten items each, eight negative and two positive, corresponding to the eight relating states. The items were assigned a rank order representing the degree of relevance to the corresponding concept of relating state. Birtchnell was also invited to assign a rank order to the items in each pool, after which discrepancies were discussed extensively.

During this iterative process, beliefs regarding definitions of concepts were challenged by Birtchnell and discussions became lengthy debates covering from semantics to etymology to philosophy.

This process has been particularly challenging due to the fact that the definitions of the eight relating states as described by Birtchnell (1993) feature overlapping characteristics with the neighbouring states. For example, the Upper Close, Upper Neutral and Upper Distant relating states share the upper element. The distinction between Upper Close and Upper Distant is sufficiently clear due to the inclusion of two opposite states, close and distant. However, the distinction between Upper Close and Upper Neutral and, similarly, between Upper Neutral and Upper Distant is more subtle and, as a consequence, requires more attention and discerning ability.

The scrutiny of two items would suffice in the attempt to illustrate this point. The items "Told me what to do or not to do" and "Would not let me make my own decisions" were initially proposed for the Upper Neutral octant. It was considered that the act of telling someone what to do was equivalent to the act of preventing them from making decisions or making decisions for them. However, on further questioning and deconstruction of item meaning, the reason why Birtchnell disagreed with the item "Would not let me make my own decisions" became clear. This item implies the existence of a restrictive and over-protective element, rendering it more suitable for the Upper Close octant. This restrictive element is not present in the item "Told me what to do or not to do", thus justifying its suitability for a different octant.

In the initial pool of eighty items, six were erroneously proposed for the neighbouring relating states. Three of these were thought to belong to the Upper Neutral state. However, Birtchnell pointed out that the items "Kept me weak and helpless" and "Would not let me make my own decisions" belong to the Upper Close state whilst the item "Laughed at my failings" belongs to the Upper Distant state. The item "I did not feel I could trust her to protect me" was proposed for the Lower

Neutral state. However, it was thought by Birtchnell to belong to the Lower Distant state. The item "Seemed to look up to me" was proposed for the Lower Distant state and was found to belong to the Lower Neutral state. Similarly, the item "Kept me firmly in my place" was proposed for the Upper Distant state and was found to belong to the Upper Neutral state.

The rating offered by Birtchnell prompted the selection of the items with the highest rank order and elimination of the rest. Negative and positive items were rated separately, therefore the rank ordering of negative items ranged between one and eight and for positive items between one and two. Within the category of retained items, 19 items required rephrasing. Table 4.1 shows the rank ordering of the relevance to the corresponding concept for each of the eighty items of the original pool and the decision made as a result of the rating.

Table 4.1

Rank ordering by Birtchnell and decision for each item

Item	Rank Order	Decision	Comment
Upper Neutral			
1. Kept me weak and helpless	-	Deleted	Belongs to UC
2. Told me what to do or not to do	1	Retained	To be rephrased
3. Would not let me make my own decisions	-	Deleted	Belongs to UC
4. Laughed at my failings	-	Deleted	Belongs to UD
5. Tried to belittle me	4	Retained	
6. Made me feel small	5	Retained	
7. Made me feel helpless	3	Retained	
8. Was too controlling	2	Retained	To be rephrased
9. She taught me well +	2	Deleted	
10. Was a good teacher +	1	Retained	
Upper Close			
11. Fussed over me too much	1	Retained	
12. Was always trying to protect me	2	Retained	To be rephrased
13. Never encouraged me to be independent	3	Retained	To be rephrased
14. Would not let me do anything for myself	4	Retained	

15.Would not let me grow up	5	Retained	To be rephrased
16.Was trying to look after me too much	7	Deleted	
17.Seemed afraid of letting me grow up	6	Deleted	
18.Did not think I was capable of looking after myself	8	Deleted	
19.Was supportive and encouraging +	1	Retained	
20.Was a good carer +	2	Deleted	

Neutral Close

21.Liked to have me near her	1	Retained	To be rephrased
22.Tried to keep me at home too much	2	Retained	
23.Did not give me enough time for myself	6	Deleted	
24.Did not allow me any privacy	3	Retained	
25.Worried when I was out of the house	4	Retained	
26.Could not bear to let me out of her sight	5	Retained	
27.Hated me to keep anything from her	8	Deleted	
28.Tried to pry into my private life	7	Deleted	
29.Was warm and loving towards me +	1	Retained	
30.Was a good listener +	2	Deleted	

Lower Close

31.Liked me to make a fuss over her	5	Retained	To be rephrased
32.Expected me to be a little mother/father to her	3	Retained	
33.Needed me to tell her that I loved her	1	Retained	To be rephrased
34.Forced me to grow up too early	4	Retained	
35.Told me things a child should not hear	6	Deleted	
36.Behaved towards me like a needy child	2	Retained	To be rephrased
37.Would talk to me about her problems	8	Deleted	
38.Treated me like an adult	7	Deleted	
39.Liked to snuggle up against me +	1	Retained	
40.Was able to let me comfort her +	2	Deleted	

Lower Neutral

41.Wanted me to do things for her	1	Retained	To be rephrased
42.Never gave me the chance to be a child	2	Retained	To be rephrased
43.Expected me to take charge of things	4	Retained	
44.Asked for my opinion too often	3	Retained	
45.Behaved towards me as if we were equals	5	Retained	To be rephrased
46.I did not feel I could trust her to protect me	-	Deleted	Belongs to LD
47.Was a week person	7	Deleted	
48.Looked up to me for guidance	6	Deleted	
49.Needed my encouragement +	1	Retained	To be rephrased
50.Was grateful for my help +	2	Deleted	

Lower Distant

51. Seemed to look up to me	-	Deleted	Belongs to LN
52. Did not like the parent role	2	Retained	
53. Was never there when I needed her	4	Retained	
54. Was hopeless as a parent	5	Retained	
55. Tended to keep out of my way	3	Retained	To be rephrased
56. Allowed me to do anything I wanted	7	Deleted	
57. Did whatever I told her to do	6	Deleted	
58. I did not feel protected	1	Retained	To be rephrased
59. Was careful not to offend me +	1	Retained	
60. Was very considerate +	2	Deleted	

Neutral Distant

61. Had no time for me	1	Retained	To be rephrased
62. Could not bear me near her	6	Deleted	
63. Kept me at a distance	2	Retained	
64. Took no interest in me	3	Retained	To be rephrased
65. Rarely cuddled or touched me	4	Retained	To be rephrased
66. Seemed uncomfortable if I got close to her	5	Retained	
67. Pushed me away from her	8	Deleted	
68. Did not like to spend time with me	7	Deleted	
69. Encouraged me to be independent +	2	Deleted	
70. Did not impose her ideas on me +	1	Retained	

Upper Distant

71. Was very strict and harsh	1	Retained	
72. Said cruel things to me	2	Retained	To be rephrased
73. Intimidated me	3	Retained	
74. Hit me for no reason	4	Retained	To be rephrased
75. Was a bully	7	Deleted	
76. Kept me firmly in my place	-	Deleted	Belongs to UN
77. Tried to put me down	6	Deleted	
78. Expected me to obey her	5	Retained	
79. Was someone I looked up to with respect +	2	Deleted	
80. She was strict but fair towards me +	1	Retained	

+ = positive items

Step I of the construct validation process proved to be an invaluable exercise due to its clarifying effects. As a result, less relevant items were identified and eliminated, items that appeared to be ambiguous or inappropriate were detected and advice was received for their improvement. In addition, a more thorough understanding of the concepts underlying each relating state was achieved. The significance of this

process was reflected in the item construction, in that, subsequently, a clearer differentiation was possible between items referring to relating states that occupy adjacent positions on the octagon.

4.3.2 Step II: Second rating of the items

The results of the construct validation obtained in Step I showed that 19 items were less than adequate for the purpose of the instrument. Some items belonged to relating states other than those for which they were proposed. Some items were ambiguous in that they referred to more than one relating concept. For example, item 41 (Wanted me to do things for her) could be interpreted as the behaviour of a dependent parent, who could not do things for herself and therefore corresponding to a lower style of relating as well as the behaviour of a bossy parent, who would tell the child what to do and, therefore, corresponding to an upper style of relating. Other items were unclear as they listed more than one example of parental behaviour, for example item 65, which reads: "Rarely cuddled or touched me".

In order to achieve higher content and construct validity in relation to the purpose of the instrument, the 19 items were rephrased. This task was informed by further consideration of the octagonal model and, more specifically, the characteristics of individuals for each of the eight relating states. For clarification of the steps involved in the process, Table 4.2 shows the transformation of each of the nineteen items.

Following the rephrasing of the nineteen items, the resulting pool of forty-eight items was subjected to Birtchnell's scrutiny. The procedure for this step was similar to that of Step I, in that the exercise took the form of a consultation and discussion.

Table 4.2

The re-phrasing of items in Step II

Item in Step I	Item after re-phrasing
Upper Neutral	
2. Told me what to do or not to do	Always put me in my place
8. Was too controlling	Imposed her will on me
Upper Close	
13. Never encouraged me to be independent	Had difficulty allowing me to be independent
15. Would not let me grow up	Would not allow me to grow up
Neutral Close	
21. Liked to have me near her	Liked to have me near her all the time
Lower Close	
31. Liked me to make a fuss over her	Was inclined to depend upon me
33. Needed me to tell her that I loved her	Needed my reassurance
36. Behaved towards me like a needy child	Always wanted me to look after her
Lower Neutral	
41. Wanted me to do things for her	Could not manage without me
42. Never gave me the chance to be a child	Relied upon me too much
45. Behaved towards me as if we were equals	Needed my advice frequently
49. Needed my encouragement +	Often needed my encouragement
Lower Distant	
55. Tended to keep out of my way	Liked to keep out of my way
58. I did not feel protected	I did not feel I could trust her to protect me
Neutral Distant	
61. Had no time for me	Had little time for me
64. Took no interest in me	Took little interest in me
65. Rarely cuddled or touched me	Rarely cuddled me
Upper Distant	
72. Said cruel things to me	Could be quite cruel
74. Hit me for no reason	Seemed to hit me for no reason

+ = Positive items

Birtchnell was invited to rate the suitability of the nineteen items rephrased after Step I and their relevance to the corresponding concept of relating. It was concluded that ten items needed further refinement. These are presented below in Table 4.3, alongside the proposed rephrased form. On this occasion, the lack of suitability of the items was due to inadequate phrasing and it was decided to address this by implementing a form that is more clear and precise. For example, the item "Needed my reassurance" should specify the circumstances of the behaviour. At the same time, the discriminatory function of some items had to be re-considered in order to avoid item redundancy. For example, the item "Seemed to hit me for no reason" may prove too extreme and could result in few participants admitting to it.

Step II of the construct validation process proved to be an edifying exercise, in that nine more items were classified as appropriate and only ten remaining items were to be further refined.

4.3.3 Step III: Final rating of the items

The results obtained from the construct validation exercise in Step II showed that ten items needed further refining. Following the points raised in Step II, the ten items were re-phrased and presented to Birtchnell for discussion, using a procedure identical to the one in the previous steps. For clarity of the item transformation involved, Table 5.3 shows the re-phrasing of the remaining ten items.

Table 4.3

The re-phrasing of items in Step III

Item/Concept in Step II	Item after re-phrasing
Upper Neutral	
2. Always put me in my place	She put me in my place
Upper Close	
12. Was always trying to protect me	Was trying to protect me too much
15. Would not allow me grow up	Kept me as a child

Lower Close
31. Was inclined to depend upon me	Wanted me to comfort her
33. Needed my reassurance	Needed my reassurance that I loved her
36. Always wanted me to look after her	Expected me to look after her

Lower Neutral
49. Needed my encouragement	She often needed my encouragement

Neutral Distant
64. Took no interest in me	Showed little interest in me
65. Rarely cuddled me	Rarely got very close to me

Upper Distant
74. Seemed to hit me for no reason	Seemed too keen on punishment

It was concluded that the rephrasing of the remaining ten items was appropriate and that all items were now relevant to their corresponding construct. Step III, therefore, was considered successful due to the achievement of acceptable levels of relevance for all forty-eight items.

Overall, the initial content and construct validation process proved to be an intricate and rigorous exercise, which resulted not only in a pool of relevant items but also in a thorough understanding of relating styles, as proposed by the octagonal theory, and further knowledge of questionnaire construction.

The last element in the development of the questionnaire was the decision regarding presentation options. This aspect included the writing of the instructions to participants, the choice of page layout and the presentation format, which were all informed by the content and layout of other octagonal measures. This means that the first page acted as a cover sheet containing the instructions to participants and the items were equally divided over the following two pages. See Appendix I for a sample of the ARPRQ. Two versions of the instrument were prepared, one for mothers, the ARPRQ-M, and one for fathers, the ARPRQ-F. The distinguishing

features were the pronouns "she" or "he" in the phrasing of the items and instructions to participants.

The items were allocated to places on the questionnaire identical to the items of the Couples Relating to Each Other Questionnaire (CREOQ; Birtchnell, Voortman, De Jong & Gordon, 2006). As a result, the scales were formed of the following items: Upper Neutral = 1, 11, 19, 25, 33, positive 48; Upper Distant = 9, 15, 28, 35, 39, positive 6; Neutral Distant = 4, 7, 23, 37, 44, positive 8; Lower Distant = 16, 26, 31, 40, 45, positive 12; Lower Neutral = 3, 17, 20, 43, 47, positive 36; Lower Close = 10, 14, 21, 29, 34, positive 24; Neutral Close = 2, 13, 32, 41, 46, positive 18 and Upper Close = 5, 22, 27, 38, 42, positive 30.

The writing of the instructions to participants has been guided by the test construction literature already cited in several places, and in particular by the work of Kline (1986) and Dillman (2007). The exercise of instructions writing follows the same principles as the task of item writing, in that the instructions have to be clear, unambiguous, specific and as short as possible without compromising relevant information. The instructions were presented on the first page of the questionnaire, starting with the name of the instrument and its acronym, followed by a statement regarding its purpose. The instructions *per se,* asked participants to remember their relevant parent, or parental figure, in childhood and tick the column that applies to them next to each statement.

4.4 Revisions and transitions of the instrument

The nature of the enterprise of questionnaire design is in itself a process of continuous revision and transition, not only in respect to the items themselves but to all encompassing elements. The elements that suffered such changes are presented here.

4.4.1 Revision of the instrument's name

The questionnaire under development was initially named "The Adult Recollection of Childhood Questionnaire", the ARCQ. On further reflection, however, it was considered that the name did not reflect with sufficient precision the construct to be measured. In other words, the name was not exactly valid.

Since the questionnaire referred less to childhood experiences in general and more to relating styles of parents in particular, it was deemed appropriate to change the name to "Adult Recollection of Parental Relating Questionnaire" (ARPRQ).

In order to distinguish between the versions for each parent, from the second study onward the two acronyms were followed by the letter M, for the mother version, and F, for the father version, becoming ARPRQ-M and ARPRQ-F.

4.4.2 Revision of the instructions to participants

The cover sheet instructed participants to think of their parent or parental figure in childhood and rate each item accordingly. It was initially deemed appropriate to allow participants the decision regarding the temporal boundaries of childhood. On further reflection, however, it was considered that participants may inadvertently extend the concept of childhood into adolescence. In order to aid precision and avoid confusion, it was decided to suggest the age of 12 as a temporal boundary of childhood. This revision was applied to Studies Two and Three.

4.4.3 Revision of the scale format

The scale format initially used throughout the questionnaire was a four-point Likert type. This was chosen in order to mirror the format of the existing relating measures based on Birtchnell's theory.

However, due to the fact that the number of scale points can have an effect on the validity and reliability of an instrument, the most general recommendations are that

scales contain between five and nine points (Nunnally & Bernstein, 1994; Pedhazur & Schmelkin, 1991). After careful consideration, it was decided to increase the number of options to the minimum recommended, which also resulted in the emergence of a middle category. The literature for and against a middle point seems equally divided and authors admit to both its advantages and disadvantages (Klein, 1986; Oppenheim, 1992; Pedhazur & Schmelkin, 1991; Rust & Golombok, 2000; 2009). Authors argue that, on the one hand, scales with no middle point force participants to exercise a more decisive choice whilst, on the other hand, the absence of a middle option may cause respondents to become irritated by items that appear ambiguous to them (Rust & Golombok, 2000). Although for some types of questions a middle options seems logical, it can also be perceived as "an easy way out" for some respondents for a variety of reasons (Pedhazur & Schmelkin, 1991).

Considering the purpose of the present study, it was decided that the nature of the construct under investigation would warrant the middle option as logical, rather than "an easy way out", especially due to the fact that the middle option does not constitute the neutral position of a scale with two opposing poles. The decision was also informed by the views provided by some participants in Study One, who commented that the presence of a middle option would be a desirable feature.

4.4.4 The transition to web format

The decision to experiment with a web version of the questionnaire was influenced by the considerations outlined in Chapter Three. However, the most convincing of these was the efficiency of data collection. It was envisaged that the benefits of collecting data from a large number of participants in a short period of time would justify the effort of preparing a web version of the instrument. Furthermore, having followed the convincing argument regarding the comparison between paper and web versions of questionnaires, presented in Chapter Three, it was concluded that the web

format was superior in many ways. Especially, within the context of today's digital explosion, the transition to web format is, perhaps, an almost compelling step in the evolution of survey research.

The first stage of the development of the web format was guided by the principles of constructing web surveys, described in Chapter Three, and in particular the work of Dillman and his colleagues (1999). To this end, it was decided that the first stage of the web version would be identical to the paper version regarding content, page layout and instructions to participants. As such, a questionnaire for mother (ARPRQ-M) and corresponding version for father (ARPRQ-F) were embedded in a website dedicated to the project. The website, entitled www.howpeoplerelate.com, was built with the purpose of presenting participants with interesting and enticing information about the project, which was intended to increase their willingness to take part in the study. See Appendix II for a screen shot of the homepage.

The home page of the website contained five tabs, one of which led to the "parental relating study" via a page corresponding to the customary letter of information of a paper based survey. The information page presents the purpose of the study, addresses confidentiality issues and rights of participants and draws attention to potential sensitive aspects. See Appendix III for a screen shot of the briefing page for Study Two. By clicking on the "continue" button participants would exercise an informed choice to take part in the study and would arrive at a page identical to the first page of the paper version of the ARPRQ. See Appendix IV for screen shots of the ARPRQ page used in Study Two. Participants would exercise their choice by clicking on the relevant option for each item and, on completion of the questionnaires, would click on the "submit" button.

One of the differences between the paper and the web formats was the presentation of the relating profile of participants' parents, on completion of the questionnaires. This was accompanied by an interpretation according to relating theory, the

opportunity to express a view regarding the accuracy of this interpretation and an invitation to provide further comments. See Appendix V screen shots of the results page of Study Two.

The results section comprised of a graphic representation of the scores on two octagons, one for each parent, the interpretation of the scores, an item asking participants to rate the accuracy of the scores on a five-point scale and a box for further comments. The scores for each item together with the participant's rating of accuracy and comments were sent as a Microsoft Excel file to an email account specially designed for this purpose.

The first stage of the development of the web format presented unexpected challenges and learning opportunities. Different perspectives of understanding the impact of the instrument in its web format were acquired from web developers, email specialists and participants.

The main item of feedback from participants was concerned with the clarity of the options for navigation within the questionnaire, in that a more explicit manner of presenting these options was suggested. This included the possibility of changing response options for items, presenting the results and their interpretation on the same page and emphasising the option of returning to a page without losing the data.

The first stage of the transition to web format provided unprecedented insight into the process of questionnaire development in general and adaptation to the web medium in particular. This insight was the basis of the changes implemented in the second stage.

Having acquired invaluable knowledge regarding the procedural validity of the web format, the next stage of the transition was concerned with implementing the relevant changes suggested by participants, as well as various other considerations that emerged from the exercise in the first stage.

The web version of the questionnaire used in the first stage required a specific web application, FlashPlayer, in order to keep the page layout identical to the paper version. Due to the fact that this application does not always perform reliably on all types of browsers, it was decided to adopt a format that does not require it. This decision was based on the consideration that technical difficulties would prevent participants from engaging with the exercise.

To this end, the page layout of the second version was redesigned and the navigation options were rephrased. The questionnaire itself was preceded by a briefing page, a sample of which can be seen in Appendix VI. The items were presented in two main sections, one for mothers and one for fathers, on the same page, which was equipped with a scroll down feature. See Appendix VII for a screen shot of the ARPRQ page used in Study Three. The results and their interpretation were also presented on the same page equipped with a scroll down feature, therefore no longer requiring navigation away from the page. See Appendix VIII for a screen shot of the results page of Study Three. The instructions were rephrased to reflect these changes, as well as to clarify previous points raised by participants in the first stage. As a result, the feedback from participants in the second stage did not contain any relevant comments or suggestions regarding the improvement of the web format, which led to the conclusion that, in this respect, this version was adequate for its purpose.

Due to the procedural knowledge acquired in the first stage of the transition to web format, the second stage permitted a more pragmatic approach, resulting in a faster and more efficient process. Furthermore, the entire exercise of adapting the questionnaire to web format was considered a successful enterprise, as the outcome proved a simple and transparent procedure, with clear advantages over the paper format.

4.5 Summary

This chapter was concerned with presenting the main steps in the development of the Adult Recollection of Parental Relating Questionnaire (ARPRQ). Before the actual steps, however, the chapter addressed the function and quantitative parameters of the instrument, distinguishing between the purposes the questionnaire intends to fulfil and the ones that it does not. It was established that the instrument was designed for research only and it was not intended to aid assessment or diagnostic purposes. The quantitative parameters of the questionnaire, such as, number if items, measuring scale and scoring procedure, were also presented in this section.

The first step in the actual development of the instrument was the definition of the construct, which comprised of the eight relating states as conceptualised according to the octagonal theory. For each relating state, this section presented the rationally deduced profile of the parent with negative relating style, followed by the eight negative and two positive items initially proposed.

The following section presented the rating of the items by the author of the octagonal theory, exercise which constituted the initial content and construct validation process. The rating comprised of three steps and the resulting transformation of the items was explicitly stated. This showed the rigorous process of refining the items in order to ensure that they were representative of the construct under investigation.

The last section was concerned with the revision of the name, instructions and scale format of the questionnaire and its transition to web format. The transition to web format comprised of two stages and the procedure was adjusted using the feedback received after the first stage.

In conclusion, this chapter has presented the iterative process of developing the ARPRQ, the initial content and construct validation exercise and the transition to web format. Having demonstrated the task of constructing the questionnaire, the next chapter will present the method employed in the validation stage.

CHAPTER FIVE

METHOD AND RESULTS OF THE VALIDATION STUDIES

The purpose of the validation stage in the construction of the ARPRQ was to assess the psychometric properties of the new instrument. This chapter will present the method and results of the validation studies carried out for this purpose. The validation stage comprised of three studies, in which both the reliability and validity of the new instrument were tested simultaneously. For orientation purposes the versions of the ARPRQ used in each study will be referred to as version 1, version 2 and version 3, respectively. Each study employed a cross-sectional survey design. Section 5.1 will describe the method and results of the reliability assessment and the concurrent validity of the new questionnaire, which were carried out in Study One. Section 5.2 will present the method and results of Study Two, which assessed the reliability and construct validity of the new measure. Section 5.3 will describe the method and results of reliability testing and the factor structure of the ARPRQ, exercise which was carried out in Study Three.

5.1 Assessment of reliability and concurrent validity - Study One

The aim of Study One was to test the internal consistency reliability, and the concurrent validity of the ARPRQ-version 1 with the Parental Bonding Instrument (PBI; Parker et al., 1979). It was conducted using the ratings for the participants' mother. The results of Study One constituted the basis for the improvements applied to the questionnaire before the testing carried out in Study Two.

Participants

The sampling requirements for Study One, as well as subsequent studies, were informed by the purpose of the instrument, which is the research of parental relating in the normal, adult population. Following the guidelines described by Rust and

Golombok (2000; 2009), Oppenheim (1992), Kline (1986) and Pedhazur and Schmelkin (1991), the sample was required to reflect the characteristics of the population that the questionnaire was intended for, that is, the normal (non-clinical) population. In order for a sampling frame to be representative of the population of interest, every element should have a nonzero probability of being included in the sample and the sampling process should include randomisation (Shaughnessy & Zechmeister, 1997; Pedhazur & Schmelkin, 1991). However, Pedhazur and Schmelkin (1991) argue that representativeness can never be fully established due to the impossibility of ascertaining the similarities between the sample and the population, regarding the variables under investigation, as well as all other variables. This does not mean that efforts should not be made to achieve relative representativeness but it means that these efforts will not guarantee the desired results and should not be viewed as such. The inclusion criteria for the present sample were age, of minimum 18 years, and absence of a record of mental health issues. It could be argued that these extremely wide criteria for selection would render any element of the population suitable for inclusion in the sample. Furthermore, the data were neither required to be representative of any other variable of interest nor intended to be used for norm-referencing procedures, in which case a homogenous sample would be a prerequisite, as recommended by Rust and Golombok (2009). For this reason, the possibility of a heterogeneous sample was considered advantageous. This position was also assisted by views, such as Pedhazur and Schmelkin's (1991) and Howell's (1997) that, in contrast with experimental designs, correlational studies benefit from heterogeneous samples. To this end, a convenience sample (Pedhazur & Schmelkin, 1991; Shaughnessy & Zechmeister, 1997) was considered suitable for the purpose of the exercise.

Participants for Study One were 117 individuals, aged minimum 18 years. Seventy-five (64.2%) were university students and 42 (35.8%) were adults from a multitude

of backgrounds. The student sample was recruited by handing out a total of 100 sets of questionnaires to students in communal areas around a university campus in London. The non-student sample was recruited using the snow-ball/chain-sampling technique, for which a total of 100 questionnaires were sent or handed out to friends, family and colleagues. The resulting composition of the sample was considered to be representative of the population for which the questionnaire was intended, normal population. Further points regarding the distinction between normal and clinical populations were discussed in Chapter Four.

Instruments

The instruments used in Study One were the paper format of the newly developed ARPRQ-version 1 and the PBI (Parker et al., 1979). The ARPRQ has been described in Chapter Four and a sample can be viewed in Appendix I.

The PBI, devised by Parker and colleagues (1979) is a widely used tool for measuring parental bonding and/or behaviour (See Appendix IX for a sample of the PBI). The PBI has been chosen as instrument of comparison not only due to its popularity, but also due to the common conceptual ground it shares with relating theory. As the essential feature of parenting, the concept of care present in the PBI is analogous to the relating to offspring from a position of closeness and upperness, or power, which is represented by the upper and close scales of the ARPRQ. Due to the fact that the care scale of the PBI measures positive parental relating and all scales of the ARPRQ measure negative parental relating, it was anticipated that these scales will be negatively correlated. The opposite situation was expected for the overprotection scale of the PBI, due to the fact that both, the overprotection scale and the ARPRQ scales, measure negative relating. For this reason, it was anticipated that the overprotection scale of the PBI will be positively correlated with the scales of the ARPRQ, especially those with upper and close elements.

The PBI asks participants to score their biological parents or parental figures (one for each form) as the participant remembers them in their first sixteen years. The questionnaire has 25 items and two scales. The first generates a care score and has 12 items. The second generates an over-protection score and has the remaining 13 items. Therefore each participant will generate a care score and an over-protection score for each parent. Each item is measured using a 4-point Likert-type scale from 0 (very unlikely) to 3 (very likely). The minimum score for both care and over-protection scales is 0. The maximum score for the care scale is 36 and for the over-protection scale is 39. The mother and father scores can be combined to obtain a global care or global over-protection score or they can also be combined to obtain parenting styles. However, these options are not relevant to the purpose of the present project.

Procedure

The student section of the sample was recruited by handing out a total of 100 sets of questionnaires to students in communal areas around a university campus. Potential participants were asked to either complete the questionnaires at that moment and return them to the researcher in a sealed envelope provided or take them away and post them back in the stamped addressed envelope provided. The majority of participants chose to complete the questionnaires immediately. The protocol for this section of the sample contained the introduction letter, the mother version of the ARPRQ-version 1 and the mother version of the PBI. The non-student set was recruited using the snow-balling/chain sampling technique, for which 100 questionnaires were sent or handed out to friends, family and colleagues. The protocol for this section of the sample contained the introduction letter, the mother version of the ARPRQ-version 1 and a self-addressed stamped envelope. The two procedures of data collection took place in parallel.

The introduction letter for both samples contained information regarding the study, ethical approval from the university, confidentiality issues and instructions for completing the questionnaires. See Appendix X for a sample of the letter to participants used in Study One. A total of 121 questionnaires were returned. Out of the 100 questionnaires distributed to students 79 (79%) were returned and out of the 100 distributed to non-students, 42 (42%) were returned. Four questionnaires returned by the student population were discarded due to being incomplete, resulting in 75 student and 42 non-student questionnaires, a total of 117, suitable for inclusion in the analysis.

Data analysis

Following the recommendations of Field (2005), and Tabachnick and Fidell (2007), prior to data analysis, the scores for each item were examined for missing values and distribution. The data set contained no missing values and all values for skewness and kurtosis were nonsignificant, suggesting that the scores were normally distributed. As a result, all 117 cases were considered adequate for inclusion in the analysis.

For the assessment of reliability, the analysis consisted of computing the reliability coefficient, Cronbach's Alpha, for each of the eight scales. According to the recommendations presented in Chapter Three, this was accompanied by other elements required for item analysis, such as inter-item correlations, item-total correlations and principal component analysis. Within the context of item analysis, the principal component analysis was used as indicator for the homogeneity or uni-dimensionality of each scale.

For the assessment of concurrent validity, the analysis consisted of computing the Pearson's correlation coefficient for the relationship between each of the eight scales of the ARPRQ and the two scales of the PBI, care and overprotection.

Results

The descriptive statistics for study one, whose scores for each item ranged between zero and three, revealed that the means for individual items ranged between 0.2 (*SD* = 0.5) and 2.0 (*SD* = 0.8). The scale scores could range between zero and 15 and the means for the eight scales ranged between 2.5 (*SD* = 2.5) and 6.0 (*SD* = 2.0). The results, presented in Table 5.1, illustrate that three scales failed to reach the required levels of reliability and homogeneity, and that some items achieved low correlation coefficients with their respective scale.

Regarding the concurrent validity of the ARPRQ and the PBI, the results of the correlation analysis revealed that, overall, the scales of the ARPRQ were negatively correlated with the Care scale and positively correlated with the Overprotection scale of the PBI. Table 5.1 presents the Pearson correlation coefficients obtained for the two scales of the PBI and the scales of the ARPRQ.

These results confirmed the expectation that the Care scale of the PBI should be negatively correlated with the scales of the ARPRQ, due to the assumption that the Care scale measures what relating theory would label "positive relating" and the ARPRQ scales measure negative relating. Similarly, the results were consistent with the expectation that the Overprotection scale of the PBI should be positively correlated with the scales of the ARPRQ, due to the notion that they both measure negative relating.

As anticipated, the strongest negative correlations were found between the Care scale of the PBI and the ARPRQ scales containing upper and distant components, i.e., upper neutral, upper distant, neutral distant and lower distant, whereas the strongest positive correlations emerged between the Overprotection scale of the PBI and the ARPRQ scales containing upper and close components, i.e., upper neutral, upper close, neutral close and upper distant.

Table 5.1

Reliability coefficients, item-total coefficients, and correlations between the scales of the ARPRQ and PBI

Scale	Item	Item-total Correlation (N=117)	Reliability Cronbach α (N=117)	Number of Components (N=117)	PBI Care (N=75)	PBI Protection (N=75)
Upper Neutral	1	.23				
	11	.52				
	19	.58				
	25	.68				
	33	.74				
			.76	1	-.62	.56
Upper Distant	9	.73				
	15	.61				
	28	.55				
	35	.63				
	39	.53				
			.81	1	-.68	.59
Neutral Distant	4	.56				
	7	.60				
	23	.58				
	37	.69				
	44	.60				
			.81	1	-.74	.35
Lower Distant	16	.24				
	26	.40				
	31	.06				
	40	.53				
	45	.46				
			.56	2	-.65	.33
Lower Neutral	3	.08				
	17	.34				
	20	.29				
	43	.04				
	47	.34				
			.39	2	-.17	.25
Lower Close	10	.45				
	14	.58				
	21	.53				
	29	.29				
	34	.57				
			.72	1	-.26	.41
Neutral Close	2	.21				
	13	.51				
	32	.35				
	41	.57				
	46	.42				
			.66	2	-.19	.69
Upper Close	5	.47				
	22	.70				
	27	.71				
	38	.59				
	42	.59				
			.82	1	-.26	.82

5.2 Assessment of reliability and construct validity - Study Two

The aim of Study Two was to test the internal consistency reliability of ARPRQ-version 2 and to provide evidence for its construct validity. It was conducted using the scores of the ARPRQ-version 2 for both mother and father of the participant. The construct validity was investigated using the comparison between ratings obtained from interviews and scores obtained from ARPRQ-version 2 for both parents. The results of Study Two served as basis for the improvements brought to the questionnaire before the last testing stage.

5.2.1 Method and results of the reliability assessment

Participants
In Study Two 104 individuals took part, 26 males (25%) and 78 females (75%). Twenty-nine participants (27.9%) were aged between 18 and 25, 24 participants (23.1%) between 26 and 30, 24 participants (23.1%) between 31 and 35, 10 participants (9.6%) between 36 and 40, 12 participants (11.5 %) between 41 and 50 and five participants (4.8 %) between 51 and 60. Fourteen participants (13.5%) were only children and 90 (86.5 %) had siblings. Participants completed the questionnaire online and were recruited via email using the snowball/chain sampling technique. Out of the 104 participants, eight agreed to take part in interviews. They were three males, aged between 27 and 31, and five females, aged between 25 and 39.

Instruments
For Study Two the ARPRQ-version 2 for mothers and the corresponding version for fathers were used, respectively ARPRQ-M and ARPRQ-F. This version for mothers, ARPRQ-M, incorporated the changes considered necessary after Study One for improving the validity and reliability of the instrument. These changes refer to the re-phrasing of inadequate items, revision of the scale format and re-naming of the

instrument. This study also coincided with the first step of the transition to web format.

A total of 21 items were re-phrased after the first stage of the project. These were items 2, 3, 6, 8, 10, 11, 17, 21, 24, 25, 26, 27, 28, 29, 31, 36, 42, 43, 45, 47 and 48. The rest of the changes and their justifications were presented in Section 4.4 "Revisions and transitions of the instrument".

The ARPRQ-F was used in its first version and joined the project at this point in time, from which all changes and revisions will be applied to versions for both parents in parallel. It was developed by adapting the phrasing of the items of the ARPRQ-M to reflect their reference to the male parent equivalent, i.e., by prefixing the items with the pronoun "he".

Procedure

An initial email was sent to forty-four friends, colleagues and members of the family with the request that they forward the message to as many friends and family members as possible. The email contained a link to the parental relating study page of the dedicated website and informed potential participants about the purpose of the study, the approximate amount of time required to complete the questionnaires and the presence of the results feature. These details were presented in Chapter Four, Section 4.4.4, and a sample of the briefing page can be seen in Appendix III. Participants were invited to provide their comments regarding any aspects of the questionnaire, especially those that may have seemed unclear. The initial email also contained an invitation for potential participants to take part in an interview, which would explore childhood memories of their parents. See Appendix XI for the initial email sent to participants.

Within the first six weeks 81 completed questionnaires were received, after which a reminder was sent to the initial pool of friends, colleagues and family. For

consistency of information given to potential participants, this reminder consisted of re-sending the original email. This resulted in the collection of 23 questionnaires, bringing the final number of participants to 104. The scores of the questionnaires were automatically sent as a Microsoft Excel file to an email account specially created for this purpose.

For the eight interviews a letter was sent to participants, explaining the aim of the study and outlining the overall procedure of the interview. The letter informed participants that a consent form will require their signature and reassured them of the confidential nature of the material elicited by the interview. Please see Appendix XII for a sample of the letter sent to participants prior to the interview.

The interviews were conducted following a semi-structured approach. This particular approach was chosen due to the nature of the issue under investigation and the type of data aimed for, which, in turn, were informed by the purpose of the interview (that is, as validation exercise for the questionnaire). Due to the feature, described by Breakwell (1995), that the data obtained would be more suitable for categorisation and numerical analysis, the structured interview may appear a more suitable choice. It was considered, however, that the rigid schedule would elicit information similar to the data obtained from the questionnaire, in which case the efforts of both, participants and researcher, would not be entirely justified.

The focus of the interviews was on the overall assessment of the relating style of the parent in question, with no direction towards specific areas and no intention of making comparisons across respondents. This semi-structured strategy was considered more appropriate for the validation process of the questionnaire, due to the subsequent comparison of the questionnaire with a spontaneous account of the construct under discussion, rather than a directed one. The feature of spontaneity and flexibility are offered by the semi-structured interview, which is described as,

paraphrasing Smith (1995), a discussion where the investigator has some idea of the area of interest but the participant is free to address any issue.

The interviews were planned following the guidelines recommended by Smith (1995) and Breakwell (1995). They were conducted in the home of the participant or on the premises of the university, lasted approximately one hour and were audio recorded. Special attention was dedicated to generating a relaxed and friendly atmosphere, which participants found stimulating. The interview schedule comprised of an initial question and a number of possible prompts, which, as suggested by Smith (1995), were intended to assist with clarity and specificity of ideas. The initial question was open and phrased using familiar language. This asked participants to describe how their parents related to them in childhood. From this general starting point the exploration was guided towards more specific examples of parental behaviour, from which inferences could be made regarding the dimensions proposed by relating theory. The process of conducting the interviews was particularly enhanced by the researcher's extensive experience of interviewing in the context of assessment for therapeutic purposes.

Data analysis

According to the same guidelines followed in Study One, prior to data analysis the scores for each item were examined for missing values and patterns of distribution. The data set for the mother version of the ARPRQ contained no missing values and all values for skewness and kurtosis were nonsignificant, suggesting that the scores were normally distributed. As a result, all 104 cases were considered adequate for inclusion in the analysis.

The data set for the father version contained two complete cases missing and 17 further missing values for various items. Little's MCAR test (missing completely at random) was nonsignificant for each scale, implying that the values were missing at

random. These were excluded from the analysis using the listwise deletion method. The values for skewness and kurtosis for all scales were non-significant, indicating that normal distribution of scores could be assumed.

For the assessment of reliability, the analysis consisted of computing the reliability coefficient, Cronbach's Alpha, for each of the eight scales. This was accompanied by other requirements of item analysis, such as inter-item correlations, item-total correlations and principal component analysis.

The assessment of construct validity consisted of comparing the scores of the questionnaire with the ratings obtained from interviews. The eight interviews were transcribed and subjected to content analysis, adhering to the procedure described by Krippendorff (1980) and Neuendorf (2002). They were repeatedly read in order to identify potential units of coding and their representation of relating states. The nature of the material and the purpose of the exercise rendered thematic coding as the most suitable choice of coding method. The coding frame was represented by the relating model itself and the code names consisted of the names of the eight relating scales. To this end, the purpose of the analysis was to assign each unit of meaningful text to one relating scale. In order to ensure a valid and reliable analysis of the text, all interviews were verified by Birtchnell and, in a process similar to the one followed in the development stage and described in Chapter Four, the disagreements were discussed extensively until satisfactory conclusions and agreements were reached.

Results

In study two the scores for each item ranged between one and five. The mean scores of individual items for the ratings of Mothers ranged between 2.6 (*SD* = 1.2) and 4.5 (*SD* = 0.9), and for Fathers between 2.3 (*SD* = 1.4) and 4.7 (*SD* = 0.7). The scale scores could range between one and 25 and the scale means ranged between 18.4 (*SD*

= 3.8) and 21.2 (*SD* = 4.7) for Mothers, and between 17.2 (*SD* = 5.7) and 22.0 (*SD* = 4.8) for Fathers.

The results of the item-total correlations and reliability coefficients for each scale and parent are summarised in Table 5.2. It appears that some items, for example item 26, achieved low correlation coefficients with their respective scale and this result is also reflected in the low reliability coefficient for that particular scale. However, the remaining reliability coefficients obtained resided within the parameters required.

5.2.2 Method and results of the construct validity study

The construct validity was established by comparing the number of units of thematic coding extracted from the interviews with the scores obtained from the questionnaires.

Two observations regarding the narrative will assist with the interpretation of the results obtained from interviews. The first observation was that six out of eight participants focused on the description of one parent almost to the exclusion of the other one and the second observation was that participants clearly emphasised the main relating style of the parent in question. These observations explain the scores of zero obtained in the interviews, meaning that the particular parent or relating scale was not mentioned. In order to avoid repetition, the analysis of only two interviews will be presented here, as exemplars of the procedure followed. However, all interviews were subjected to an identical process.

Table 5.2

Reliability and item-total coefficients for Study Two (N=104)

		ARPRQ-M		ARPRQ-F	
Scale	Item	Item-total Correlation	Reliability Cronbach's α	Item-total Correlation	Reliability Cronbach's α
Upper Neutral	1	.33		.56	
	11	.67		.70	
	19	.57		.62	
	25	.66		.74	
	33	.61		.74	
			.78		.85
Upper Distant	9	.64		.74	
	15	.70		.72	
	28	.62		.54	
	35	.67		.76	
	39	.42		.54	
			.81		.85
Neutral Distant	4	.56		.67	
	7	.73		.78	
	23	.58		.76	
	37	.75		.73	
	44	.72		.66	
			.85		.88
Lower Distant	16	.48		.65	
	26	.06		.30	
	31	.46		.51	
	40	.39		.66	
	45	.42		.60	
			.60		.77
Lower Neutral	3	.58		.70	
	17	.58		.72	
	20	.68		.74	
	43	.62		.80	
	47	.75		.80	
			.83		.90
Lower Close	10	.47		.63	
	14	.62		.77	
	21	.66		.84	
	29	.64		.88	
	34	.69		.77	
			.82		.91
Neutral Close	2	.41		.72	
	13	.60		.69	
	32	.56		.73	
	41	.36		.64	
	46	.50		.68	
			.72		.86
Upper Close	5	.56		.63	
	22	.60		.59	
	27	.62		.67	
	38	.49		.72	
	42	.68		.71	
			.80		.75

Interviews numbers three and six were chosen as exemplars due to the clarity of the negative relating style of the participants' parents, which allowed for a direct comparison with the scales of the ARPRQ. This comparison was less evident in other interviews, partly due to the absence, or less prominence, of negative relating of the parents and partly due to the style of the participant's narrative.

Interview number three

The relating style of the participant's Mother referred to three scales of the relating models. These are presented here, followed by a few examples in order to substantiate the choice of coding with the words of the participant.

Referring to the Mother, there were 11 occurrences of negative Upper Neutral relating.

"…Always making remarks if something wasn't up to standard…"

"… and she was very controlling regarding … what I could do… "

"… I felt like I was never good enough."

There were two occurrences of negative Neutral Close relating.

"…she doesn't really respect my privacy… it's like we are Siamese in her mind…"

"…she would just open the door of my room […] so I close the door but she wouldn't understand that…"

Negative Upper Distant relating was mentioned on four occasions.

"… my Mum was also very, quite punitive…"

"…and there was no way of going around her…"

"[the relationship]…with my Mum it was more…a much stricter one."

There were no occurrences of behaviour referring to the remaining negative relating states. A number of positive relating behaviours were mentioned. However, positive relating does not constitute the subject under investigation.

Referring to the Father the only negative relating state mentioned was Upper Distant, of which there were five occurrences.

"[my Dad would be]…but also probably quite punitive…"

"…whenever there would be an argument he would be very intimidating…"

"…then he would say 'what are you looking at me like', you know, 'like you're retarded?'…"

There were numerous occurrences of positive relating of the Father. However, these were not relevant to the present analysis.

The summary of the results of the frequencies count showed that for the Mother there were 11 occurrences of Upper Neutral, two occurrences of Neutral Close and four instances of Upper Distant relating. The results of the ARPRQ for this participant showed that the highest scores obtained were also for these three scales, with eight for Upper Neutral, five for Upper Close and four for Upper Distant.

For the Father, the summary of the frequencies count revealed five instances of Upper Distant relating. The results of the ARPRQ showed a score of seven for this scale. However, a score of seven was also obtained for the Upper Neutral scale, which was not identified in the interview.

Interview number six

This participant referred to both parents as a unit, apart from two occasions. There were five occurrences of Neutral Distant relating of both parents.

"…didn't say much because they were preoccupied…"

"…if they had shown any interest I would have gladly told them…"

"…distant in terms of time and involvement they had for me…"

There were two separate occurrences of Neutral Distant relating of the Mother.

"…when she was involved in work and I wanted her attention there was no way of getting it…"

"…she didn't have time for me…"

The Neutral Distant relating of the Father was mentioned on two occasions.

"…if I could changed my parents I would have made […] and my dad less self obsessed and narcissistic."

"…he's in his own world…"

The summary of the frequencies count showed that for the Mother there were seven occurrences or Neutral Distant relating. The results of the ARPRQ showed a score of seven for the Neutral Distant scale. For the Father, seven counts of Neutral Distant relating emerged from the interview and a score of nine was obtained from the ARPRQ. For both parents, relatively high scores were obtained for the Lower Distant scale of the ARPRQ. However, these were not identified in the interview.

The results of content analysis and ARPRQ for all interviews

Following the procedure outlined above, from each interview a frequency value was obtained for each parent and relating scale. The pattern that emerged from this comparison shows that high values of interview scores are accompanied by high values of ARPRQ scores, which suggests that there may be a positive correlation between the results obtained by the two methods. Although, due to the small sample size used for the interviews, this observation could not be reliably substantiated by statistical analysis, the emerging pattern was a sufficient indicator for the purpose of the exercise.

Feedback from participants

An additional exercise that contributed to the validation of the ARPRQ was the presentation of the item designed to obtain feedback from participants regarding the accuracy of the results. As described in Chapter Four, Section 4.4.4, this item asked

participants to rate the accuracy of the results on a five-point scale, where zero referred to "not at all accurate" and four referred to "very accurate".

One hundred and one participants responded to this item. The scores showed that 11 participants (10.6%) found the results very accurate, 46 participants (44.2%) found the scores moderately accurate, 31 participants (29.8%) neither accurate nor inaccurate, 13 participants (12.5%) moderately accurate and zero participants found the results not at all accurate.

5.3 Assessment of reliability and factor structure - Study Three

The aim of Study Three was to test the internal consistency reliability of ARPRQ-version 3 and to establish its factor structure. It was conducted using the scores for both parents.

Participants

A total of 601 participants completed the questionnaire online in Study Three, 345 (57.4%) males and 256 (42.6%) females. Twenty-two (3.6%) participants were aged under 25, 226 (37.6%) participants were aged between 25 and 40, 238 (39.6%) participants were aged between 41 and 55, and 115 (19.1%) participants were aged over 55. Participants were recruited using the services of an online survey company and were awarded points for participation. This type of inducement was an agreement between the survey company and the participants and consisted of discounts or vouchers for various products and services. This option was chosen in order to expedite the process of data collection, which was estimated to be of considerable duration due to the large number of participants required for the subsequent factor analysis. The requirements regarding the size of the sample were informed by Field's (2005) "common rule" of at least 10-15 participants per variable, Nunnally's (1978) recommendation of at least 10 cases per variable, Tabachnick and

Fidell's (2007) "comforting" rule of thumb of at least 300 cases for factor analysis, and Comrey and Lee's (1992) guide of 500 cases as very good and 1000 as excellent. As the ARPRQ comprises of 40 measurable items, or variables of the analysis, the application of the rule of 15 cases per variable resulted in the requirement of 600 participants.

Instruments

The instrument used in Study Three was the web format of the ARPRQ-version3 with both the mother and father versions, respectively ARPRQ-M and ARPRQ-F. After Study Two, the changes deemed necessary for improving the psychometric properties of the ARPRQ were incorporated into the version used in the third stage. These changes refer to the re-phrasing of the items deemed responsible for the inadequacy of the reliability values, which were items 3, 26, 31 and 43. This version of the ARPRQ coincided with the second step of the transition to web format.

Procedure

The survey company was sent an email containing the link to the web page of the study. The information requested by this company was concerned with the length of time the questionnaire would require to complete and with establishing a means of identifying the participants. This identification was necessary in order to enable the survey company to reward participants for their time. It was established that the email addresses of the participants would be requested and forwarded to the company. The reason for this request was made explicit to participants on the information page of the study. The scores were collected on a web page specially designed for this purpose. A total of 614 sets of scores were received, of which 13 were discarded due to being incomplete. This resulted in a total of 601 sets of scores suitable for inclusion in the analysis.

Data analysis

According to the guidelines followed in Studies One and Two, prior to data analysis the scores for each item were examined for missing values and patterns of distribution. To this end the data set was analysed for each scale and parent.

The mother version of the ARPRQ contained between seven missing values, for the Upper Neutral scale, and 16 missing values, for the Lower Neutral scale. Little's MCAR (missing completely at random) test of missing values for each of the eight scales revealed nonsignificant results, suggesting that these were completely at random. The missing values were deleted from further analyses on a listwise basis. All values for skewness and kurtosis were non significant, suggesting that the scores were normally distributed and the values of the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy for each scale, as well as for all the scales combined, were above the recommended value of .6 (Tabachnick & Fidell, 2007), implying that the sample was suitable for factor analysis.

The data set for the father version contained between 16 missing values, for the Upper Neutral scale, and 26 missing values, for the Lower Close scale. Little's MCAR test of missing values showed nonsignificant results for each of the eight scales, confirming that these were completely at random. These cases were excluded from further analysis on a listwise deletion basis. All values for skewness and kurtosis were non significant, implying that the scores were normally distributed. The results of the KMO test of sampling adequacy revealed values above the recommended .6, suggesting that the data were suitable for factor analysis.

For the assessment of reliability, the analysis consisted of computing the reliability coefficient, Cronbach's Alpha, for each parent and scale. As in the previous two studies, this was accompanied by other elements of item analysis, such as inter-item correlations, item-total correlations and principal component analysis.

For the assessment of the factor structure, or underlying constructs, the analysis consisted of conducting an exploratory factor analysis for each parent version of the ARPRQ. The method of this exercise was informed by the recommendations of Field (2005), Tabachnick and Fidell (2007), Rust and Golombok (2009) and Kline (1994). As a result, the principal component method was chosen and, due to the expectation that the dimensions of the questionnaire are correlated with each other, the oblique rotation procedure was stipulated.

Results

In study three the scores for each item ranged between one and five. The descriptive statistics indicated that the means of individual items ranged between 2.7 ($SD = 1.2$) and 4.3 ($SD = 1.0$) for ratings of Mothers, and between 2.4 ($SD = 1.2$) and 4.5 ($SD = 0.8$) for Fathers. The scale scores could range between five and 25 and the scale means ranged between 17.6 ($SD = 3.7$) and 20.2 ($SD = 4.0$) for Mothers, and between 17.5 ($SD = 5.0$) and 21.5 ($SD = 3.7$) for Fathers.

These differences have been analysed for statistical significance considering the gender of the parent and the gender of the respondent. Results for the effect of gender of parent showed that, apart from the Upper Neutral scale, the differences between perceived relating styles of Mothers and Fathers were significant, with Mothers perceived as more upper distant ($p < .05$), neutral distant ($p < .01$) and lower distant ($p < .01$), and Fathers perceived as more lower neutral ($p < .01$), lower close ($p < .01$), neutral close ($p < .01$) and upper close ($p < .01$).

The analysis of the effect of gender of participant showed a significant difference between the experiences of genders for the Neutral Distant scale, with female respondents perceiving Fathers as more negatively neutral distant than their male counterparts ($p < .05$). A significant difference was also found between the ratings of

male and female respondents for the Lower Neutral scale, with females perceiving both Mothers ($p < .05$) and Fathers ($p < .01$) as more negatively lower neutral than male respondents. The differences for the remaining scales were nonsignificant. The results of the item-total and reliability analysis for each scale and parent revealed that all items and scales reached the required parameters. These results are presented in Table 5.3.

Table 5.3

Reliability and item-total coefficients for Study Three (N=601)

Scale	Item	ARPRQ-M Item-total Correlation	ARPRQ-M Reliability Cronbach's α	ARPRQ-F Item-total Correlation	ARPRQ-F Reliability Cronbach's α
Upper Neutral	1	.31		.46	
	11	.74		.79	
	19	.64		.69	
	25	.76		.79	
	33	.75		.76	
			.83		.87
Upper Distant	9	.67		.75	
	15	.73		.76	
	28	.69		.72	
	35	.75		.79	
	39	.42		.49	
			.84		.87
Neutral Distant	4	.73		.79	
	7	.78		.78	
	23	.80		.81	
	37	.78		.79	
	44	.70		.70	
			.90		.91
Lower Distant	16	.70		.70	
	26	.71		.74	
	31	.53		.55	
	40	.73		.67	
	45	.31		.36	
			.81		.81
Lower Neutral	3	.31		.54	
	17	.62		.68	
	20	.52		.66	
	43	.39		.41	
	47	.60		.68	
			.72		.80
Lower Close	10	.50		.56	
	14	.63		.67	
	21	.68		.71	
	29	.69		.69	
	34	.63		.73	
			.83		.85
Neutral Close	2	.49		.48	
	13	.63		.68	
	32	.49		.46	
	41	.33		.39	
	46	.61		.67	
			.74		.76
Upper Close	5	.58		.50	
	22	.65		.58	
	27	.67		.72	
	38	.60		.62	
	42	.72		.70	
			.83		.82

5.3.1 Examination of circumplex structure

The possibility that the scales of the ARPRQ may be ordered in a circumplex fashion was assessed in Study Three by examining the matrices of intercorrelation coefficients between the eight scales. Table 5.4 shows the coefficients obtained for the correlations between the eight scales of the ARPRQ for the Mother and Father versions respectively.

In a perfect circumplex pattern the scales representing opposing octants should produce a negative correlation coefficient of -1.00, the scales representing orthogonal octants should produce a correlation coefficient of 0.00, and the scales representing adjacent octants should produce correlation coefficients of .50 and -.50, respectively. The ideal arrangement for the ARPRQ is indicated by the italicised values occupying the first row of the table. These values suggest the circumplex pattern of correlations between the Upper Neutral and the remaining scales.

Due to measurement error in real data, a "perfect" circumplex probably does not exist. However an "imperfect" circumplex should display a similar arrangement of octants. The correlation coefficients presented in Table 5.4 indicate that, as expected, the scales of the ARPRQ for both Mother and Father versions do not conform to a circumplex structure.

Table 5.4

Inter-scale correlation coefficients for the ARPRQ (N=601)

ARPRQ-M	UN	UD	ND	LD	LN	LC	NC	UC
UN	*1*	*.50*	*.00*	*-.50*	*-1.0*	*-.50*	*.00*	*.50*
UD	.88	-						
ND	.67	.70	-					
LD	.63	.63	.84	-				
LN	.13	.08	.10	.22	-			
LC	.41	.34	.27	.40	.72	-		
NC	.48	.35	.12	.15	.37	.51	-	
UC	.55	.41	.23	.27	.33	.53	.80	-
ARPRQ-F								
UN	-							
UD	.89	-						
ND	.63	.67	-					
LD	.60	.62	.81	-				
LN	.22	.12	.11	.26	-			
LC	.35	.26	.18	.40	.78	-		
NC	.50	.41	.17	.30	.48	.63	-	
UC	.56	.46	.29	.38	.46	.61	.80	-

Italicised row indicates the coefficients of a perfect circumplex structure.

5.3.2 Investigation of factor structure

The underlying constructs of the ARPRQ were uncovered by assessing the factor structure of the questionnaire. Having assessed the adequacy of the data for the type of statistical analysis required, the items of the ARPRQ were subjected to exploratory factor analysis, which employed a principal components method with oblique rotation.

For the Mother version of the ARPRQ five factors were extracted in the initial solution, which were collectively responsible for 62.7% of the total variance, with the first factor explaining 34%, the second 13.9%, the third 8.1%, the fourth 3.8% and the fifth 2.7% of this total.

The estimates of communalities ranged between .40 and .77, which fell within the desirable range recommended by Tabachnick and Fidell (2007), i.e. between 0 and 1, without approaching or exceeding either of these extreme values.

The adequacy of the oblique rotation procedure was assessed by inspecting the component correlation matrix, which showed that, overall, correlations between factors were below the recommended limit value of .32 (Tabachnick & Fidell, 2007). The only value higher than this limit was the correlation between factors 2 and 3, which was .35. The discovery that the factors were not sufficiently highly correlated rendered the use of oblique rotation inappropriate. In addition, the fifth factor extracted had small and erratic variable loadings, which caused the questioning of its meaningfulness. For these reasons, as well as theoretical ones, the data were further explored requesting a four-factor solution with orthogonal rotation. The results of this analysis showed that the four factors extracted were now responsible for 60% of the variance observed in the variables, with their individual contributions being identical to the first solution attempted.

Table 5.5 shows the loadings of variables on factors, grouped by size of loadings in order to facilitate interpretation. Loadings with values lower than .40 have been replaced by blank cells. This decision was informed by Tabachnick and Fidell's (2007) "rule of thumb" that only variables with loadings of .32 and above are interpreted, as well as Comrey and Lee's (1992) classification of this value as poor, and the value of .45 as fair. Due to the observation that some variable loadings fell sufficiently close to this value, between .40 and .45, it was considered useful to report them in order to illustrate the pattern of loadings and to assist future discussion. Suggested factor labels are presented in the footnote.

The conclusion of this part of the exercise was that the dimensions underlying the Mother version of the ARPRQ for this particular sample appear to be Distance, Closeness, Lowerness and Upperness.

Table 5.5

Factor loadings for Principal Component Analysis with Varimax Rotation of the ARPRQ-M items (N=601)

Item	Scale	F1	F2	F3	F4
M23	ND	.86			
M40	LD	.84			
M37	ND	.82			
M7	ND	.81			
M26	LD	.80			
M4	ND	.79			
M16	LD	.78			
M33	UN	.76			
M44	ND	.75			
M28	UD	.75			
M15	UD	.70			
M19	UN	.70			
M31	LD	.63			
M35	UD	.61			.45
M11	UN	.54			.44
M25	UN	.53	.46		.50
M45	LD				
M22	UC		.76		
M42	UC		.75		
M13	NC		.70		
M5	UC		.69		
M27	UC	.42	.69		
M46	NC		.68		
M38	UC	.44	.60		
M2	NC		.60		
M32	NC		.60		
M41	NC		.51		
M17	LN			.78	
M47	LN			.77	
M34	LC			.72	
M20	LN			.67	
M21	LC			.65	
M29	LC		.41	.60	
M14	LC			.59	
M10	LC			.58	
M43	LN			.57	
M3	LN			.43	
M1	UN				.74
M9	UD	.42			.69
M39	UD				.68

Suggested labels: F1=Distance; F2=Closeness; F3=Lowerness; F4=Upperness

For the Father version of the ARPRQ also five factors were extracted in the initial solution, collectively responsible for 66.1% of the total variance, with the first factor explaining 35.4%, the second 16.5%, the third 7.2 %, the fourth 3.9% and the fifth 3.2% of this total.

The estimates of communalities ranged between .37 and .80, which fell within the desirable range recommended by Tabachnick and Fidell (2007), i.e. between 0 and 1, without approaching or exceeding either of these limits.

The adequacy of the oblique rotation procedure was assessed by inspecting the component correlation matrix, which showed that, overall, correlations between factors were below the recommended value of .32 (Tabachnick & Fidell, 2007). Higher values were for these correlations were limited to the pairs of factors 1 and 5, at .46, and 2 and 3, at -.40. The discovery that the factors were not sufficiently highly correlated invited the questioning of the appropriateness of oblique rotation.

For these reasons, as well as the fact that only one variable had a loading higher than .45 on the fifth factor, the data were further explored requesting a four-factor solution with orthogonal rotation. The results of this analysis showed that the four factors extracted were now responsible for 62.9% of the variance observed in the variables, with individual proportions being identical to the first solution presented above.

Table 5.6 shows the loadings of variables on factors, grouped by size of loadings in order to facilitate interpretation. Loadings with values lower than .40 have been replaced by blank cells, for reasons identical to the ones accompanying Table 5.5, and suggested factor labels are presented in the footnote.

The conclusion of this part of the exercise was that the dimensions underlying the Father version of the ARPRQ for this particular sample appear to be Distance, Lowerness, Closeness and Upperness.

Table 5.6

Factor loadings for Principal Component Analysis with Varimax Rotation of the ARPRQ-F items (N=601)

Item	Scale	F1	F2	F3	F4
F23	ND	.89			
F4	ND	.84			
F26	LD	.83			
F37	ND	.80			
F7	ND	.78			
F40	LD	.76			
F16	LD	.76			
F31	LD	.70			
F44	ND	.69			
F28	UD	.66			.44
F15	UD	.65			.49
F33	UN	.65			.44
F19	UN	.60			
F17	LN		.83		
F47	LN		.80		
F20	LN		.78		
F34	LC		.76		
F21	LC		.67		
F29	LC		.66		
F3	LN		.63		
F10	LC		.61		
F14	LC		.58		
F43	LN		.55		
F45	LD		.47		
F42	UC			.77	
F13	NC			.71	
F27	UC	.41		.68	
F22	UC			.67	
F46	NC		.43	.66	
F41	NC			.62	
F5	UC		.48	.53	
F38	UC			.52	
F2	NC		.44	.51	
F32	NC	.49		.50	
F1	UN				.81
F9	UD				.77
F39	UD				.68
F25	UN	.49			.61
F11	UN	.49			.58
F35	UD	.55			.58

Suggested labels: F1=Distance; F2=Lowerness; F3=Closeness; F4=Uperness

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5.4 Summary

This chapter described the method followed in the process of establishing the psychometric properties of the ARPRQ and the results obtained through this process. Section 5.1 described the method and results of Study One, whose aim was the assessment of reliability, and concurrent validity of the ARPRQ version 1 with the PBI. This was conducted using the paper version of the instrument and the ratings for participants' mother. This section also presented the sampling considerations that were used as guidelines for all three studies. The results of Study One revealed that, with the exception of three cases, all items were positively correlated with the total for their respective scale, reaching the minimum values required. The reliability analysis showed that five out of the eight scales had acceptable levels of internal consistency and this conclusion was reinforced by the principal component analysis, which revealed one component for the five scales with good internal consistency and two components for the three scales with less reliable structure. The concurrent validity assessment showed that the scales of the ARPRQ were negatively correlated with the Care scale and positively correlated with the Overprotection scale of the PBI. This brought initial support to the assumption that the ARPRQ measures the expected parental relating dimensions.

Section 5.2 described the method and results of Study Two, whose purpose was the assessment of reliability and construct validity of the ARPRQ version 2. This study was conducted using the web format of the questionnaire and the ratings for both parents. The construct validity aspect was assessed by comparing the scores of the ARPRQ with participant's own ratings of their parents, which were obtained from interviews. The choice of approach for conducting the interviews and the method of analysis of the resulting text were also described in this section. The results of Study Two showed that only one scale failed to reach acceptable levels of internal consistency for the mother version of the ARPRQ. Although for the father version of

the questionnaire this scale did reach the required Alpha coefficient, the principal component analysis revealed that its items referred to different constructs. The construct validation exercise revealed a pattern that suggests a positive correlation between the scores obtained from the ARPRQ and participants' ratings of their parents. This pattern further contributed towards ascertaining the instrument's ability to measure the targeted construct.

Section 5.4 presented the method of assessing the reliability and the factor structure of the ARPRQ version 3, which were carried out in Study Three. This study was conducted using the web format of the questionnaire and the ratings for both parents. This section described the sampling and data screening requirements for the assessment of factor structure and the procedure employed in order to address these requirements. Results showed that all items reached the required correlation coefficients with the total for their respective scale for both parent versions of the questionnaire and all scales achieved adequate internal consistency for both parents. The principal component analysis substantiated the conclusion that, for each scale, all items referred to the same construct, and the results of the correlations between scales showed that the ARPRQ does not conform to a circumplex structure. The results of the factor analysis revealed that both Mother and Father versions of the ARPRQ measure four constructs. According to relating theory, the proposed labels for these constructs are Closeness, Distance, Upperness and Lowerness.

CHAPTER SIX
DISCUSSION AND CONCLUSION

The principal aim of this project was the development of a questionnaire, the Adult Recollection of Parental Relating Questionnaire (ARPRQ), for the retrospective measurement of parental relating from the perspective of the child. The constructs measured by the ARPRQ were proposed as the components of a new conceptualisation of parental relating, which was based upon Birtchnell's (1987, 1993) relating theory. The task of constructing the questionnaire consisted of two main stages: the development stage, described in Chapter Four, and the validation stage, described in Chapter Five. This chapter will present the interpretation of the results obtained from the validation studies and will discuss the implications of these findings for the purpose of the instrument and for the study of parenting.

6.1 Synoptic view of results

As the overall aim of the present project was the development of a questionnaire, the tasks involved in the process were formulated in terms of specific hypotheses regarding the requirements of reliability and validity.

The internal consistency reliability of the ARPRQ was assessed through a series a steps alternating between item analysis and item revision. Adequate, and in some cases excellent, levels of reliability were achieved for both parents versions of the questionnaire, as revealed by the reliability coefficients in the final study. In addition, all items were positively correlated with their respective scale and one component was extracted for each scale, meaning that the items formed homogeneous scales. These results provide support to the hypothesis that the questionnaire would show adequate levels of internal consistency reliability.

The validity of the ARPRQ was assessed using multiple approaches. The content validity of the items was assessed during the development stage of the instrument. This procedure ensured the inclusion of items that were highly relevant to the constructs in question, which, in turn, simplified the subsequent steps of the process. The concurrent validity of the ARPRQ was tested by comparing the scales of the instrument with the scales of the Parental Bonding Instrument (PBI). The results support the hypothesis that the scales of the ARPRQ would be negatively correlated with the Care scale and positively correlated with the Overprotection scale of the PBI.

The construct, as well as concurrent validity, were assessed by comparing the scores of the ARPRQ with themes extracted from interviews. The results of this comparison provide support to the hypothesis that there would be a positive relationship between parenting styles obtained using the two methods.

The validity of the constructs under investigation was established by obtaining the factor structure of the ARPRQ, which supports the hypothesis that the factors extracted would coincide with the four factors underlying relating theory.

This contracted account of the results suggests that, at least at first sight, the ARPRQ is a promising instrument, which demonstrates good reliability and validity. The following section will present a detailed account of these properties and their implications.

6.2 Detailed view of results and their interpretation

Since the present exercise is an exemplar of the scientific enterprise, it is, almost by definition, expected to be incomplete. Within the domain of questionnaire design, one of the most illustrative examples of the nature of scientific inquiry is the endeavour to achieve validity and reliability. The following sections will present and discuss this process in detail.

6.2.1 The process of item and reliability analysis

In order to avoid repetition, the detailed process of interpreting the results and implementing changes will be presented only for the Lower Distant scale. This has been chosen as exemplar of the process due to the inconsistency of its internal structure, which allowed the opportunity to impart the intricacy of the exercise with a level of detail and clarity that would be redundant in the presentation of the scales with "perfect" results. However, an identical process has been followed for all eight scales.

Lower Distant Scale - Mother

The results of Study One showed that some items did not conform to the requirements described in Chapter Three and, therefore, they did not form a coherent scale. More specifically, not all items were positively correlated with each other and the item-total correlation coefficients were under the required value. Item 31 was weakly correlated with the other items of the scale and reached the lowest corrected item-total correlation coefficient. For item 31 the value of Cronbach's Alpha if item deleted was higher than the one obtained for the scale, meaning that the scale would perform better in its absence. The results of the principal component analysis showed that two components were extracted, with items 16, 26, 40 and 45 loading on the first component, and item 31 loading mostly on the second component. On the basis of these results, item 31 was changed from "Liked to keep out of my way" to "She never seemed to care about what I was doing".

Although the values obtained for the rest of the items seemed adequate, on further reflection it was considered that the phrasing of items 26 and 45 could be more precise. To this end, item 26 was changed from "She did not like the parent role" to "She easily gave in to me". Similarly, item 45 was changed from "Was hopeless as a parent" to "She was too inclined to just let me do anything I wanted".

After Study Two the results of the analysis showed that only three items were positively correlated with each other at the minimum level required. The pattern of inter-item correlations indicated that item 26 failed to reach satisfactory correlation coefficients with all items apart from item 45. The results of the corrected item-total correlations showed that four items were positively correlated with the total for the scale at the minimum level required. The unsatisfactory item resulting from the item-total analysis appeared to be item 26. Furthermore, for item 26 the value of Cronbach's Alpha if item deleted was higher than that obtained from the scale, which also indicated that the scale would benefit from its deletion. Two components were extracted for this scale, with items 16, 31 and 40 loading on the first component, item 26 on the second, and item 45 loading almost equally on both. The results of this analysis prompted the alteration of items 26 and 31. Item 26 was changed from "She easily gave in to me" to "She did not like being a parent". Item 31 was changed from "She never seemed to care about what I was doing" to "She tended to keep out of my way". Although the new phrasing may sound similar to the format used in stage one for both items, it was considered that the new format would benefit the items by being more simple and precise. After Study Three the results showed that all items were positively correlated with each other and all corrected item-total correlation coefficients reached the level recommended. The reliability analysis revealed that the scale was internally consistent and all items were referring to one component.

Lower Distant (LD) Scale - Father

The results of the inter-item correlations for the Lower Distant scale showed that the items were positively correlated with each other, although some coefficients were modest and nonsignificant. The corrected item-total correlation results showed that all items were positively correlated with the scale and the reliability analysis pointed towards the benefit of deleting item 26. The results of the principal component

analysis showed that the items loaded on two components, with item 26 loading more substantially on the second component. On the basis of these results and in order to preserve consistency between the mother and father versions of the questionnaire, item 26 was changed from "He easily gave in to me" to "He did not like being a parent". After Study Three the results showed that all items were positively correlated with each other and the corrected item-total as well as reliability coefficients reached the parameters required.

The exemplar presented above illustrates the intricate nature of the process of item optimisation and the value of repeated testing for the decision making exercise involved in item selection. Since, as Kline (1982) stated, a questionnaire cannot be better than its items, the importance of this stage as generator of the basic construction units cannot be sufficiently emphasised. At the same time, the finding that a number of items did not refer to the construct initially predicted brings support to Cronbach and Meehl's (1955) argument for the superiority of statistical over clinical prediction, which has been clearly demonstrated by the iterative process of item optimisation during the validation stage of the ARPRQ.

The relationship of interdependence between reliability and validity in questionnaire design implies the necessity for a degree of compromise in the quest for equilibrium. This equilibrium has been achieved in the case of the ARPRQ, or it can be argued that, at least using the present method, the reliability of the questionnaire has reached a saturation point, where further changes would not contribute to further improvement without the risk of compromising the validity of the measure.

6.2.2 The process of establishing validity

The elusive nature of the constructs under investigation makes personality measurement an even more uncertain context than the traditional quest for evidence found in other domains that are guided by empiricism. For the process of establishing

construct validity, this uncertainty implies that the evidence for or against any hypothesis should be treated with even more caution. At the same time it could mean that the empiricist approach, as embodied by the hypothetico-deductive model, may need supplementing by other epistemological approaches.

The validity of the ARPRQ was assessed through comparison with another validated measure of perceived parental behaviour, through comparison with another method of data collection and through establishing its underlying dimensions using statistical procedures. The comparison with the two scales of the PBI produced supporting results to the hypothesis that the care scale should be negatively correlated and the protection scale should be positively correlated with the scales of the ARPRQ. However, this comparison was performed in Study One, in which three scales of the ARPRQ were not sufficiently reliable. At the same time, although theoretically the PBI and the ARPRQ share some common ground, a direct comparison between their constructs is not a straightforward exercise. This is due to the limitations imposed by their aggregated constructs, which, as proposed in Chapter Two, suffer from the inability to allow such direct comparisons. The constructs underlying the PBI, care and overprotection, would be conceptualised by relating theory as composites of closeness as well as power. Actually, both care and protection would translate as upper-closeness, with the distinguishing feature that care refers to positive and overprotection refers to negative aspects of this construct. The results appear to support this hypothesis, with the correlation between overprotection and upper-close scales achieving the highest coefficient (.82).

However, this does not seem to be the case for care and upper-close scales, which reached a more modest correlation (-.26). Since the reliability of the upper-close scale was considered excellent (.82), this low coefficient could not be attributed to inadequate reliability but could reflect conceptual differences between the two scales. The inspection of the correlations between the care scale of the PBI and the other

scales of the ARPRQ revealed that the highest coefficients were obtained for scales containing the component of distance, upper-distant (-.68) and neutral-distant (-.74), suggesting that the care construct of the PBI may be related more to the closeness, rather than the upperness, component of the upper-close scale. Indeed, the items of the care scale of the PBI, such as, "She spoke to me in a warm and friendly voice" or "Was affectionate to me", do not seem to refer to a power component of looking after or providing for, which the term *care* would imply. In this case, the negative correlation between neutral-close and care scales should be stronger than the one obtained (-.19). However, the low reliability of the neutral-close scale may have contributed to this weak relationship.

Although not entirely conclusive in terms of direct comparison of constructs, the results of the correlations between the scales of the ARPRQ and the PBI bring support to the claim that the ARPRQ measures only negative parental relating. However, as Kline (1986), and Rust and Golombok (2009) argue, the method of concurrent validation is one of the least reliable validation procedures, mainly due to the uncertainty that the two instruments reflect the same underlying dimensions. Consequently, the results of the present exercise can be used as a general indicator of the domain under investigation but not as absolute comparison standard. Despite these limitations, however, a replication of the concurrent validity procedure in the presence of more reliable ARPRQ scales would contribute towards a clearer understanding of the relationship between constructs. This replication may become the purpose of a future study.

The principal validation exercise of the ARPRQ was the procedure of ascertaining its factor structure. For both versions of the measure, ARPRQ-M and ARPRQ-F, it was concluded that the most adequate solution was a model based on four unipolar factors, whose suggested labels were Distance, Closeness, Lowerness and Upperness.

A close examination of the factor loadings for each item of the ARPRQ-M revealed that 17 items referred to the first factor, Distance. These were all five Neutral-Distance items, all five Lower-Distance items, four Upper-Neutral, and three Upper-Distance items. The presence of the four Upper-Neutral items prompted a more detailed inspection of the relationship between items and further reflection on the relationship with their respective construct. To this end, it was observed that two of the Upper-Neutral items, 11 and 25, also loaded almost equally on the fourth factor, whose suggested label was Upperness. Item 11, which reads "She forced her will on me" and item 25, "She was too controlling", were designed to capture the aspect of unmitigated use of power, and the fact that they were interpreted as Distance suggests that the phrasing of the items may be ambiguous. It is possible, however, that such use of power may, in turn, be associated with a distant parent.

The other two of the four items designed to refer to Upperness, but which resulted in referring to Distance were item 19, "She made me feel helpless" and item 33, "She made me feel small". For these two items, the unexpected loadings could not be attributed to ambiguity, due to the very clear, high coefficients on Distance and minimal coefficients on all other components. This pattern also suggests that Distance and Upperness might share some common ground, or that, perhaps the first factor extracted refers to Upper-Distance, rather than Distance.

A detailed examination of the items that loaded on Upperness may bring some clarification to this possibility. These were item 1, "She put me in my place", item 9, "She was strict and harsh" and item 39, "She expected me to obey her". However, these three items do not seem to refer to a very strong negative behaviour, since parents are expected to set boundaries by putting children in their place or expecting children to obey them, and the item that can be viewed as the strongest, "She was strict and harsh", actually also loads considerably on Distance (.42). The fact that only three items loaded on Upperness and one of them also refers to Distance may

justify the preliminary speculation that, for mothers, negative distance may be perceived as negative upperness. At the same time, all five items intended for the Lower-Distance scale also loaded on the Distance component, which would contradict the suggestion that the Distance factor may actually refer to Upperness. This is due to the fact that, in this particular design, Upperness and Lowerness should be mutually exclusive. However, a re-evaluation of the Lower-Distance items prompted the realisation that the five items could simply refer to Distance. For example, item 40, "She was never there when I needed her", and item 31, "She tended to keep out of my way", evidently refer to Distance but they do not appear to imply any degree of deference or submissiveness to the child. Similarly, item 26, "She did not like being a parent" or item 16, "I did not feel I could trust her to protect me", refer to elusive interpretations and feelings, rather than specific manifestations. The relating reasons for not liking parenthood or not trusting the parent to protect the child are not sufficiently clear and the suggestion of Lowerness is absent. Another example is item 45, "She was too inclined to just let me do anything I wanted", which was the only item that initially loaded almost equally on a fifth factor as well as on Distance. When the solution was forced into four factors, item 45 settled for Distance, although it did not reach satisfactory loading. Item 45 was designed for the Lower-Distant scale but the element of permissiveness that it implies may not necessarily be attributed to a lack of power. As a result, it was concluded that the first factor may refer to Distance, but that Distance itself may be perceived as Upperness. Considering the upper-close nature of parenting discussed in Chapter Two and the journey of the items designed for the lower scales, this particular pattern of results was not entirely surprising. It can be regarded as confirmation of the relating nature of parenting and, implicitly, the normality of the sample.

Perhaps a more surprising discovery was the co-existence of upperness and distance items on the same factor, since items such as "She showed little interest in me" and

"She made me feel small" were designed to refer to orthogonal constructs. Their presence on the same factor suggests that the perception of both power and distance may be attributed to the same underlying construct. Theoretically, this possibility can be explained by the model of relating in terms of the relationship between power and distance, in that power is needed in order for distance to emerge. From the point of view of the child, who is completely dependent on the parent, a distant parent who shows little interest in meeting the child's needs, for example, may appear enormously powerful, perhaps more so than a controlling parent.

The second factor extracted for the Mother version of the ARPRQ appeared to refer to Closeness. This component comprised of the five items intended for the Neutral-Close scale and the five items designed for the Upper-Close scale. Three of the items designed for the Upper-Close scale also loaded on Upper-Distance. These were item 27, "She did not want me to be independent", item 32, "She did not allow me any privacy" and item 38, "She would not let me do anything for myself". These items achieved loadings ranging between .42 and .48 on the Upper-Distance scale, which may be due to their underlying power element.

The third factor extracted for the ARPRQ-M appeared to refer to Lowerness, since all five items intended for the Lower-Close scale and all five items intended for the Lower-Neutral scale loaded comfortably on this component. The only item that showed a notable relationship with another component was item 29, "She relied upon me too much", which also loaded on the third factor, assumed to be Closeness.

The fourth factor extracted for the Mother version of the ARPRQ comprised of three items, which were designed for the Upper-Neutral and Upper-Distance scales. These were item 1, "She put me in my place", item 9, "She was strict and harsh" and item 39, "She expected me to obey her" and it was thought that this factor referred to Upperness.

A detailed examination of the factor loadings for the Father version of the ARPRQ revealed that 13 items loaded on the first factor, whose suggested label was Distance. These were all five Neutral-Distance items, two Upper-Neutral items, two Upper-Distance and four Lower-Distance items. The Upper-Neutral and Upper-Distance items also loaded on the fourth factor, whose proposed label was Upperness.

The second factor extracted for the ARPRQ-F appeared to refer to Lowerness, due to the fact that it comprised of all five Lower-Neutral items, all five Lower-Close items and one Lower-Distant item. The Lower-Distant item, however, did not achieve the minimum required loading coefficient. This was item 45, "He was too inclined to just let me do anything I wanted", and displayed an indecisive pattern of relationships to the four constructs which was similar to that of item 45 from the Mother version of the ARPRQ. This direct correspondence indicated that, for both parent versions, item 45 lacked the clarity and precision required for eliciting the targeted construct.

The third factor extracted for the ARPRQ-F consisted of all five Upper-Close items and all five Neutral-Close items, which indicated that it referred to the underlying construct of Closeness. An intriguing finding was that item 27, "He did not want me to be independent" and item 32, "He did not allow me any privacy", which were intended for the Upper-Close scale, resulted in also referring to Distance. A possible explanation for this contradictory finding could be the relationship between Distance and Upperness, which was already suggested as explanation for the similar pattern encountered for the mother version of the ARPRQ, meaning that distance may be associated with power. Another unexpected finding was that item 2, "He never gave me any space to be myself", item 46, "He could not bear to let me out of his sight", both intended for the Neutral-Close scale, and item 5, "He fussed over me too much", intended for the Upper-Close scale, also referred to Lowerness. Although these three items did not reach the required loading coefficients on Lowerness, their

relationship with this construct indicates that, for fathers, excessive closeness may also be perceived as weakness or clinginess.

The fourth factor for the father version of the ARPRQ appeared to refer to Upperness and consisted of three Upper-Neutral and three Upper-Distant items. Of these six items, three also loaded on Distance, with item 35, "He was too keen on punishment", reaching almost the same loading on Distance (.55) as it has reached on Upperness (.58). Since item 35 was intended for the Upper-Distance scale, this division of reference between Upperness and Distance was not considered unreasonable.

6.2.3 Configurational equivalence of ARPRQ-M and ARPRQ-F

The pattern of item loadings showed that 36 out of 40 items referred to the same construct for both parents. These were all items that loaded on Closeness and Lowerness, 13 of the items that loaded on Distance and three of the items that loaded on Upperness. The remaining items were item 11, "She/he forced her/his will on me", item 25, "She/he was too controlling", item 35, "She/he was too keen on punishment", and item 45, "She/he was too inclined to just let me do anything I wanted".

Items 11 and 25 were designed for the Upper-Neutral scale and item 35 for the Upper-Distance scale. All three loaded on Distance for mothers and on Upperness for fathers, which was an intriguing result. It is possible that mothers and fathers are expected to relate to their children in different ways, causing the respondent to attach different meanings to the same overt behaviour. It can be argued that, since mothers and fathers differ in regards to childrearing responsibilities (Wood & Repetti, 2004; Yeung, Sandberg, Davis-Kean & Hofferth, 2001), it would be reasonable to assume that they may also be expected to relate to their children in different ways. Indeed,

the results of the present project showed that mothers were perceived as more negatively distant and fathers as more negatively close.

Parker et al. (1979) also found that mothers were perceived as more caring as well as more protective than fathers, which in relating theory terms would mean that mothers tend to be perceived as more positively close as well as more negatively upper than fathers. Using the abbreviated version of the CRPBI, Raskin et al. (1971) also reported that mothers were perceived as more "negatively controlling" than fathers, and using the EMBU, Perris et al. (1980) found that mothers were seen as more overprotective and overinvolved than fathers. Others have found that mothers and fathers are similar in their levels of intrusiveness but mothers show more variation in harshness levels (Adamsons & Buehler, 2007).

Regrettably, the meaning of such comparisons is substantially limited by the issue of measurement equivalence, since in parenting research measures were generated and validated on mothers but not validated for use with fathers. Consequently, it is unclear whether the differences between mothers and fathers reflect true differences in behaviours or whether they reflect the use of measures that assess parenting inaccurately for one or both groups (Adamsons & Buehler, 2007). The subject of measurement equivalence can be assigned various levels of importance but, in a manner similar to that of validity, its most significant contribution should be governed by pragmatism. Due to the sensitive balance between these properties, refining one can easily upset the others, in which case the exercise becomes "over-refining" and the final product can lose its value. As such, equivalence, validity, reliability and other such measurement requirements should be approached as purposeful design features rather than a "ticking boxes" exercise.

Returning to the discussion of the items, it is possible that the loadings of the three Upperness items do reflect real differences, in which case the scales would require adjustment, either of the scoring or the phrasing of the items. At the same time, it is

possible that different items are needed for each parent. Due to the fact that identical items were used for both versions of the questionnaire and these items reached the required loading coefficients using a notable sample size, these differences cannot be simply, or solely, attributed to measurement error.

An example of inconclusive findings due to measurement error is the result obtained for item 45, which can be used to illustrate the difference between results affected by measurement error and results that reflect the potential existence of a real phenomenon. Item 45 loaded on Distance for mothers and on Lowerness for fathers. The reason for which this pattern cannot be accepted as reflecting a real difference is the fact that item 45 did not reach the required loading coefficient for either of these components. Furthermore, its distribution of loadings on other components indicates differential interpretation of the item, which, in turn, is likely to have been caused by ambiguity of phrasing. Indeed, it does not seem clear whether "She/he was too inclined to just let me do anything I wanted" refers to the possibility of the parent neglecting the child, caring for the child but being unable to resist his or her requests, or relying on the child to make decisions, amongst other possible explanations. Returning to the issue of configurational equivalence, the pattern of distribution of items to factors for both versions of the ARPRQ suggests the existence of four well-defined constructs that underlie the developing instrument. One finding, however, generates further questioning regarding the relationship between items and constructs, especially for mothers, as well as between constructs themselves. This is the result of the loadings on Upperness and Distance, and the possible relationship between them, which was proposed above. If this relationship reflects reality, items for both Upperness and Distance would be expected to load on only one component. It may be that the most suitable factor solution for mothers does not correspond with the solution for fathers. For example, it was noted that the mother version generated a clearer pattern of item loadings using oblique rotation but this procedure was not

considered suitable due to low correlations between factors. However, according to the pragmatic approach recommended by Kline (1986), Oppenheim (1992) and Rust and Golombok (2009), to which this thesis adheres, the optimal balance between statistical prediction and the value of the instrument may require a degree of compromise. It may be that the attempt to understand these inconsistencies would benefit from a different methodological perspective, which can be the purpose of future studies.

Another method of gathering evidence regarding the validity of the new measure was the comparison between the ratings of parents using the ARPRQ and the ratings of parents obtained using interviews. This comparison indicated agreement between the scores obtained using the two methods, suggesting that they measure the same constructs. Although it could be argued that using the conceptual framework itself as coding frame has the potential of contaminating the results, interviews were led by participants and the scarce questioning was non directive. Furthermore, the relating dimensions were not used as interviewing guides and the comparison with the octagon was conducted after the extraction of the themes from interviews. However, since the results were interpreted in considerable detail in Chapter Five, their discussion will not be repeated here. It was considered sufficient to conclude that the exercise contributed to the validation process of the new instrument by providing a detailed and in-depth perspective of the participants' experiences and that these experiences appeared to coincide with the ones measured by the ARPRQ.

6.3 Limitations of the project

As presented in Chapter Three, the task of constructing questionnaires as retrospective measures may be undermined by limitations such as differential interpretation of items, inaccurate recall and distortion of responses. Whilst the

precautions of psychometricians have been followed with fidelity, certain limitations may have still affected the validity of the measurement.

The most evident threat to the validity of the ARPRQ could have been posed by inaccurate recall, due to the fact that participants were asked to rate events from their childhood and, for many participants, a substantial period of time may have elapsed since this stage in their life. However, as concluded in Chapter Three, autobiographical recollections are fundamentally accurate (Barclay, 1986) and the possible reconstructions are usually limited to a fraction of the autobiography (Ross & Conway, 1986). Implicitly, it can be claimed that the validity of the questionnaire was not significantly compromised by inaccurate recall.

A factor that could have affected autobiographical memory was the targeted time frame, in that participants were asked to recall events that occurred in their childhood or approximately before the age of 12. It is possible, however, that, as they gradually immersed themselves in the process of rating the items, participants may have forgotten the targeted time frame and they could have also referred to events that occurred after this age.

A more intricate and difficult to capture aspect of recall is the distinction between the state and trait quality of parenting and recollection of it. As a construct that spans over a number of years, parenting has the potential to change, perhaps several times, due to the wide range of life events a family experiences. The stability of the construct may the threatened not only by these actual changes, but also by changes in perception and recollection of the respondent, which in turn may be affected by the type of life events experienced by the respondent. It is possible that this project captured the state quality of the recollection, and in future studies further consideration will be given to designing more appropriate procedures for measuring the trait quality of the respondents' recollection.

Regarding the distortion of responses, it can also be argued that this did not constitute a significant threat to validity, due to the fact that participants were not asked to rate their own behaviour or attitudes and, therefore, there is less reason to believe that they would have presented a more socially desirable response. Furthermore, perceived parenting is not usually associated with sensitive topics. For comparison purposes, parents' reports of their own behaviour towards their children would be affected by social desirability as well as regarded as a sensitive topic.

The limitation that had the highest potential to compromise the validity and reliability of the ARPRQ was the issue of differential interpretation of items. This was more evident in the initial versions of the questionnaire and was subsequently reduced with each stage of the validation process. Section 6.2 discussed in detail this limitation and the steps involved in item optimisation, although this was, actually, the concern of the entire project. Nevertheless, a procedure that could further contribute towards ensuring reliability of the measure is the investigation of the test-retest reliability. This was not attempted during the project because the scales were still being refined and, as Watson (2004) recommended, test-retest reliability is typically assessed after the scales have demonstrated good internal consistency. Therefore, this will be one of the aims of future studies.

Another limitation of the project is associated with factor analytic procedures, which, as psychometricians agree, are the epitome of the concept of "garbage in, garbage out" (Field, 2005; Klein, 1986; Rust & Golombok, 2009), meaning that associations will always be reported, despite the fact that they are unlikely to reflect reality. However, this issue was addressed during the exercise of content validation, which resulted in the inclusion of items that were considered to be most relevant to the construct in question, therefore minimising the probability that the pool of items would consist of "garbage". In hindsight, perhaps a larger pool of initial items, followed by exploratory factor analysis for each stage, would have highlighted

different aspects of the construction process and this, in turn, could have expedited the understanding of the relationship between items and constructs, as well as between constructs themselves.

On the other hand, perhaps confirmatory factor analysis would have been appropriate and would have highlighted different aspects of the scales and the model. As such, in order to ensure the psychometric robustness of the instrument, this procedure will be attempted in imminent studies.

Although justifications for sampling strategies were discussed in previous chapters, it is possible that rewarding respondents for their participation in the last study could have influenced the composition of the sample, in that respondents who register their interest in completing surveys may have certain psychological characteristics. The most obvious of these is the possibility that the interest in the financial reward could be greater than the interest in assisting with the advancement of research, which would result in an incomplete engagement with the task. However, the large number of comments, some very detailed, offered after completion of the questionnaire indicates that respondents did engage in the task with serious intentions.

6.4 The future of the ARPRQ - Implications, applications and postulations

As presented in Chapter Two, the dimensions of parenting agreed upon in the literature are support and control, and this thesis proposes that these two dimensions can be re-conceptualised as proximity and power, whilst distinguishing between positive and negative relating. As hallmark of relating theory, the distinction between positive and negative relating would represent the principal contribution of the study of parental relating to the wider field of parenting research. This contribution would facilitate the investigation of specific links between parental relating and child outcomes and, therefore, it would enable the prediction of specific developmental outcomes at different stages and various roles in life.

To this end, the next most important feature of the ARPRQ that requires research effort is its predictive validity. Ascertaining the prediction of a particular outcome as reference criterion would grant the ARPRQ the empirical validation of a genuinely useful instrument. Possible reference criteria would range from functional behaviour, for example, relating to others in general, relating to one's children, relating to one's partner and relating in other specific roles, to dysfunctional behaviour as encountered in individuals suffering from anxiety, depression, personality disorders and other psychological issues. Personality disorders have already been mapped using both relating (Birtchnell & Shine, 2000) and interpersonal theories (Horowitz, 2006) and, therefore, links to the relating style of parents would provide further understanding of the developmental aspect of these disorders, further evidence for the validity of their classifications, as well as an enhanced empirical basis for the therapeutic interventions used to address them. The application of the ARPRQ to the field of abnormal psychology would require the adjustment and validation of the instrument in order to reflect the features of particular clinical populations.

In fact, the initial idea behind the development of the ARPRQ was the motivation to investigate intergenerational transmission of parental relating and, therefore, ascertaining the instrument's ability to predict parental relating would constitute one of the first aims for future studies. This perspective could complement the body of evidence regarding intergenerational transmission of parenting (See Belsky, Conger & Capaldi, 2009, for a review). Research focused on intergenerational transmission of parenting was initiated by the study of child maltreatment (Belsky, 1978; Chicchetti & Rizley, 1981; Spinetta & Rigler, 1972) and was subsequently extended to other aspects of parenting, such as, angry and aggressive behaviour (Conger, Nellpl, Kim & Scaramella, 2003), antisocial behaviour (Thornberry, Freeman-Gallant, Lizotte, Krohn & Smith, 2003), constructive parenting (Chen & Kaplan, 2001), warm-sensitive-stimulating parenting (Belsky, Jaffee, Sligo, Woodward &

Silva, 2005), role-reversal (Macfie, McElwain, Houts & Cox, 2005) and perfectionism (Soenens, Elliot, Goossens, Vansteenkiste, Luyten, & Duriez, 2005), to name but a few areas.

Consequently, due to the proposed biological basis of relating, the study of intergenerational transmission of relating styles has the potential to address the nature-nurture debate not only in the context of parenting, but in the entire range of roles and situations. To this end, it would be fascinating to uncover how blank the relating slate really is.

At the same time, it would be useful to understand the possible differences between perceived and actual relating of parents, as well as other roles, and determine their respective effects on the recipient. This would require the development of corresponding versions of the ARPRQ to suit various roles. This line of research would offer insight into the possible contributors to the difference between perceived and actual relating. However, the most useful discovery would be to determine which one of the two promises the highest probability of predicting specific outcomes. Having argued for the primacy of the recipient's perception of parenting, it can be hypothesised already that it is the perceived relating that would have a significant contribution to outcome.

At present, the ARPRQ is being used by Kalaitzaki, at the University of Crete, in Greece, as part of the International Parenting Study led by Fauchier and Strauss from the University of New Hampshire. This study investigates the methods used by parents to correct children's misbehaviour, and is organised as a research consortium consisting of approximately 30 nations.

The ARPRQ could be used to investigate the contribution of parental relating received in childhood to the tendency of the recipient to relate to strangers, or unacquainted people, in adulthood. Apart from the traditional questionnaire, present relating style could also be assessed using the "thin slice studies" format (Borkenau

& Liebler, 1995; Borkenau, Mauer, Riemann, Spinath & Angleitner, 2004), in which participants are exposed to information about unacquainted target individuals and usually asked to rate various aspects of their personality. This particular type of investigation would have the potential to ascertain whether recipients of different parenting styles interpret the same attributes of the target in different ways. Exploration of these differences could be assisted by models of person perceptions, for example, Kenny's (1991) Social Relations Model, which assesses the proportion of variance in ratings that is accounted for by perceivers and targets, or Brunswick's (1956) Lens Model, which addresses the process used by perceivers to make inferences about targets. Such investigations could also attempt to elucidate the differences between perceived and actual relating style of parents, by highlighting the possible variations in cue utilisation and validity.

One option that could uncover potential differences in perceived parental relating would be to obtain ARPRQ ratings of the same parent by twins and siblings of the same and different gender. A study with this aim has already been designed and the data is being collected online.

The comparison between the perceived relating of parents towards the recipient and the perceived relating of parents to each other could also be used to establish the most likely predictor of the recipient's relating style in their roles as parent and/or partner during adulthood.

Since different degrees of power and proximity are expected at different stages in the development of the child, the measurement of these dimensions can be adapted to suit these stages. To this end, the ARPRQ can be adapted to refer to two or three stages in childhood and two or three stages in adolescence. The findings could contribute to the understanding of transitions between these stages and the feature of continuity or discontinuity in relating styles.

A different perspective to parenting research could focus on the detailed processes and mechanisms that take place during the interaction between parent and child, in terms of intention and impact, as proposed in Chapter Two. This approach would be most suitable for the investigation of the principles of complementarity and reciprocity, which govern the main dimensions of relating in interpersonal theory. Such a perspective would benefit from observing the interactions between parent and child in specific situations or over extended periods of time.

The applications of the instrument, and conceptual framework on which it is based, can only be limited by the imagination and resources of the researcher. Indeed, as with many ideas, it may be that the ARPRQ will be taken in a completely unexpected direction. Despite the awareness that at least one of these directions may lead to obscurity, the instrument promises realistic potential for many interpersonal interactions, not only for research purposes but also for therapeutic interventions. These could range from interventions for individuals or dyads, such as parent-child, teacher-pupil, doctor-patient, employer-employee as well as child-child, colleague-colleague, partner-partner, to virtually most of the roles that people might assume. In order to facilitate and expedite potential research and interventions, a shorter version of the questionnaire would also be useful. The psychometric feasibility of a shorter version stems from the principles on which the questionnaire was constructed, in that all items carry equal weight. As such, perhaps a 24-item ARPRQ could be developed by choosing the items that achieved the highest loadings on their particular factor in the present project. The psychometric properties of the shorter version would have to be re-assessed.

6.5 Conclusion

Despite the fact that the aspirations before the beginning of this project were slightly different from the actual objective addressed after engaging in the research process, the resulting achievement has not departed substantially from the initial intentions. The aim of developing a questionnaire emerged from the grand idea of comparing patterns of relating between generations. The necessity and importance of developing a valid and reliable measure, however, not only preceded other elements of the project but also proved a much more demanding and time consuming task than it was initially anticipated. Consequently, the development of the measure became the purpose of the project and the remaining components are to be addressed in future studies.

To this end, this thesis proposed a new conceptual framework for parental behaviour and presented the process of developing a questionnaire capable of testing it. This process commenced with reviewing the literature regarding relating and interpersonal dimensions, which was presented in Chapter One, and the literature regarding parenting dimensions, which was presented in Chapter Two. The requirements and steps involved in questionnaire design were described in Chapter Three and were followed faithfully, but pragmatically, in the empirical part, as presented in Chapters Four and Five. The product of the entire process is the Adult Recollection of Parental Relating Questionnaire.

The ARPRQ is not perfect. However, the rigorous approach applied to its development ensured that the result is a measure as valid and reliable as the empirical perspective allows. The lengthy and detailed process of scale optimisation produced scales with excellent internal consistency and, therefore, abiding to the first, and most important, requirement of any measure.

Returning to the purpose of the instrument, the proposal of a new conceptualisation of parental relating was based upon the necessity to deconstruct existing parenting

dimensions into purer constructs. At the same time, the amalgamation of various degrees of proximity and power was proposed as the context within which specific parenting practices take place. To this end, the ARPRQ is able to distinguish between the four main positions proposed by relating theory, and this distinction applies to both parents.

In conclusion, the ARPRQ can be considered a reliable and valid instrument for measuring perceived parenting styles from a relating theory perspective. Having designed and produced a "good enough" instrument as a prototype, its application to the real world can now begin. This means that the focus can now turn to addressing the initial intentions with which the project had started. One such intention is the investigation of intergenerational transmission of relating styles and the mechanisms involved in the process, and others include the exploration of the relationships between perceived relating of parents and tendencies of relating to others in various roles of adult life. The range of applications of the ARPRQ can only be limited by the range of interactions in which humans can participate.

Finally, although it could be argued that the effort devoted to the development of the ARPRQ may not be commensurate with the importance or impact of the outcome, the knowledge that the ARPRQ has been built on a sound and rigorous foundation is most reassuring, satisfying and inspiring.

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SAMPLE OF ARPRQ USED IN STUDY ONE

ARCQ – THE ADULT RECOLLECTION OF CHILDHOOD QUESTIONNAIRE

PM
THE PARTICIPANT'S ASSESSMENT OF THE MOTHER IN RELATION TO HIM/HERSELF

PLEASE READ THIS BEFORE YOU START

This questionnaire lists various attitudes and behaviours of parents.

As you remember your **MOTHER** (or maternal figure) in **CHILDHOOD** please tick the column that applies to you next to each statement.

Thank you for taking the time to complete this questionnaire.

		Nearly Always true	Quite Often true	Some Times true	Rarely true			Nearly Always true	Quite Often true	Some Times true	Rarely true
1.	She put me in my place					13	Tried to keep me at home too much				
2.	Liked to have me near her all the time					14	Expected me to look after her				
3.	Could not manage without me					15	Could be quite cruel				
4.	Had little time for me					16	I did not feel I could trust her to protect me				
5.	Fussed over me too much					17	Relied upon me too much				
6.	She was strict but fair towards me					18	Was warm and loving towards me				
7.	Kept me at a distance					19	Made me feel helpless				
8.	She did not impose her ideas on me					20	Asked for my opinion too often				
9.	Was strict and harsh					21	Expected me to be a little mother/father to her				
10	Needed my reassurance that I loved her					22	Was trying to protect me too much				
11	Imposed her will on me					23	Showed little interest in me				
12	She was careful not to offend me					24	She liked to snuggle up against me				

		Nearly Always true	Quite Often true	Some Times true	Rarely true
25	Tried to belittle me				
26	She did not like the parent role				
27	Had difficulty allowing me to be independent				
28	Intimidated me				
29	Forced me to grow up too early				
30	She was supportive and encouraging				
31	Liked to keep out of my way				
32	Did not allow me any privacy				
33	Made me feel small				
34	Wanted me to comfort her				
35	Seemed too keen on punishment				
36	She often needed my encouragement				

		Nearly Always true	Quite Often true	Some Times true	Rarely true
37	Rarely got very close to me				
38	Would not let me do anything for myself				
39	Expected me to obey her				
40	Was never there when I needed her				
41	Worried when I was out of the house				
42	Kept me as a child				
43	Expected me to take charge of things				
44	Seemed uncomfortable if I got too close to her				
45	Was hopeless as a parent				
46	Could not bear to let me out of her sight				
47	Needed my advice frequently				
48	She was a good teacher				

APPENDIX II

SCREEN SHOT OF HOMEPAGE OF "HOW PEOPLE RELATE" WEBSITE

APPENDIX III

SCREEN SHOT OF BRIEFING PAGE FOR STUDY TWO

APPENDIX IV

SCREEN SHOTS OF ARPRQ USED IN STUDY TWO

| Part A | A2 | PM | M1 | M2 | M3 | M4 | PF | F1 | F2 | F3 | F4 | Results | R2 | R3 | R4 | Submit |

ARPRQ Part A

Next

Please click the option that applies to you or type in the box next to each question.

About yourself

Are you ○ male ○ female

Your age group ○ 18-25 ○ 26-30 ○ 31-35 ○ 36-40 ○ 41-50 ○ 51-60

Do you have any siblings? ○ yes ○ no

If yes enter the ages of any **male** siblings you have? ☐ ☐ ☐ ☐ ☐ ☐

and the ages of any **female** siblings you have? ☐ ☐ ☐ ☐ ☐ ☐

To continue click on the 'Next' button at the top of the page.

| Part A | A2 | PM | M1 | M2 | M3 | M4 | PF | F1 | F2 | F3 | F4 | Results | R2 | R3 | R4 | Submit |

Next

ARPRQ
THE ADULT RECOLLECTION OF PARENTAL RELATING QUESTIONNAIRE

PM
THE PARTICIPANT'S ASSESSMENT OF THE MOTHER IN RELATION TO HIM/HERSELF

PLEASE READ THIS BEFORE YOU START

This questionnaire lists various attitudes and behaviours of parents towards you.

As you remember your MOTHER (or maternal figure) in CHILDHOOD (roughly up to the age of 12) please rate each statement on a scale of 1 to 5, where 1 represents "nearly always true" and 5 represents "almost never true".

APPENDIX IV - continued

| Part A | A2 | PM | M1 | M2 | M3 | M4 | PF | F1 | F2 | F3 | F4 | Results | R2 | R3 | R4 | Submit |

ARPRQ

Next

	Nearly Always True 1	2	3	4	Almost Never True 5
1. She put me in my place					
2. She never gave me any space to be myself					
3. She was inclined to depend on me					
4. She had little time for me					
5. She fussed over me too much					
6. She was someone I looked up to with respect					
7. She kept me at a distance					
8. She encouraged me to be independent					
9. She was strict and harsh					
10. She needed me to tell her that I loved her					
11. She forced her will on me					
12. She was careful not to offend me					

| Part A | A2 | PM | M1 | M2 | M3 | M4 | PF | F1 | F2 | F3 | F4 | Results | R2 | R3 | R4 | Submit |

ARPRQ

Next

	Nearly Always True 1	2	3	4	Almost Never True 5
1. He put me in my place					
2. He never gave me any space to be myself					
3. He was inclined to depend on me					
4. He had little time for me					
5. He fussed over me too much					
6. He was someone I looked up to with respect					
7. He kept me at a distance					
8. He encouraged me to be independent					
9. He was strict and harsh					
10. He needed me to tell him that I loved him					
11. He forced his will on me					
12. He was careful not to offend me					

APPENDIX V

SCREEN SHOTS OF RESULTS PAGE FOR STUDY TWO
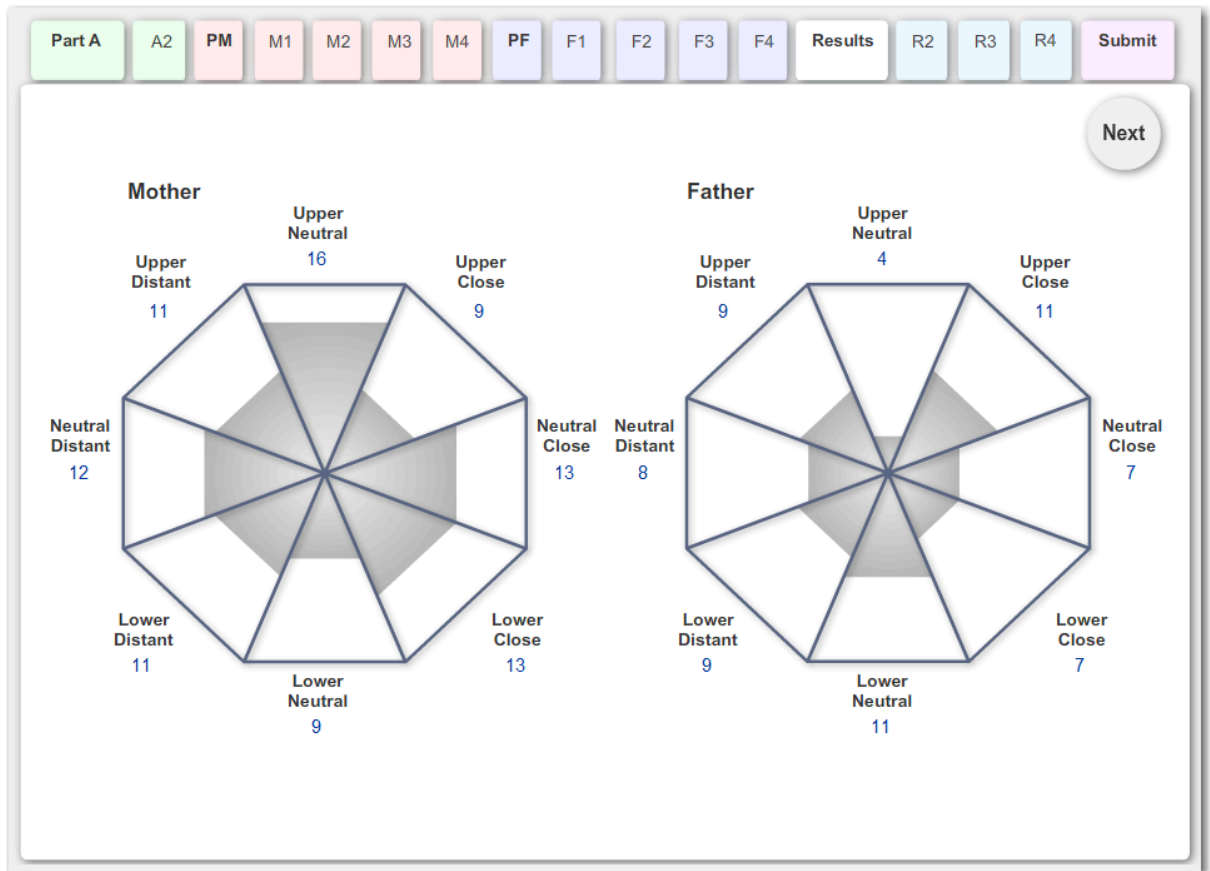
What does it all mean?

The relating octagon was designed so that, for each octant, a score of zero represents positive relating and a score of twenty represents negative relating. A score between eleven and twenty is considered high and a score between zero and ten is considered low.

Positive relating means that the person relates to others in a sensitive and considerate way, taking into account the other person's relating needs, whereas negative relating refers to the opposite characteristics. Please bear in mind that there are many ways of relating negatively. The statements below are just a few examples for each octant and they do not represent a complete list of relating behaviour.

A full explanation is presented by J. Birtchnell in his book "How Humans Relate – A New Interpersonal Theory" and on www.johnbirtchnell.co.uk.
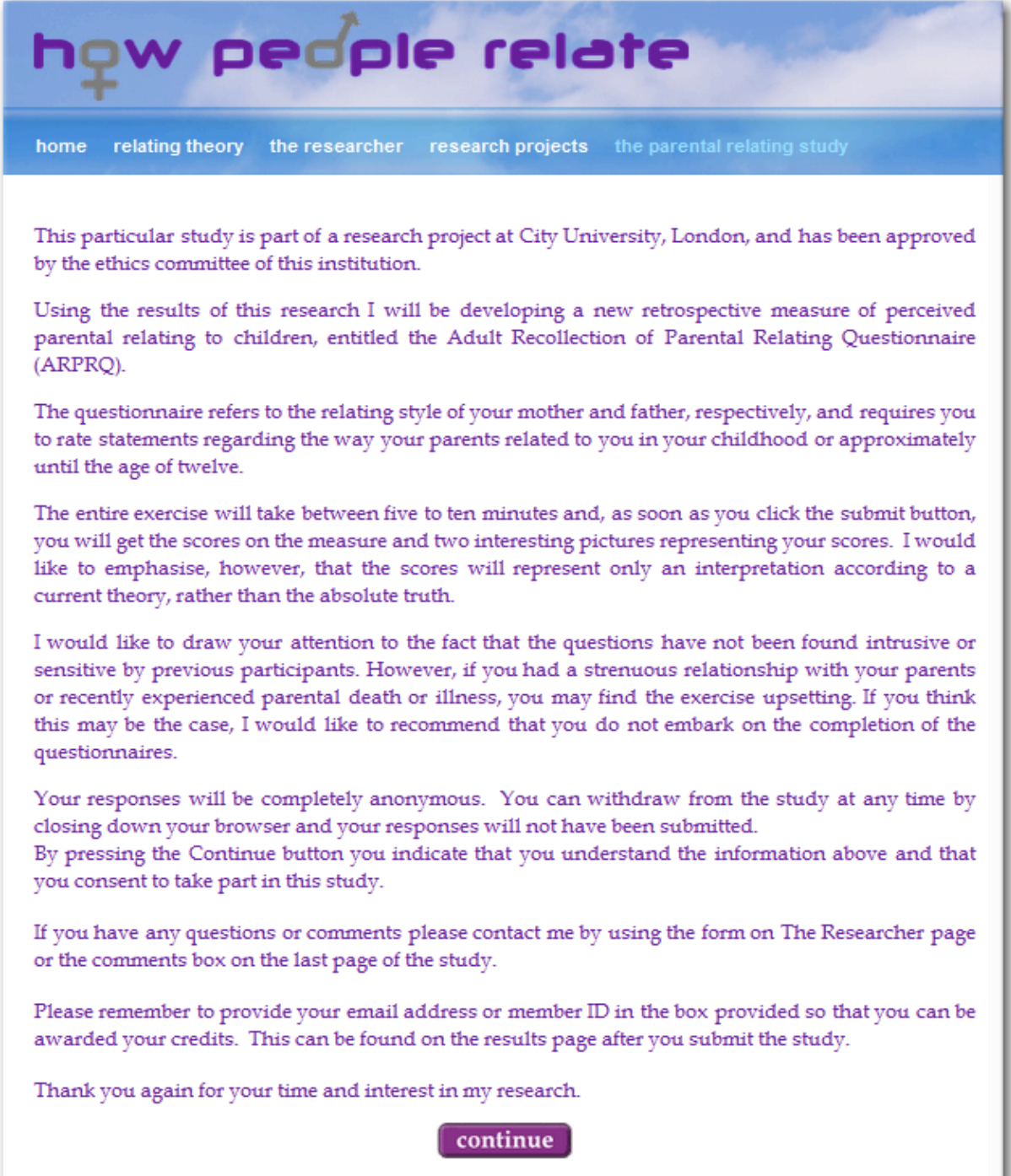
Upper Neutral (UN)

If you scored eleven or more on this octant, it means that your relevant parent tended to be assertive and demanded respect from you. S/he was perhaps arrogant and even pompous. S/he may have been a bully, ready to point out your weaknesses, insult or humiliate you.

Upper Close (UC)

If you scored high on this octant, it means that your relevant parent may have imposed his or her closeness upon you. S/he may have been possessive of you, perhaps trying to keep you around him or her as much as possible. S/he did not like you to be independent or have close relationships with your friends.

Upper Distant (UD)

A high score on this octant means that your parent tended to enjoy his or her space and importance. S/he may have been intolerant of your mistakes and seemed to reject you some times. S/he may have imposed punishment and treated you more like an object than a person. S/he wanted to rule and control you.

APPENDIX VI

SCREEN SHOT OF BRIEFING PAGE FOR STUDY THREE

how people relate

home   relating theory   the researcher   research projects   the parental relating study

This particular study is part of a research project at City University, London, and has been approved by the ethics committee of this institution.

Using the results of this research I will be developing a new retrospective measure of perceived parental relating to children, entitled the Adult Recollection of Parental Relating Questionnaire (ARPRQ).

The questionnaire refers to the relating style of your mother and father, respectively, and requires you to rate statements regarding the way your parents related to you in your childhood or approximately until the age of twelve.

The entire exercise will take between five to ten minutes and, as soon as you click the submit button, you will get the scores on the measure and two interesting pictures representing your scores. I would like to emphasise, however, that the scores will represent only an interpretation according to a current theory, rather than the absolute truth.

I would like to draw your attention to the fact that the questions have not been found intrusive or sensitive by previous participants. However, if you had a strenuous relationship with your parents or recently experienced parental death or illness, you may find the exercise upsetting. If you think this may be the case, I would like to recommend that you do not embark on the completion of the questionnaires.

Your responses will be completely anonymous. You can withdraw from the study at any time by closing down your browser and your responses will not have been submitted.
By pressing the Continue button you indicate that you understand the information above and that you consent to take part in this study.

If you have any questions or comments please contact me by using the form on The Researcher page or the comments box on the last page of the study.

Please remember to provide your email address or member ID in the box provided so that you can be awarded your credits. This can be found on the results page after you submit the study.

Thank you again for your time and interest in my research.

continue

APPENDIX VII

SCREEN SHOT OF ARPRQ USED IN STUDY THREE
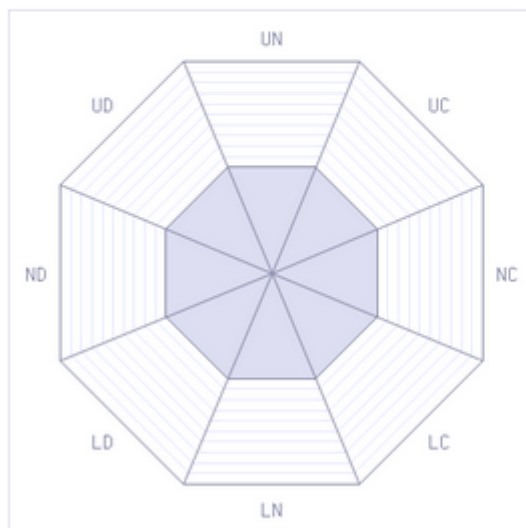
SCREEN SHOT OF RESULTS PAGE FOR STUDY THREE

## ARPRQ Mother or maternal figure - how you scored

The octagon diagram illustrates your scores. A score over 11 is considered high. The higher the score the more negative the relating style of the parent. The lower the score the more positive, considerate and sensitive the relating of the parent.

	Your score	Current average
UN	**10**	7.1
UC	**10**	6.7
NC	**10**	7.6
LC	**10**	5.1
LN	**10**	6.5
LD	**10**	5.7
ND	**10**	6
UD	**10**	7

ARPRQ Father or paternal figure - how you scored

The octagon diagram illustrates your scores. A score over 11 is considered high. The higher the score the more negative the relating style of the parent. The lower the score the more positive, considerate and sensitive the relating of the parent.
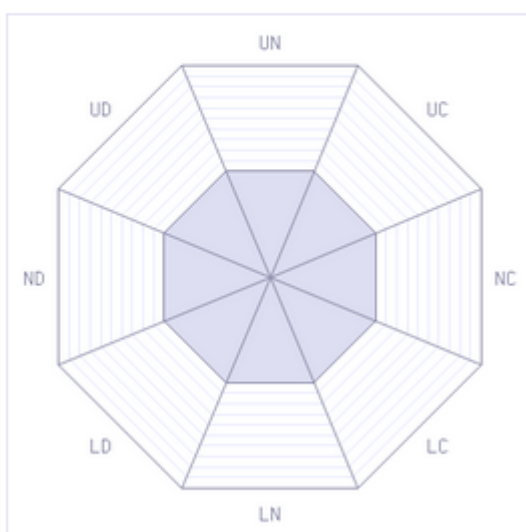
	Your score	Current average
UN	**10**	6.8
UC	**10**	5.2
NC	**10**	5.9
LC	**10**	3.9
LN	**10**	5.1
LD	**10**	6.3
ND	**10**	7.4
UD	**10**	7.6

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The histograms illustrate the distribution of scores received so far from other people. The blue triangles indicate how your scores compare.

UN

Upper Neutral - If you scored eleven or more on this octant, it means that your mother tended to be assertive and demanded respect from you. She was perhaps arrogant and even pompous. She may have been a bully, ready to point out your weaknesses, insult or humiliate you.

UC

Upper Close - If you scored high on this octant, it means that your mother may have imposed her closeness upon you. She may have been possessive of you, perhaps trying to keep you around her as much as possible. She did not like you to be independent or have close relationships with your friends.

NC

Neutral Close - A high score on this octant means that your mother may have developed strategies for keeping you close. She did not respect your need for distance and forced her company on you. She overestimated your interest in her and would react with anger if you ignored or rejected her.

LC

Lower Close - A high score on this octant means that your mother needed your love and the reassurance that you will not abandon her. She may have tried to increase your interest in her by stating that she could not live without you, openly crying or exaggerating illness.

LN

Lower Neutral - A high score on this octant means that your mother may have wanted reassurance that you will not let her down and that you approved of her. She may have made you feel sorry for her or guilty for not helping her.

LD

Lower Distant - A high score on this octant means that your mother was likely to have been shy and maintained a low profile. She would have been careful not to offend you, even to the point of leaving decisions to you. She would have been rather withdrawn and inaccessible to you.

ND

Neutral Distant - A high score on this octant means that your mother may have been less involved with you and rather quiet. She may have preferred to keep things to herself and did not seem too interested in your thoughts and feelings. She may have enjoyed her space and even seemed unapproachable.

UD

Upper Distant - A high score on this octant means that your mother tended to enjoy her space and importance. She may have been intolerant of your mistakes and seemed to reject you some times. She may have imposed punishment and treated you more like an object than a person. She wanted to rule and control you.

APPENDIX IX

SAMPLE OF PARENTAL BONDING INSTRUMENT

This questionnaire lists various attitudes and behaviours of parents. As you remember your MOTHER (or maternal figure) in your first 16 years please place a check in the most appropriate box next to each statement.

	Very likely	Moderately likely	Moderately unlikely	Very unlikely
1. Spoke to me with a warm and friendly voice	❏	❏	❏	❏
2. Did not help me as much as I needed	❏	❏	❏	❏
3. Let me do things I liked doing	❏	❏	❏	❏
4. Seemed emotionally cold to me	❏	❏	❏	❏
5. Appeared to understand my problems and worries	❏	❏	❏	❏
6. Was affectionate to me	❏	❏	❏	❏
7. Liked me to make my own decisions	❏	❏	❏	❏
8. Did not want me to grow up	❏	❏	❏	❏
9. Tried to control everything I did	❏	❏	❏	❏
10. Invaded my privacy	❏	❏	❏	❏
11. Enjoyed talking things over with me	❏	❏	❏	❏
12. Frequently smiled at me	❏	❏	❏	❏
13. Tended to baby me	❏	❏	❏	❏
14. Did not seem to understand what I needed or wanted	❏	❏	❏	❏
15. Let me decide things for myself	❏	❏	❏	❏
16. Made me feel I wasn't wanted	❏	❏	❏	❏
17. Could make me feel better when I was upset	❏	❏	❏	❏
18. Did not talk with me very much	❏	❏	❏	❏
19. Tried to make me dependent on her	❏	❏	❏	❏
20. Felt I could not look after myself unless she was around	❏	❏	❏	❏
21. Gave me as much freedom as I wanted	❏	❏	❏	❏
22. Let me go out as often as I wanted	❏	❏	❏	❏
23. Was overprotective of me	❏	❏	❏	❏
24. Did not praise me	❏	❏	❏	❏
25. Let me dress in any way I pleased	❏	❏	❏	❏

APPENDIX X

SAMPLE OF LETTER TO PARTICIPANTS FOR STUDY ONE

<div align="right">

Psychology Department
City University
Northampton Square
London
EC1V 0HB
E-mail: cristina@synapseuk.com

</div>

Date

Dear participant

This aim of this study is the development of an instrument for the retrospective measuring of perceived parental relating towards children. The study is also part of a research project in Psychology at City University and has been approved by the Ethics Committee of this institution.

The ARCQ–PM refers to your mother or maternal figure. The questionnaire requires you respond to statements regarding the way your mother related to you in your childhood or approximately until the age of twelve.

Please be assured that your responses will be treated with utmost confidentiality. You will not be asked any personal details that would lead to loss of anonymity.

If you decide to take part in the study, please complete the questionnaire enclosed and return it to me in the envelope provided.

If you would like more information about the study, please do not hesitate to contact me at the above address or via email.

Thank you for taking the time to participate in the study.

Yours faithfully

Cristina Sheppard
Chartered Psychologist

APPENDIX XI

CONTENT OF EMAIL SENT TO PARTICIPANTS IN STUDY TWO

Dear friends,

I haven't seen some of you for a while but I hope you are all well.

I am making slow progress with my PhD and I have just reached one of the points where I need your help.

Would you please try to find 20 minutes to complete my online questionnaire? It is about the way your parents related to you when you were a child and, once you have completed it, you get your scores in a nice picture by clicking the "results" button.

As this study is concerned with the construction of a good instrument, I would appreciate your comments, questions and suggestions regarding any aspects that seem unclear to you. I would also be grateful if you could forward this email to a few friends who, in your opinion, might like to take part in the study.

Those of you who took part in my interviews about your parents (not clients) could you please put your name in the comments box at the end of the questionnaire? In this way I can use your interview to validate the questionnaire and your time you have kindly spared for me would be put to good use. Many thanks.

The questionnaire can be found on my website www.howpeoplerelate.com under the heading "parental relating study"

Many thanks for your help

Best wishes,
Cristina

APPENDIX XII

SAMPLE OF LETTER INVITING PARTICIPANTS FOR INTERVIEW

<div align="right">

Psychology Department
City University
Northampton Square
London
EC1V 0HB
E-mail: cristina@synapseuk.com

</div>

March 2006

Dear participant

This study forms part of a research project in Psychology at City University and has been approved by the Ethics Committee of this institution.

The interview will mainly try to explore how you perceived your parents' behaviour towards you when you were a child.

The whole session will last approximately one hour and will be recorded. You will have the right to refuse to answer any of the questions you will be asked, as well as the right to withdraw completely at any stage during the interview.

All your answers will be treated with the strictest confidence. Only I will have access to the information collected in this study. Some results of this study may be published but any data included will in no way be linked to any specific view point or person.

If you decide to take part in the interview, please complete and sign the consent form enclosed and bring it with you at the interview.

If you would like more information about the interview or entire project, please do not hesitate to contact me at the above address or via email.

Thank you for taking the time to participate in this study.

Regards

Cristina Sheppard
Chartered Psychologist