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SEPARATION-INDIVIDUATION IN TWINS:
AN OBJECTIVE ASSESSMENT

By
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A DISSERTATION

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ABSTRACT

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By

Elizabeth Jill Hirt

The purpose of this study was to assess any differences in the separation-individuation process between twins and non-twins, and to validate a revised objective measure of separation-individuation. It was postulated that significant differences between twins and non-twins, and among differing twin-types, would provide evidence for the validity of the measure of separation-individuation, and enlarge the field of knowledge concerning adult twins.

The sample in this study included 40 non-twins, 40 identical twins, 40 fraternal same-sex twins, and 40 fraternal opposite-sex twins. All of the participants were volunteers, college students, and between the ages of 18 and 25. Each completed the separation-individuation instrument, which consisted of five subscales, and a background questionnaire, which inquired about the respondents' relationship with the twin or closest sibling. It was hypothesized that twins would exhibit less complete separation-individuation than fraternal twins, and that fraternal same-sex twins would exhibit less complete separation-individuation than fraternal opposite-sex twins.

The data were analyzed with a t-ratio of planned orthogonal comparisons, with the probability of significance set at the .05 level. The comparisons between identical and fraternal twin mean scores on the five subscales of the separation-individuation instrument, and the comparisons between fraternal same-sex and fraternal opposite-sex twin mean scores on the five subscales of the separation individuation instrument, were not significant. However, comparisons between non-twin and twin mean scores on the five subscales revealed a significant difference on the Individuation II-Present subscale, indicating a difference between twins and non-twins in the areas of dependency, jealousy, and guilt. On the other four subscales, there were no significant differences.

Based upon an examination of the respondents' answers to the questions concerning the relationship to the twin (which included such items as to whether the parents emphasized the similarities or differences between the twins, and the frequency of alliterative names, dressing alike, or a secret language between the twins), it was found that most of the twins used in this study did not represent, in general, the twins reported in the literature, and upon which the separation-individuation process in twins was developed. The theory on which separation-individuation in twins and the intertwin relationship is based seems to come from twins who have multiple problems, e.g., parents initially had difficulty distinguishing one twin from the other, and encouraged the similarities between the twins, giving them alliterative names and dressing them alike; between the twins, there was considerable rivalry and competition, feelings of being one-half of a whole, and an inability to separate from the twin. However, the parents of the twins

used in this study apparently emphasized the differences rather than the similarities between the twins when they were young; most of the twins did not dress alike currently, although they did when they were younger; and most were not living with or attending the same school as the twin. In brief, the twin sample used in this study does not appear to suffer from the complicating and diverse psychological difficulties that were evidenced by the individuals in much of the literature on twins. While there are twins who do have difficulty in the separation-individuation process, it appears as if not all twins have these problems.

DEDICATION

To Nana

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CHAPTER I

THE PROBLEM

Need

While many studies have been conducted on the psychology of twins, most of them have focused on the question of nature v. nurture, with a particular emphasis on intelligence and schizophrenia. These studies typically involve the measurement of one or another characteristic in pairs of twins, and correlations or concordance rates are examined to determine whether the characteristic under investigation has been inherited or acquired from the environment.

Studies in the area of personality research involving relationships between twins were reported in the early 1930s by von Bracken (1934), Hartmann (1934-35/1964), and Cronin (1933). Following World War II, there was a mild, renewed interest in twins; Burlingham published her classic study on three pairs of identical twins in 1952, but it was not until the 1960s that the intertwin relationship began to be studied in more detail. Most of the literature, however, consists of isolated case studies of fraternal and identical twins; very few researchers have compared fraternal and identical twins, and even fewer have compared twins to non-twins. In addition, while many researchers have noted the "uniqueness" of the twin relationship, and how some twins feel the need to recreate the twin relationship with other persons, none have systematically examined the nature or extent

of this need. Thus, little is known about how the relationships with other people differ between twins and non-twins. The literature on twins also seems to be largely restricted to twins in therapy, or those in some type of crisis situation. This phenomenon naturally restricts the generalizability of the findings, and may provide too narrow a viewpoint when examining twins in the general population.

Lastly, while many researchers or theorists have proclaimed that there seems to be a problem for twins, dating from birth, in the separation-individuation process, none have studied adult twins to determine if this problem does in fact continue into adulthood. Those studies that have been conducted pertaining to these issues have involved observational and/or subjective psychoanalytic techniques and have been concentrated on children from infancy to school age. Therefore, using a young adult population would expand the age range of twins studied thus far, as well as confirm the persistence of early separation-individuation problems in adulthood.

Maroda (1979) provided preliminary evidence for the use of objective methods for assessment in the area of separation-individuation. Additional studies using adult twins would further substantiate her hypotheses regarding the separation-individuation process in adults, as well as provide valuable information on the differences between twins and non-twins in the separation-individuation process.

Purpose

The purpose of this study, then, is to (a) validate a revised objective measure of separation-individuation; (b) assess the extent of separation-individuation in twins as compared to non-twins; and

(c) assess the extent of separation-individuation in identical twins as compared to fraternal twins.

Outcomes showing twins to have greater difficulty than non-twins in the separation-individuation process, and identical twins to have greater difficulty than fraternal twins, would both validate the objective test of separation-individuation utilized as the criterion variable in this study, and support the literature pertaining to separation-individuation in twins.

Theory

The separation-individuation process is the process whereby the infant becomes separate from the mother and is able to function in a relatively independent manner. Separation-individuation refers to two interdependent and complementary kinds of development: separation concerns the intra-psychic process in which the mother comes to be perceived as separate from the self, while individuation centers around the child's developing self-concept (McDevitt, 1975). While as an adult the ability to see oneself as being both "in" and at the same time separate from the world "out there" is taken for granted, it is a result of a gradual sequence of events which begin at birth and continue throughout the life cycle (Mahler, 1972b). The initial psychological achievements in this process occur from about the fourth to the thirty-sixth month.

During the first few weeks of life, the infant is in a state of "primitive hallucinatory disorientation," or what Mahler (1968) terms a state of normal autism. The infant does not perceive the mother as being a separate and distinct entity, and his/her waking life centers

around an attempt to achieve and maintain biological homeostasis. This state gradually gives way, at about the second month, to normal symbiosis, during which time the infant becomes vaguely aware of the need-satisfying object. However, there is no real differentiation between the "I" and "not I"; " . . . the infant behaves and functions as though he and his mother were an omnipotent system, a dual unity within one common boundary" (Mahler, 1968, p. 488).

Following this period, the infant begins "hatching out" from the dual symbiotic unit. Whereas the infant's attention was previously directed inward and focused within the symbiotic orbit, it now becomes outwardly directed (Mahler, 1972a). The child emerges from symbiosis, and at about the fourth or fifth month, smooth differentiation from the mother's body can begin to take place. This development marks the beginning of the separation-individuation process.

It is during this subphase of differentiation that the infant, through the maturation of sensory and motor capabilities, takes the first tentative step toward breaking away, in a bodily sense, from the mother. The child will, for example, slide from the mother's lap, but will tend to remain as near as possible to her. Also, it is at this stage that the specific smiling response to the mother, signalling a specific bond between mother and child, occurs.

The second subphase, practicing, begins at about seven months. Actually, there are two stages in this period. The early practicing subphase (which overlaps to some degree with differentiation) is characterized by the infant's moving away from the mother while still returning to her for occasional "emotional refueling" (Furer, unpublished, cited by Mahler, 1972b). The second part is characterized

by upright locomotion, and it is during this period (from about 10 to 18 months) that the infant's "love affair" with the world begins. The child is " . . . intoxicated with his own faculties and with the greatness of the world The chief characteristic of this practicing period is the child's great narcissistic investment in his own functions, his own body, as well as in the objects and objectives of his expanding 'reality'" (Mahler, 1972b, p. 491). This period culminates at about 18 months, at which time the child is at the peak of his magic omnipotence and at the height of his "ideal state of self" (Mahler, 1968).

However, it soon occurs to the infant that the world is in fact not his oyster, and that he/she must cope with it as a rather small, helpless, and separate individual. "The toddler now begins to experience, more or less gradually and more or less keenly, the obstacles that lie in the way of his anticipated 'conquest of the world'" (Mahler, 1972a, p. 337). The relative lack of interest in the mother during the practicing period is now replaced by active approach behavior, a constant concern with the mother's whereabouts, and anxiety when separated from the mother. The infant, with increasing realization of his/her separateness, seems to have an increased need and wish for the mother to share every new experience and development. This subphase of rapprochement (from about 15 to 22 months) is thus a period of vulnerability; it is, as Mahler (1968) states, a " . . . time when the child's self-esteem may suffer abrupt deflation" (p. 121).

The child at this stage must relinquish the delusions of grandeur, and frequently, dramatic fights with the mother occur; Mahler terms this the "rapprochement crisis" (1972b). At this juncture, despite the fact that the child is becoming increasingly autonomous in his/her actions

relative to the mother, attempts are simultaneously made to resist the separation from the mother. However, both mother and child must realize that they can no longer function as a dual symbiotic unit.

When the rapprochement crisis is resolved, the child enters the last subphase, individuation and object constancy. The chief criterion is the ability of the child to tolerate brief separations from the mother, an ability which results from the emergence of a stable mental representation of the mother; prior to this time, she was only available physically (Mahler, Pine, & Bergman, 1975). This "internal mother" is more or less available in order to supply comfort to the child in the mother's physical absence. There is also a shift from self-centered, demanding, clinging behaviors to more mature, ego-determined relationships; this includes expressions of affection, trust, confidence, and the ability to interact with others in a cooperative and understanding manner (McDevitt, 1975).

The mother's reactions to this entire sequence of events is of critical importance. She can act either as a facilitator or inhibitor of the separation-individuation process, and the role that she selects has a direct impact on the child's ability to perceive him/herself as a separate, distinct, and capable individual in a safe and nonthreatening environment. Some mothers may not welcome the separation from the symbiotic unit, or they may find it difficult to find a natural and optimal balance between providing active support for the child and, at the same time, knowing when to merely be available and observe from a distance.

The mother will react according to whether she feels that her child is merely an extension of herself or a separate individual. As soon as

a child begins to act autonomously, e.g., in the practicing subphase, some mothers fail their infants prematurely by "abandoning" them to their own devices. "They react with a kind of relative ridding mechanism to the traumatization of their own symbiotic needs" (Mahler, 1968, p. 119). Other mothers do not adequately respond to the infant's desire to be separate and, at the same time, to be attached.

Mark was one of those children who had the greatest difficulty in establishing a workable distance between himself and mother. His mother was ambivalent as soon as Mark ceased to be part of herself, her symbiotic child. At times she seemed to avoid close body contact; at other times she might interrupt Mark in his autonomous activities to pick him up, hug him and hold him. She did this, of course, when she needed it, not when he did. This ambivalence on mother's part may have been what made it difficult for Mark to function at a distance from his mother. (Mahler, 1972a, pp. 336-337)

Conflict is also evident in the rapprochement subphase. The infant, somewhat indifferent to the mother during the practicing subphase, now returns to the mother constantly so that she can share in every new discovery and accomplishment. Again, the mother can facilitate the toddler's growing autonomy, or she can act as a barrier.

From the data we have accumulated so far, we would state strongly that the mother's continued emotional availability is essential if the child's autonomous ego is to attain optimal functional capacity. . . . However, the less emotionally available the mother has become at the time of rapprochement, the more insistently and even desperately does the toddler attempt to woo her. In some cases, the process drains so much of the child's available developmental energy that, as a result, not enough may be left for the evolution of the many ascending functions of the ego. (Mahler, 1972b, pp. 495-496)

This concludes the discussion of the separation-individuation process in singly-born children. For twins, separation-individuation is somewhat complicated in that each twin must not only separate from the mother and establish his/her own identity, but must also separate from the twin, and find an identity in relationship to his/her twin.

As individuals, each twin goes through the same developmental processes as non-twins. They go through the undifferentiated phase in which ego and id are one, and no boundaries exist between the self and the outside world. There is an initial sense of oneness, or lack of perception of separateness, with the twin, just as there is with the mother. The maturation of sensory perception is necessary before one twin can perceive him-/herself to be separate from the other. Leonard (1961), for example, describes the lack of physical differentiation in a set of twins at three months of age.

Twins . . . were lying side by side in a twin-sized baby carriage. Both infants were sleeping peacefully on their backs, the thumb of one twin in the mouth of the other. (p. 307)

Twins become aware of each other in the differentiation subphase.

Burlingham (1952), in her study of three pairs of identical twins, found that Bert and Bill responded to the mother before responding to each other, as did Bessie and Jessie, and that both responded at about seven months.

The development of the infant-mother relationship is somewhat circumvented and hindered by the presence of twins; a twin never experiences the luxury of the singly-born child of being the sole recipient of the mother's attention (Leonard, 1961). At the earliest stages of development, twins react to their mothers as singly-born children do, but even at early stages, the twins become aware of providing pleasure not as separate and distinct individuals, but as a unit. The mother may encourage independence and separateness from her, but her actions may, not infrequently, prompt the twins to seek the companionship of each other. Because of the mother's household, career, and other responsibilities, and especially if the twins get along with each other fairly

well, they are frequently left to entertain each other. In addition, even when the twins are with the mother, it is not uncommon for imitation to occur, i.e., when one twin reacts emotionally to the mother, the other will imitate these reactions as well. It is this imitation, which is based on identification with the twin, that leads to identity problems in twins.

Although the concept of identification was not mentioned in the previous discussion of separation-individuation, it is identification which sustains the individuating infant against the continuous danger of feelings of helplessness. In the separation-individuation process, with the beginning awareness of separateness comes the first stage in the process of identification: striving to maintain unity with the pleasure-giving object through incorporating it into the ego, or primary identification.

Whenever he (the child) drinks from his mother's breast or is physically close to her body, his wishful fantasies of reunion with the mother by means of oral incorporation will be gratified. Hence with the achievement of gratification, his images of the self and of the love object will temporarily merge, only to be separated again with the increase of instinctual needs and experiences of hunger and frustration (Jacobson, 1954, pp. 98-99)

Normally, the child progresses from the primary identification with the mother to a more active type of primitive identification through imitation of the mother. Self-images that result from identification may have either the person or function as the principal motif (Lichtenberg, 1975). In other words, self-images may arise from perceptual images of a particular person, for example, from a mother's loving smile, or perceptual images of functions, in which there is less emphasis on personal characteristics. An example of the latter would

be the child's internalization of the function of soothing, which is evident in a child's symbolic play when he/she may, for instance, mother a doll to comfort him-/herself when mother is absent.

Identification between the twins is usually mutual, i.e., reciprocal and of equal intensity. Continued visual confrontation with the mirror image of the twin leads to identification through visual incorporation, and this identification resembles the primary identification with the mother in many respects (Leonard, 1961). Imitation of both language and action is quite frequent. In Burlingham's (1952) study, Bill and Bert imitated each other's movements and gestures from 12 months of age. While both of them were constantly trying to find ways of entertaining each other, such copying games hindered them from making normal contacts with others. Another pair, Jessie and Bessie (aged two years), both made identical and innumerable demands on their mother, and would not accept any refusal on the part of the mother to accede to their demands. All three sets of twins that Burlingham observed worked as a team to either provoke the mother, or in their copying games, to entertain each other. At such times, they were exclusively occupied with each other and were not amenable to outside influence. They frequently combined against parental or other authority figures, and when they experienced some type of disappointment, they clung together, falling back on their relationship to each other.

This exclusive and dependent relationship between the twins soon becomes self-perpetuating:

One aspect of this becomes clear: there is a tendency for the primary intertwin identification to be self-perpetuating. Once it has become intensified, it inhibits progress toward communication with individuals other than the twin and thus hinders the development of object relationships. (Leonard, 1961, p. 313)

There is an increasing influence of one upon the other, and the stage is set for the twins to identify with each other rather than with an adult object. As Ortmeyer (1970) found, "they may not struggle toward individuation, but replace the mother with each other" (p. 138).

For twins and non-twins, normal separation-individuation is the first crucial prerequisite for the development and maintenance of the sense of identity (Mahler, 1963). The evolution of the sense of self is a gradual process: initially, self-representations are fused and confused with object representations, but with advances in ego development, maturation of physical abilities, and the development of the capacity for perception, self-perception, and introspection, the images become unified and organized into more or less realistic concepts of the self and others (Jacobson, 1954). However, this does not mean that at the age of 36 months a stable image of the self emerges and is maintained, without alteration, throughout the remainder of the individual's life.

One could regard the entire life cycle as constituting a more or less successful process of distancing from and introjection of the lost symbiotic mother, an eternal longing for the actual or fantasied 'ideal state of self', with the latter standing for a symbiotic fusion with the 'all good' symbiotic mother, who was at one time part of the self in a blissful state of well-being. (Mahler, 1972a, p. 333)

Separation-individuation is a life-long process, and further changes can and do occur at other critical periods in an individual's life. In many instances, particularly as twins go through late adolescence or early adulthood, when separation experiences are to be dealt with, twins are largely unprepared. In a study involving a fraternal male twin, the subject himself made these remarks when discussing his twin:

I had not imagined life without him and, when the thought occasionally passed through my mind, I had no fear for I did not appreciate how much he meant to me But when he left for college, I was emotionally shattered. (Karpman, 1953, p. 258)

Twins do relate to each other in a manner differing in certain respects from other interpersonal relationships. Twin-like relationships exist more frequently than is usually realized, a prime example being a marriage in which the partners are mutually and exclusively dependent on each other (Leonard, 1961). One even occasionally sees married couples who dress alike, or twins who presumably marry other twins to preserve the dual unity that they once had with their twin. While certain aspects of the intertwin dependency may recede into the background as twins mature, there is no doubt that other aspects of the relationship persist into adulthood and influence later development.

Types and Frequency of Twins

For the past 50 years, the dominant view has been that there are two twin-types. The first, identical, is the result of a very early split, less than two weeks after conception, in a cell mass that would normally have developed into one individual. (Fission occurring after about 14 days is believed to result in conjoined twins.) Twins occasioned by early fission have identical genes and, hence, are called identical, monozygotic, or uniovular twins. While these twins have identical heredity factors, such twins need not look alike, nor must their personalities be the same, as both prenatal and postnatal factors can account for tremendous differences. No two persons are exactly alike, including identical twins.

The other type, fraternal, is the result of near simultaneous fertilization of two ova by two sperm. These twins may look alike, but they will be as much alike, or as unlike, as any sisters or brothers. They are called fraternal, dizygotic, or binovular twins.

Recently, some scientists have postulated that a third type of twin--identical in maternal contribution but diverse in paternal--is possible. This third type of twin has been hypothesized to occur as a result of one of two phenomena. In the first instance, the sperm may cause the ovum to divide as fertilization occurs, providing another ovum which, if fertilized by a second sperm, would result in the development of twins who are neither identical nor fraternal (Joseph, 1961; Koch, 1966). In the second instance, there may be a second fertilization which occurs at least a month after the first, and this phenomenon may account for any marked differences in the maturity or size of twins at birth (Koch, 1966). The latter case may also account for twins who are of different races, and for those who are born some days apart (Hagedorn & Kizziar, 1974).

In order to determine twin type, physical characteristics of a set of twins are examined for similarity and dissimilarity. Naturally, differences in sex, eye pigmentation, or blood group mean that the twins are fraternal, but similarity in traits is not conclusive evidence that the twins are identical. A positive, although impractical, test to determine twin type is the skin graft; the skin will grow on the other twin if the two are identical, but will be rejected if they are fraternal (Hagedorn & Kizziar, 1974).

About 12 in 1000 births is a birth of twins. On the basis of race, the highest rate of fraternal twinning is among Blacks

(14/1000 births), the next highest is among Caucasians (9/1000 births), and the lowest is among Orientals and American Indians (6/1000 births). While the rate of fraternal twinning varies from race to race, the rate of identical twin births is constant for all races at about 4 per 1000 births. Identical twins represent about 30% of the total twin population; fraternal same-sex and fraternal opposite-sex twins each represent about 35% of the remainder of the twin population (Glenn, 1966).

Research Questions

As the research illustrates, twins have a dual task: separating from their mother, and separating from their twin. In this study, the following research questions are posed.

1. Because of environmental influences, parental preferences, and the attachments and conflicts in the twin relationship, do twins exhibit less complete separation and individuation than non-twins?
2. Are there differences in the degree of separation and individuation exhibited between identical and fraternal twins?
3. Are there differences in the degree of separation and individuation exhibited between fraternal same-sex and fraternal opposite-sex twins?

Overview

In this chapter, a brief theoretical description of the separation-individuation process for both twins and non-twins has been described. In chapter two, the literature concerning parental reactions to twins, the intertwin relationship, and differences between both twins and non-twins are reviewed. The design and methodology of

the study follows in chapter three. Chapter four includes the presentation of the results of the study, and chapter five contains the summary and conclusions.

In the next chapter, the pertinent literature concerning twins and their relationship is reviewed in more detail.

CHAPTER 2

REVIEW OF THE LITERATURE

One reason for the persistent appearance of twins in the records of man and his thought is the unexplained mystery surrounding their special unity, regardless of whether it is based on love or hate, or some combination of the two. Historically, themes in literature concerning intertwin relationships, for example in the Old Testament or Greek and Roman mythology, center around competition and rivalry, or inseparability and the harmonious bond between twins. In the story of the twins Jacob and Esau, the competition dates from the womb. Each was determined to be the first-born; when Esau threatened to prevail at the expense of his mother's life, Jacob gave way. Esau, the favorite son of his father Isaac, was as the first-born to inherit his father's goods and worldly possessions. However, Jacob, the favorite of his mother Rebekah, bought his brother's birthright for some soup, and then defrauded Isaac in order to receive the paternal blessing that was meant for Esau.

Despite the fact that Greek traditions abound with stories of sibling rivalry, twins are portrayed as exceptions to these rivalries and jealousies. The theme of inseparability is perhaps most pronounced in the story of the twins Castor and Pollux. In the last of their battles while in search of the Golden Fleece, Castor was mortally wounded; Pollux, being immortal, could not follow Castor to Hades, and

wept with grief at the separation. Zeus, touched by Pollux's grief, granted Castor the privilege of immortality, and the twins' inseparability was consecrated by a fixed position among the stars, where they became known as the Gemini or Dioscuri, the sons of the gods.

These themes are also prevalent in more current literature. For example, in Wilder's (1927) The Bridge of San Luis Rey, a pair of orphaned twins, Manuel and Estaban, whose identical appearance was the cause of many jokes, vowed never to appear in public together. But they felt an intense need for each other and worked together, remaining silent and unapproachable to others. Manuel fell in love with an actress, and as he became more involved with her, Estaban, seeing how empty his life was, became listless and depressed. Despite this, he encouraged Manuel to stay with the actress; Manuel, in turn, seeing all the pain his brother was suffering, relinquished his attachment to the actress. However, Manuel fell ill, and in his fevered delirium before his death, accused Estaban of coming between him and his lover. Unable to acknowledge his brother's death, Estaban assumed Manuel's identity, and despondently wandered the streets. Finally, one day he tried to kill himself. Surprised in the act by his employer, he cried out, "I am alone, alone," realizing that he existed as almost nothing more than a series of reactions to the union formed with his brother.

The modern psychological view of twinship combines elements of Biblical, mythological, and popular conceptions, but places a particular emphasis on differentiation and separation (Hartmann, 1934-35/1964; Joseph & Tabor, 1961; Ortmeyer, 1970; Maenchen, 1968). Individual psychological development within twin pairs is the result of a complex interaction among three factors: innate constitutional factors;

parental attitudes, which can either enhance or diminish the importance of these innate differences; and the relationship between the twins themselves, which tends either toward equalization and similarity, or differentiation and divergent development (Gifford, Murawski, Braselton, & Young, 1966). The subtle interaction of these factors can produce twins who are "as different as day and night," or, conversely, twins who are "like two peas in a pod."

Most twins seem to have some difficulty differentiating from each other, and this can lead to difficulties which are not commonly found in non-twins. However, there are a number of points which the reader should bear in mind in the discussion which follows:

1. Not everything found in the personalities of twins can be attributed to the twinship itself. As noted above, constitutional factors make their contribution to personality formation, and not everything that occurs in the twin relationship is the sole result of being a twin (Hartmann, 1934-35/1964; Joseph, 1975; Orr, 1941).

2. Even though twins are born simultaneously, they are not subject to identical environments (Hartmann, 1934-35/1964; Kent, 1949). Just as the environment is never the same for any two children in a family, it is not the same for twins.

3. Even though twins may be identical, because of the second point, it does not follow that the development, character, or behavior of both members will be identical (Gifford, et al., 1966; Joseph, 1975; Peto, 1946; Spitz, 1966; Zazzo, 1978). In fact, there seems to be a surprising diversity in the personalities of identical twins, just as there is between two siblings in the same family.

4. Even though fraternal twins are no more alike, genetically, than any brother or sister in the same family, they are often given a special kind of treatment, and pressure may be unwittingly exerted to make them behave as people feel twins should (Leonard, 1961). In many instances, especially with fraternal same-sex twins, they are dressed alike, given identical toys, and dealt with in ways which accentuate their twinship (Orr, 1941). Each may suppress some of his/her own distinct personality traits in an effort to fit into the cultural stereotype that twins should be quite similar.

5. While no one single characteristic of a twin relationship is different from that which may be found in a non-twin relationship, "the sum adds up to a Gestalt by which it can be distinguished" (Winestine, 1969, p. 442). A "twinning reaction," or a cluster of reactions with an intensity among those who happen to be twins, includes such phenomena as hampering of independent activity, identification between the partners, feelings of lack of completeness, conflict between the desire to differentiate and the need for each other, and reciprocal relationships, in which one twin is dominant and the other submissive (Joseph & Tabor, 1961, Ortmeyer, 1970; Winestine, 1969).

Thus, there are factors, influenced by cultural and parental attitudes, which encourage closeness and those which encourage distance. In addition, the intertwin relationship itself is an important determinant in separation-individuation. In the next section, general cultural and parental attitudes and expectations will be examined.

Parental Reactions to Twins

The emotional reactions of parents who are about to give birth to twins can range from shock to dismay to exhilaration. Some mothers react to twins as a narcissistic pleasure, while others consider them a narcissistic injury, although this occurs infrequently in Western culture (Burlingham, 1952; Plank, 1958). Generally, the mother feels that " . . . she has achieved something unusual and her twins . . . become precious possessions which other people are interested in, wonder at, and even envy" (Burlingham, 1952, p. 12). These attitudes, which are a reflection of cultural attitudes which emphasize the positive aspects of twins, are somewhat unrealistic, as they neglect to take into consideration the problems of handling two small infants simultaneously, and the economic factors of feeding, clothing, and caring for twins (Leonard, 1961). While negative feelings concerning twins are rarely expressed by parents, some of the principal difficulties in raising twins include exhaustion, especially during the first six months; difficulties on the part of the parents in accepting differences between the twins; uneasiness if one twin chooses one parent as his/her favorite; and the "ganging up" of the twins against the parents (Plank, 1958). Nonetheless, the parents will probably feel privileged and proud, and many mothers join Mothers of Twins Clubs, reinforcing pride in their social status (Leonard, 1961).

Many parents have a strong desire to emphasize the twin relationship. For example, a mother who hears remarks about a dissimilarity in her identical twins may behave as if a disparaging remark had been made about them, and respond by pointing out their likeness (Burlingham, 1952). Parents, especially of fraternal twins, may feel

disappointed if their twins grow up to be very dissimilar and no one takes them for twins anymore (Scheinfeld, 1967). The narcissistic pleasure derived from being the parents of twins may prompt the parents to give the twins similar names, to give them similar hair styles, to dress them alike, to give them identical toys, and in general to try to keep them together. Scheinfeld (1967), in an informal survey, reports that female twins are more frequently given twin-type names (56% of those surveyed) than are male pairs (33% of those surveyed) or male-female pairs (33% of those surveyed). In the same survey, he found that many parents of same-sex twins dressed them alike (83% for female twins and 73% for male twins), and planned to continue to do so until the twins objected. A mother of identical twin girls aged 4½ is quoted by Scheinfeld: "We dressed them alike until two and a half. It's no point in having cute twin girls without making a big deal of it" (p. 14). And another mother of fraternal twins said, "Dressing them alike is the only way to show they're twins" (p. 14). Thus, many immature parents' ego needs are so bound up in their twins that they consciously or subconsciously encourage either dependency or similarity because of the attention that they as parents receive (Hagedorn & Kizziar, 1974).

According to Winestine (1969), twins who insist, at later ages, on identical attire illustrate a strong residual interidentification, probably initially fostered by the mother, but with the locus of control now shifted from mother to child. The identical clothes may serve as an exhibitionistic investment in the twinship for both parents and the twins; dressing alike can add to the feeling of being special (Koch, 1966), or the twins may fear not being noticed were they to

dress differently from their twin (Winestine, 1969). However, there are some twins who resent dressing alike and being treated as a unit; these twins as adults equate their mother to "stage mothers" who pushed them into the limelight to satisfy their own ego needs (Hagedorn & Kizziar, 1974).

Through parental responses, the twinship of both identical and fraternal twins may be accentuated, and efforts on the part of the twins to become distinct entities can be impeded by the parents. Parents may experience difficulties because of the necessity of having to adopt, at the same time, two modes of interaction with two children at the same age, but with different characteristics. As a result, some may stress the differences between the twins to facilitate interaction, while others attempt to resolve problems by treating the two children as one (Neubauer, 1972; Shields, 1954). One of the main findings in a study by Kent (1949) on maladjusted twins is that most of the mothers of these twins want them to be alike, regardless of whether they are identical or fraternal twins. For several of the mothers, that the children did not develop completely alike presented a special problem, and the mothers themselves seemed to view each child as one half of a whole. The parental inability to acknowledge a separate identity for each of the twins is sometimes carried to an extreme, as can be seen in this 22-year-old female identical twin:

My sister had to wear a brace to correct a bone defect. I was forced to wear the brace although I was fine. Now I feel angry about it, but then I just accepted it. To the present day my father is confused as to which is which." (Ortmeyer, 1970, p. 131)

If the parents do not perceive and encourage the twins' uniqueness, unit identity may be strengthened, and personal identity weakened (Hagedorn & Kizziar, 1974).

It is essential that the parents be able to distinguish one twin from the other in order to love and treat each twin as an individual. The necessary one-to-one relationship seems to be dependent on distinct delineation between the twins, and the possibility of being alone with each twin, at least for short periods of time (Leonard, 1961). The parents have to cope with similarity or dissimilarity, sameness or individuation, and their attitude is decisive. Gifford et al. (1966) report, in their four-year longitudinal study on a pair of identical twins, that if parents emphasize opportunities for the individual and separate development of each twin, and minimize dependency between the twins, two distinct and permanent personality patterns can and will emerge. Similar findings are reported by Allen, Greenspan, and Pollin (1976), in a two-year longitudinal study of 10 pairs of twins, eight identical and two fraternal. When differences between the twins were perceived by the parents, as they were in most instances, parents related to each twin in a different manner. They delineated a separate role for each twin, and then in turn subtly encouraged or reinforced conformity with the selected role.

In an effort to establish an individual identity in each twin, the "separate but equal" approach is sometimes adopted. However, because of parental identification with certain characteristics of each twin, it is not uncommon for this approach to develop into "separate and unequal." A unique study on the effect of parental perceptions on early development is the previously mentioned work conducted by

Allen et al. (1976). Even though most of the twins were identical and in many ways remarkably similar, the parents "often discerned the smallest differences and either exaggerated them or attached special significance to them" (p. 66). It was the rule, rather than the exception, for one parent to focus on the positive aspects of the twin with which he/she identified, and the negative aspects of the other twin.

For example, A was described by the father as being stronger, more aggressive, and more daring. The mother was quick to point to a deficiency in A--namely, that he was more distant with strangers, whereas B was more social, 'a charmer, he will smile, and he will come to a stranger first.' (p. 69)

Certain early characteristics of each twin exert an influence on the parent and lead to identification with one twin and to what at times could be appropriately termed indifference toward, or overt rejection of, the other twin. Although Shields (1954), in a study of 62 pairs of same-sex twins, found instances of overt parental preferences to be quite rare, he did report that parents of fraternal twins were most insistent that they made no difference between the twins, that they tried to give them the same of everything. He compared these parents to parents of identical twins, and concluded, "To risk a paradoxical generalization, the parents of identical twins make a special effort to treat their twins differently, those of fraternal twins to treat them the same" (p. 230).

Many authors have commented on the high frequency of "splitting" of the twins between the mother and the father (Abraham, 1953; Benjamin, unpublished, cited by Gifford et al., 1966; Demarest & Winestine, 1955; Hagedorn & Kizziar, 1974; Karpman, 1953; Mesnikoff, Rainer, Kolb, & Carr, 1963; von Bracken, 1934). In her study on

maladjusted twins, Kent (1949) reported that most mothers showed a definite preference for one twin, or found it more difficult to deal with one twin. Plank (1958) and Burlingham (1952) both cited instances in which one twin would claim or appropriate the mother, and the other the father, leading to the conclusion that this "splitting" is probably a mutual process between parent and child.

Thus, the parents, either consciously or unconsciously, react to each twin in a different manner, and preferences are established. These preferences seem to be more marked in fraternal than in identical twins, and are especially noticeable in opposite-sex twins (Hagedorn & Kizziar, 1974; Karpman, 1953; Kent, 1949; Scheinfeld, 1967). Developmental differences in boy-girl pairs may encourage these parental preferences, or they may be the result of the parents' own relationships with, or perceptions of, the two sexes (Hagedorn & Kizziar, 1974). Burlingham (1952) noted that these parental preferences can alternate; at one stage a parent may prefer one twin, and at a later stage, the other twin.

These preferences are significant, for when one twin is preferred by one parent, the other twin may attempt to compensate for the loss of that parent by identifying with other members of the family, particularly the twin (Demarest & Winestine, 1955; Holden, 1965; Joseph & Tabor, 1961; Karpman, 1953; Lidz, Schafer, Fleck, Cornelison, & Terry, 1962). This is perhaps best illustrated by Holden's (1965) report of his analysis of a pair of 27-year-old identical male twins. In Holden's words, each twin was "shackled to the other in a pathological clinch" (p. 859). Initially, neither twin would acknowledge that any differences existed between them; they insisted that they not be

seen separately because they were one person. After many sessions, one of the twins, Adrian, stated that he knew that he was his mother's favorite, and the other twin, Richard, responded that he was aware of this, and felt that he had to internalize Adrian in order to maintain a link with their mother. This had been carried to such great lengths that any individual pursuit or interest was seen as a threat to their bond with their mother. Thus, when parental preferences for one or another twin are established and quite marked, there can be a ceding of one parent to one twin, and a ceding of the other parent to the other twin, with ties to the ceded parent maintained through the twin. Intertwin identification can be further emphasized and strengthened, leading to a decrease in individual identity.

In summary, in this culture, the positive factors involved in giving birth to twins seem to override the negative factors, and many parents seem to derive great pleasure from the experience. This can lead to a desire on the part of the parents to emphasize and accentuate the twin relationship, thereby hindering the development of a separate identity for each twin. In some instances, parental preferences for one twin over the other occur, and the "rejected" twin may compensate for the loss of one parent by identifying with other family members, including the twin. This too can contribute to intertwine identification, helping to further the unit identity at the cost of an individual identity. The relationship between the twins themselves, and its contribution to the unit identity which may develop will be discussed in the next section.

The Intertwin Relationship

As previously stated, the majority of the material concerning the intertwine relationship is based on individual case histories from psychoanalytic or psychotherapeutic researchers. There are very few studies which involve comparisons of twins to non-twins, or comparisons between the different twin-types. For this reason, the intertwine relationship will first be discussed as it has been outlined on the basis of case studies, and subsequently the studies that have involved groups of twins will be reviewed. The common findings between the two will then be explored.

Intertwin Identification

In the discussion of the separation-individuation process in twins, it was seen that just as there is an initial state of symbiosis, or oneness, with the mother, there is also an initial state of symbiosis with the twin. Each twin gradually progresses from this undifferentiated stage to an awareness of some degree of separateness (both from the mother and the twin), but the presence of the twin can interfere with and inhibit the separation-individuation process (Ackerman, 1975; Winestine, 1969). The profound and complicating influence of the twin has been stressed by Leonard:

It is of utmost importance in understanding later development to realize that the one human being who is most constant within the twin infant's range of perception is not his mother but his twin. (1961, p. 304)

From about the fifth or sixth month, twins are aware enough of each other to have a quieting effect on each other. Just as the mere presence of a mother in a room can soothe a disturbed infant, the presence of the twin gives the other a sense of not being alone

(Leonard, 1961). Parents, preoccupied with household and career responsibilities, may notice this mutual effect that the twins have on each other, and will leave them together to play and entertain each other as long as they appear to be content. The twins may often be left in each other's company, and there is an increasing influence of the mood of one upon the other. Because of the lack of adequate ego boundaries at a young age, each may have difficulty distinguishing his/her own thoughts, behaviors, and wishes from those of the other twin. There is a general confusion on the part of the twins as to where the boundaries between themselves and their twin begin and end. Thus, the developing ego responds to the needs and drives of the other twin, as well as to those within the self (Lidz et al., 1962).

This situation limits the necessary parent-child interaction and identification, which are prerequisites for normal separation and individuation. To the detriment of the twins, parent-child contact is insufficient, and twin-twin contact, which is characterized by interaction with an individual in the same developmental phase, is excessive. Given less opportunity to interact with the mother, the twins resort to imitation and identification with the nearest individual, their twin (Winestine, 1969).

That this twin-twin contact has a negative developmental impact is evident in the study of Burlingham (1952). She reports that one pair of identical twins (Bert and Bill), imitated each other's movements and gestures from 12 months of age. While both of them were constantly trying to find new ways of entertaining each other, such copying games hindered normal development.

It was felt that, if the twins had been brought up without each other, Bert would have been able to develop normally. The influence that Bill exerted on him made it impossible for him to allow his ego to develop as it would have done if he had not been carried away by Bill's dominant, domineering, and erratic nature. Bill, if brought up without his twin, would not have had the added thrill of observing the reactions he created in Bert and would have lacked the enjoyment of watching Bert, which obviously gave him sensations of excitement. The double pleasure created in this way absorbed them and prevented them from achieving the development normal for their age. (p. 26)

In addition to retarded development, the twin relationship can foster the development of unique communication patterns between twins. With imitation of sounds and gestures between the twins, it is not uncommon for them to develop their own secret language--idiolalia--which others, including the parents, cannot understand (Hagedorn & Kizziar, 1974; Holden, 1975; Maenchen, 1968; Scheinfeld, 1967; Zazzo, 1978). (Leonard terms this secret language "echolalia," while Zazzo uses the term "cryptophasia" in order to stress its incommunicability to others.) These communication patterns can serve to isolate the twins from outside attachments, and in some instances are used by the twins to emphasize their unity.

A separate existence for either twin was seen as quite impossible, indeed they were explicit that they would rather die than separate. The existence of their secret language was shown to me as proof of their unity, and I was repeatedly reassured that every thought they had was shared, that they had no secrets from each other, etc. (Holden, 1965, p. 864)

Another aspect of the indirect effects of the twin relationship that has been studied is identity confusion (Lézine, 1951). In a test at 24 months in which children were supposed to say their own name, only 40% of the twins passed, as compared to 60% of the non-twins. At the same age level, the children were supposed to be able to point to parts of their own body and to identify them in a picture. Again,

42% of the twins passed, as compared to 60% of the non-twins. In addition, one twin came when the other's name was called, or would point to the parts of the body on the body of the twin instead of on him-/herself. These tests showed the difficulty that twins have in separating self from non-self, and the confusion of identity appears to be one of the results of intertwin identification (Leonard, 1961). Burlingham (1952) also makes reference to the inability of twins to see themselves as separate identities. For example, one set of twins used to take turns crying whenever the mother left home; when queried as to why both did not cry, the one who was not crying said, "Sister's crying, I don't need to."

Thus, it seems that the presence of another individual, in close emotional and physical proximity, and in the same developmental phase, does have a definite effect. This effect is perhaps quite strong because close contact occurs before ego boundaries are firmly established, and as Glenn (1966) notes, uncertainty about ego boundaries makes for excessive employment of identification. Being a member of a twin pair, either fraternal or identical, encourages the phenomenon of the "twinning reaction," which consists of mutual interidentification and part fusion of the self-representation and object representation of the other member of the pair (Joseph & Tabor, 1961). This leads to diffuseness of ego boundaries between the twins.

By and large, there is a mutual interdependency and failure to completely differentiate one's self from the twin, so that a complete self-representation is not found. Study of the protocols of the various case reports shows that this state of affairs exists to varying degrees in all of these patients. While mindful of Hartmann's admonition that not everything that is found in the personality of a twin should be ascribed to the twinship itself, where such a finding is so universally reported in all studies, it seems significant. (Joseph & Tabor, 1961, p. 276)

The twinning reaction is based on multiple factors, including (a) the occurrence of relatively simultaneous passage through the progressive phases of maturation and development; (b) the influence of the environment toward nondifferentiation; (c) the physical similarities between twins; (d) the mutual choice of the twin as an object of libidinal and narcissistic gratification; and (e) the inhibition of or defense against hostile impulses directed at the twin. The first two factors have been discussed previously, while the remaining three require further elaboration.

The importance of physical similarities between the twins is crucial. The intensity with which twins identify with each other seems to be strongly related to the degree of resemblance, which is not necessarily correlated with twin type (Leonard, 1961). For example, some identical twins differ more in weight at birth, and therefore in appearance, than do some fraternal twins. The more alike twins are, the stronger the tendency on the part of the environment to treat them as a unit, which emphasizes their identification with each other and tends to make them feel as though they belong together. Furthermore, physical similarity exerts an early influence at a time when separation of self and non-self occurs, and continued confrontation with a mirror image inhibits this separation of self from non-self, thus promoting the fusion of self and object representations (Joseph & Tabor, 1961). For example, Leonard (1961) reports these observations on a young set of twins.

. . . Approximately in the seventh month, these . . . twins were seated on the bed opposite each other and were playing with each other in the manner that a single child might play with a mirror held up to him, namely, reaching out and touching. However, this particular situation had other elements in it; each baby seemed to be exploring the body of

the other in a way that, if left to himself, one baby explores his own body. Fingers were poked into the navel of the other, toward the eyes and into the mouth. (p. 308)

Thus, a twin may initially perceive his/her twin as being a mirror image, and conversely, Burlingham (1952) reports instances in which the true mirror image was perceived not as the self but as the twin. While it would seem that, with time, basic similarities in appearance and behavior would be gradually overlaid by acquired differences, the identification of the twins with each other can minimize the development of such differences. In fact, through excessive identification with the twin, twins can become more alike as they mature (Burlingham, 1952).

Accompanying the intertwin identification is a strong tie between the twins based on the mutual stimulation that they provide for each other. It was previously noted that because of the monumental task of handling two infants at the same time, twins are rarely the sole recipient of the parents' attention, and must generally share such attention with their twin. There may be inadequate individual contact, both emotional and physical, and the twins may turn to each other not only for mutual entertainment, but for consolation and attention as well (Terry, 1975). The fact that twins must share parental attention and time can lead to periods of quite intense frustration. Conversely, turning to each other for consolation and attention can lead to periods of too intense gratification as well (Glenn, 1966).

An example of the frustration that twins experience can be seen in the feeding situation. As Leonard (1961) noted, it is a rare set of twins who conveniently fit their demands into a schedule in which the mother can feed one twin while the other sleeps. "All too frequently

and frustratingly, the feeding of one is accompanied by the scream-int protest of the other infant" (p. 304). While the behavior of a pair of twins is not usually identical, e.g., one may be indifferent as the other is fed, or one twin may object months before the other, the first competition for attention seems to center around feeding (Burlingham, 1952). Burlingham vividly illustrates the feeding of a pair of identical twins, Jessie and Bessie.

At 13 months the mother would sit them at a table opposite each other, and she would then take her place between them. The mother had to feed Bessie twice as quickly, because each time she picked up the spoon to feed Jessie, Bessie would start screaming. Jessie was forced to wait while the mother tried to satisfy Bessie by pushing two spoonfuls into her mouth for every one she gave Jessie. (1952, p. 21)

While one twin is fed, the other usually waits; while one is diapered, the other waits; while one is bathed, the other waits. This can result in the build-up of tension that is not released for long periods of time, and this frustration may be one of the sources of the rage toward both the mother and the other twin, which is prominent in twins (Glenn, 1966).

The mutual gratification between the twins results from the twins' use of each other as sources of entertainment, attention, and consolation. One twin will not infrequently use the other as a parental substitute if he/she is disappointed in the parent, or if the parent is absent for a period of time. All children are at times disappointed or frustrated with their parents, but twins have the opportunity to turn to each other as a source of gratification should discomfort arise (Joseph & Tabor, 1961). The substitution of each other for the parent was noted by Burlingham (1952) in all three twin pairs in her study.

Whenever they are disappointed in their parents, they turn to each other for consolation and understanding. They substitute each other for the mother or other loved person when they find them lacking--mothering, comforting, helping, protecting, and loving each other. (p. 81)

As Jessie and Bessie were discussing an impending separation from their mother, Bessie comforted herself with the words, "We are never alone. I always have Jessie to talk to." Jessie laughed, and said, "I always have Bessie, so we aren't lonely" (Burlingham, 1952, p. 87). Twins soon learn that they can fall back on, or gratify, each other, in cases of parental disappointment or absence.

However, this use of each other as sources of gratification can lead to an inhibition of the individuation process, for as Jacobson (1954) pointed out, excessive gratification or deprivation can lead to confusion of self and object representations. The twins' self-images become blurred or blend in with that of their twin. For example, Spitz's (1962) analysis of Harlow's monkey experiments reveals too much reciprocity between same-age monkeys raised on a cloth mother, in contrast to those raised by a real mother. The identical needs of those monkeys with surrogate mothers were completely and reciprocally fulfilled, resulting in a closed and static system which was not amenable to any outside influence. They clung to each other, were unable to form any other relationships, and did not engage in play with other monkeys. Spitz concluded that these monkeys were arrested on what in man would be called the primary narcissistic level. The "together-together" monkey relationship entailed no frustration and, hence, "neither incentive nor push to form different relations" (p. 295).

In the mother-child system, the needs of the child and the needs of the mother are, though in certain respects complementary, quite dissimilar. The mother will not offer simple and constant gratification, but "a wealth of action shifting from approach to retreat, from embracing to rejecting, from gratification to frustration" (p. 293), thus providing the infant with a variety of experiences, and forcing a variety of responses. These circular social interactions promote the separation-individuation process, and the encouragement of relations with others.

Each of her responses represents a push in the direction of developmental unfolding of the infant's personality--each of them bringing him nearer to autonomy from the mother and to seeking contact not only with the "other" but also with the "generalized other." (Spitz, 1962, p. 294)

This pattern is not true of the "together-together" relationship in which demands and needs are mutually gratified with few frustrations. With twins, the mutual stimulation and lack of frustration can interfere with the development of object relations and with the evolution of normal personality (Maenchen, 1968). Instead of the necessary identification with a competent adult and mutuality of imitation between mother and child, there is an identification with an equally helpless twin. Ackerman's (1975) description of a 28-year-old female identical twin provides an illustration of the relationship that can develop as a result of the intertwin identification.

In many ways her twinship impaired separation and individuation by providing a continuous, mirroring, narcissistic object with which to identify herself, to rely on and to love . . . Tension-alleviating functions were a mutual process of soothing the other and the self. Moreover, the twin served as a transitional object that was not given up. (pp. 396-397)

It seems, then, that there is a certain amount of frustration and gratification inherent in the twin relationship, with perhaps too much frustration in the parent-child interactions, and too much gratification in the twin-twin interactions. The resulting effect on the separation-individuation process is detrimental in that a primary object relationship is established with a person who is not different but the same, and with whom most experiences are shared (Lidz et al., 1962). The persistence of the twin as a need-satisfying, mirroring, idealized object retards individuation.

The capacity for deep and satisfying object relationships would depend on both a gratifying, constant, responsive period of symbiosis with mother, as well as gradual, safe phases of separation and frustration. Trust, confidence and mastery reflect dependable identifications. If a need-satisfying and tension-alleviating object fulfills its role too well, or anachronistically persists, delaying the ontogenetic timetable of individuation, then libidinal fixation and narcissistic striving may occur. (Ackerman, 1975, p. 407)

Rivalry and Ambivalence

However, just as there is a tie between the twins based on need which inhibits separation-individuation, there is a pull in another direction, based on rivalry and competition, which encourages separation-individuation (Joseph, 1961). This rivalry and competition probably precedes the awareness on the part of the twins of their special relationship; the first experience with the twin is clearly that of a rival and intruder in the earliest phase of instinctual gratification.

In the initial phase there is the self-centered wish to possess the breast and the mother without regard for the sibling. This is coupled with resentment toward both mother and sibling for having to share food, attention, or love in any form. (Arlow, 1960, p. 194)

Within a short period of time, however, comes the realization that exclusive possession in any sense is impossible; some form of renunciation of exclusivity is inevitable, and sharing will have to occur. Out of this realization of the necessity for sharing, one twin begins to be willing to renounce some of his/her demands on the condition that an equal renunciation can be exacted from the rival, the other twin. In this manner, a truce is effected in which the feelings of competition, hostility, and jealousy are transformed into a resolution to share things equally. But this resolution to share equally is a mere continuation of their former competitive relationship.

The struggle is now centered around the desire to have, not more, not less, but the same. To have the same prevents the other from having more and in this way they are able to strike a balance. (Burlingham, 1952, pp. 62-63)

This is a very tenuous balance and the rivalry is by no means eliminated by this solution. As Arlow (1960) notes, any transgression on the part of one twin can precipitate an immediate and violent retaliation. For example, if one twin should be the recipient of a gift that he/she is not willing to share with the other, the rivalry and resentment will quickly resurface. Furthermore, this balance is not necessarily limited to the possession of objects; the effort to strike a balance can permeate every aspect of the twin relationship, as is illustrated in Orr's analysis of a male fraternal twin.

Two sides of the twin rivalry thus became apparent; if the twin excelled and was preferred, the patient felt rejected and became hostile towards the twin as well as towards those who showed this preference; but if the patient excelled, he felt anxious lest his twin hate him with the same intensity he felt in the reverse situation. This dilemma could be solved only if neither excelled or was preferred; that is, if the patient were as much like his twin as possible. A premium was thus placed upon their being "identical." (1941, p. 291)

Orr goes on to state that such a twin relationship can be maintained only by sacrificing individuality and development as a separate personality.

The ambivalence created by this situation, in which the growing need for each other acts as a check on the negative feelings which arise from envy, jealousy, and competition, appears to be quite intense among twins (Arlow, 1960; Glenn, 1966; Kent, 1949; Steinfeld, unpublished, cited by Orr, 1941). As Joseph & Tabor (1961) point out, the twin relationship is fraught with many conflicting affects. There are feelings of rivalry, hostility and jealousy, deriving from attention given to the other twin, guilt over these feelings, and attempts to deny the guilt associated with such feelings. There may be feelings of inferiority, deriving from either developmental differences or from the invidious comparisons of parents and outsiders. At the same time, there is a real love between the twins, and the realization that the twin is needed, both as an ally and as a source of gratification. Based partly on a need for each other, and partly as a defense against hostile impulses toward each other, mutual interidentification can serve a defensive role in permitting a state of coexistence in which neither gains an advantage over the other, and ties between them are strengthened (Joseph & Tabor, 1961). In a sense, notes Arlow (1960), it is probable that most twins purchase good relations with each other at the expense of their relationships with other individuals.

Because of intertwin identification, reaction formation, and in particular, parental admonitions about expressing hostility, overt expressions of hostility directed at the twin appear to be rare. Hagedorn & Kizziar (1974) note the irony of this situation: the more

closely two people are associated, the more likely they are to come into conflict, but even though no two people appear to be more closely associated than are twins, aggression against one's twin is likely to be unacceptable.

From the point of view of the parents, the insistent clamoring for attention on the part of each twin can be unbearably harrowing. Not realizing how important it is that twins fight it out and learn to accept each other as different individuals, parents frequently do everything in their power to try to make the twins conform to the culturally accepted picture of what the twin relationship should be like. (Leonard, 1961, p. 315)

The final attitude which the twins adopt can depend on which aspect of the ambivalent relationship is repressed (Arlow, 1960). In some twins the competition is maintained as a primary characteristic of the relationship; they may try to "out-do, out-perform, out-wit, and out-maneuver their twin--to come out on top in their parents' and others' eyes no matter what the cost" (Hagedorn & Kizziar, 1974, p. 117). In other instances, the rivalry may result not in open hostility but in cold war (Maenchen, 1968). For some, the solution is to attempt to maintain conformity and equality, as in a case cited by Winestine (1969) in which if the mother of a pair of twins failed to provide two clean pairs of socks of matching color, they divided the socks between them, i.e., each wore a blue and a brown sock. Others may seek a resolution through accentuating the differences between them so that a more or less complementary relationship exists between them. In this manner, a "division of labor" is effected. One twin may, for example, handle social interactions, taking responsibility for dealing with the outside world (the "Minister of Foreign Affairs"), while the other may deal with the twins' private life, making decisions or acting as the

conscience of the pair (the "Minister of the Interior") (von Bracken, 1934; Shields, 1954; Zazzo, 1978).

Thus, ambivalence, based on the need for the twin as a source of gratification and the realization that he/she is also a contender for affection and attention, seems to be highly characteristic of the twin relationship. Twins have an acute rivalry to cope with; it seems to be more severe than ordinary sibling rivalry, and starts at an earlier age than it does with siblings. It can be dealt with through excessive competition, maintenance of conformity, or division of roles between the twins.

Complementary Relationships

The division of roles can lead to an increased emphasis of a phenomenon which is frequently observable in twins, namely a dominant-submissive, or active-passive, pattern. The first signs of such a pattern in twins may appear quite early in development, as early as eight months of age, according to Burlingham (1952), and in some instances are quite marked.

Such differences--sometimes subtle but frequently vivid--include: (1) a clear-cut difference in the relative ease of adaptation to new stimuli, including a difference in initial fearfulness (dependence-independence); (2) a tendency for one twin to be relatively more methodical and thoughtful, the other more excitable and emotional; (3) a difference in object orientation, one twin appearing to be relatively more interested in people (social) and the other more oriented toward inanimate objects; (4) a difference in approach to the environment, one twin tending to explore patiently and thoroughly, the other more actively searching for some new stimulus; (5) a tendency for one twin to be more passive, the other more confident and assertive. (Allen et al., 1976, p. 66)

As a specific example of differences in behavior, the stronger twin may bite, push, pull, or snatch things away from the weaker twin, who will

in no way try to defend him/herself, but behaves in a completely passive manner.

Dominant-submissive roles may switch back and forth between the twins, i.e., if the stronger twin should get sick, the other twin will take advantage of the situation (Burlingham, 1952; Neubauer, 1972; Shields, 1954). However, most of the switching appears to occur when the twins are younger; with time, the roles become more stabilized. In general, it seems that a role is delineated for each twin, which is subtly encouraged or reinforced by the parents, so that the child begins to behave according to parental cues and expectations (Allen et al., 1976; Kent, 1949). Through the interaction of constitutional factors, the intertwin relationship, and parental responses, a dominant-submissive pattern can be established. While the following example, concerning five-year-old female fraternal twins, illustrates such a relationship to a greater degree than is typical of most twin relationships, it nonetheless shows how such a relationship can be formed.

The mother complained of her inability to gain full satisfaction from either child and, during their infancy, yearned to be with one child at a time. Nevertheless, a strong preference for Susan over Ann was early established because Susan was the first-born and more wanted child. . . . The mother expressed preference for the more dynamic and active personality of Susan in contrast to Ann whom she thought the less interesting and more phlegmatic She consistently permitted Susan to thwart Ann's early attempts to seek contact with the mother; Susan shouted Ann down when the latter attempted to talk with the mother; Susan could not sleep unless the mother left Ann's bedside and the room, until Ann finally stopped all her requests for the mother's presence; Susan attacked the mother when Ann attempted to seek solace from her at times when Susan had sat on Ann or had forcibly taken something from Ann, until finally Ann also stopped these overtures The mother felt that each twin had a negative effect upon the other, thus creating a more difficult task for her; Ann would have been less difficult to rear without the stimulating effect of Susan; Susan displayed fears only by "contagion" and exposure to Ann The mother summed up

their relationship by saying: "Ann serves as Susan's hands, but Susan is like a drug for Ann and Ann cannot do without Susan." (Demarest & Winestine, 1955, pp. 339-340)

In this case, not only was a clear dominant-submissive pattern quite marked, but the dominant twin, Susan, was also unwilling to relinquish her control over Ann. This phenomenon has been noted by other researchers (Arlow, 1960; Holden, 1965; Potash & Brunell, 1974); the dominant twin seems to be dependent on the submissive twin, and vice versa, so that while each resents the other, each also relies on the other. The dominant twin may feel that if he/she were to relinquish control or surveillance over the other twin, the other would gain some advantage (Arlow, 1960). Or the dominant twin may fear hurting his/her more passive twin, perhaps alienating him or her, and thereby alienating him-/herself in the process (Holden, 1965).

Such dominant-submissive patterns inhibit the separation-individuation process for both partners; each feels a need for the other, and cannot let the other be free and independent. While the dominant twin may be perceived as being the more separate and individuated, this is not necessarily the case. He/she may reveal brittle ego features if threatened with the loss of domination over the twin, and the self representation may include the incorporation of the twin through the act of domination (Winestine, 1969). In contrast, the submissive twin may welcome a release from the domination and become more accessible to other relationships (Demarest & Winestine, 1955; Winestine, 1969), as was the case with Ann, who responded to therapy in a more effective manner than her twin, Susan.

In addition to the dominant-submissive pattern, other "complementary" personality traits in twins may develop. For example,

it was previously noted that one twin may take the lead in social interactions, while the other may take care of the relationship between the twins themselves. While working together, coordination may be so pronounced that the two figures of the twins seem fused into a single four-handed figure (Cronin, 1933). In Karpman's words,

It would seem that there is often between twins a repulsion and attraction, positive and negative, active and passive complementary traits, so that they fit each other as the convex fits the concave, making a whole (1953, p. 248).

Maenchen (1968) takes a stance which is somewhat contradictory to Karpman's. In her analysis of a 12-year-old identical male twin, she found that while both twins "used each other in the same way, their mutual attraction being both narcissistic and genuinely affectionate, they did not quite complement each other--they were two halves which did not make a whole" (p. 441). Even though the twins were able to function when they were together (although at a borderline level), when they were apart there was a diminished capability in maintaining ego boundaries. Overall, most researchers view the twinship in a light which is more compatible with Maenchen's than Karpman's. While there are feelings of union and strength, and an awareness of being an object of special interest to others, twins may feel at somewhat of a loss when not in the company of their twins. Cohesiveness of the self may not be experienced as being separate, but as being joined to a kindred spirit, a mirror image; with the twin there is a sense of omnipotence and power, but without the twin, there is anxiety and a sense of loss (Ackerman, 1975; Winestine, 1969).

According to Ortmeyer (1970), it is not that a trait is completely present in one twin and absent in the other, but that a trait is more

fully developed and more structured in one twin than in the other. Out of this differential development of traits, there arises a "we-self" identity between the twins, and they appear to function as a cohesive and efficient unit--until, that is, separation occurs.

Clinical knowledge of this twin seems to support the hypothesis of the we-self. She was similar to her sister in physical appearance, yet not in personality. She seemed neither identical nor a mirror image of her sister but, rather, to have complementary personality attributes. Together with her sister, they apparently functioned as a unit; the patient was accustomed to having both personality attributes. Separately, she sorely missed certain of her twin's personality attributes, not having acquired them sufficiently in herself. Such personality traits were not totally absent, but relatively undeveloped in her. (Ortmeyer, 1970, p. 133)

Problems arise when, without the personality of his/her counterpart, the twin faces the loss of traits necessary for his/her expected personality functioning. Ortmeyer found that with the loss of the twin, the other twin does not develop the deficit, but instead seeks out twin substitutes who will conform to the relationship with the lost twin.

Separation from the Twin

Many twins, especially those who are reared as a unit and not encouraged by their parents to develop individually, report feelings of being half a person and incomplete without their twin (Hagedorn & Kizziar, 1974). In a case reported by Knight (unpublished, cited by Orr, 1941), for example, an identical male twin felt incomplete when not with his twin, and never felt comfortable meeting new people until his twin had also met them. Some of these same twins report that their greatest fear is that their twin would die, that they could not continue on their own. This is how one twin described his first separation from his twin when he left for college.

The power of the shock to my emotional system is eloquent proof of the extent of my emotional reliance on him. I wrote to him that it was as if a part of me had gone with him. I realize now that he had become a vital part of my emotional life and when he left a gaping hole remained My confidence, my optimism, the pleasure of school, all disappeared as quick as a flash and in their stead came hopelessness, fear, lack of confidence, insecurity, misery. (Karpman, 1953, p. 258)

Burlingham (1952) had an opportunity to observe the reactions of twins when they were separated at a young age, and found that indifference at separation occurred at about 16 to 18 months of age. In addition, separation from the twin had the same emotional value and produced the same reaction as separation from the mother, i.e., the feelings of hurt and anger at being separated from the love-object were expressed by rejection of the loved person at the moment of reunion. At the same time, the twins seemed to suffer acutely when separated from each other, with the one who was left taking over the name, clothes, and characteristics of the missing twin. Winestine (1969) also reports that some of the twins she studied, aged 8 to 12 years, expressed a desire never to be separated.

A expresses some wish to be Siamese twins as the only assurance that he and his twin will never be separated. He also expresses preference for the same class placement rather than the school's policy of separating twins and indicates that he concentrates better in the presence of his twin. Both imply that they feel part of a whole. . . . They sleep together in a double bed, time their routines concomitantly, intend never to marry, and to live together as adults. (p. 453)

Perhaps it is the sense of loss when separated from the twin which is responsible for the need, noticeable in some twins, to "recreate" the twinship with others, including parents, children, spouses, friends, and therapists (Ackerman, 1975; Glenn, 1966; Joseph, 1959; Steele, unpublished, cited by Joseph, 1961). In the analysis of a fraternal opposite-sex male twin, for example, Glenn (1966) reports

that his client, who had an intensely competitive relationship with his sister, entered the same occupation as his sister, and found a business partner who would dress like him, eat the same food, and purchase the same type of car. In the transference, the twin problem was prominent, as the client had a strong desire to picture the analyst as a twin. Steele (unpublished, cited by Joseph, 1961) speaks of the analytic situation as a "situation par excellence for recreating a 'twin relationship'" (p. 162).

There are two people who share a common purpose, develop a secret language in a common room, etc. Inevitably, therefore, the patient's need to recreate the twin situation is fostered by analysis. This results in a 'sticky' type of transference. Problems of terminating the analysis are increased because the twin fantasizes a perpetual analysis with his 'twin analyst.' (Joseph, 1961, p. 162)

However, no matter how strong the intertwin identification and other ties which seem to keep twins together, separation and individuation, to whatever extent, are inevitable (Lidz et al., 1962). In their report concerning 37-year-old male identical twins, who were very close, and even at times confused about which experiences had happened to which twin, Joseph & Tabor (1961) found that two distinct personalities did emerge.

Aside from the close physical proximity imposed upon them by their environment, aside from the drive toward unity expressed by the family, aside from their need for each other as a source of the narcissistic gratification so often denied by the need-satisfying objects, aside from the use of each other to live out instinctual conflicts, and aside from the need to deny guilt at hostile feelings toward each other by remaining a unity--they still are different individuals. (p. 294)

It is also possible that the loss of individual identity may be compensated for by the supportive aspects of such a bond (Leonard, 1961). The reassurance and security gained may counteract whatever weakening

may be suffered by the individual ego, with the identity à deux substituting for individual identity.

Differences between Twins and Non-Twins

Very few of the authors of the case-study material discuss specific differences between twins and non-twins, except to state that the presence of the twin complicates the separation-individuation process. Leonard (1961) concluded that intertwin identification was a major problem for twins, and that "in the case of every twin whose analysis has been reported, the twin relationship was considered the prime reason for that individual's disturbance" (p. 301). Joseph & Tabor (1961) acknowledge that the twinning reaction can occur between siblings close in age, between non-twin individuals, and even between a husband and wife who are married to each other for a long period of time, but it is less extreme in non-twins than in twins.

Although the problems of fraternal twins do not exactly parallel those characteristic of identical twins, the same common denominator, i.e., the presence of another individual in the same phase of development, does exist (Burlingham, 1952; Demarest & Winestine, 1955). Because of this common factor, it is assumed that the fraternal relationship is comparable to that of identicals in many respects. Thus, for example, Joseph & Tabor (1961) report that the twinning reaction occurs in both fraternal and identical twins. Among identical twins, if they are quite similar in make-up, development, and capabilities, their problems may relate to too great an attachment to and dependence on each other, and if they are not alike, any marked differences between them may put one at a disadvantage over the other (Scheinfeld, 1967). Also, notes Scheinfeld (1967), among fraternal twins, problems

may arise from being "trained" to be twins. If they look alike, they may be under some pressure to be the same in their development and capabilities, and thus may have greater difficulties than those of identicals, since they are really no more alike, genetically, than any two siblings from the same family.

There appears to be a lack of consensus on the similarity between fraternal opposite-sex twins and other twins. Glenn (1966) is of the opinion that opposite-sex twins have personality structures similar to identical and fraternal same-sex twins; his opposite-sex twin clients exhibited confusion between self and object representations, exaggerated ambivalence, and a need to recreate the twinship. However, Scheinfeld (1967) reports that boy-girl pairs are least affected by problems ordinarily associated with twins. The major difficulties seem to center around developmental differences; the girl member at birth is usually ahead of the boy in biological maturity, and her lead is maintained through puberty. He rates the opposite-sex twins as being least close, with the degree of closeness highly dependent on the female partner's efforts to maintain contact.

This concludes the discussion of case study material on the inter-twin relationship. The studies which are more systematic in that they involve groups of twins will now be considered.

Systematic Studies of Twin Relationships

The results of systematic studies are presented, in condensed form, in order to examine differences that have been found between non-twins and twins on some of the various dimensions of the separation-individuation process, e.g., dependency, rivalry, ambivalence, and

closeness between siblings and twins. Knowledge of these prior efforts provides a base for the current examination of separation-individuation. Studies which are particularly relevant are those by von Bracken (1934), Shields (1954), and Husén (1959) on differences between fraternal and identical twins; Koch's (1966) study comparing twin-types to each other and to non-twins; Paluszny & Gibson's (1974) observations of fraternal twins; and Winestine's (1969) study of identical twins. (See Table 2.1 for a summary of the different samples used by each researcher.)

One index of separation-individuation is the degree of attachment or closeness between the twins. In their studies of young, normal school-age twins, von Bracken (1934), Shields (1954), and Koch (1966) all reported that identical twins were more closely attached to each other than were fraternal twins. Because of the design of Koch's study, she was also able to compare closeness between non-twins and twins, and she reported that twins were closer to each other than were non-twins. Within twin groups, in addition to the previously cited finding that identicals were closer than fraternal, she found that fraternal same-sex pairs were closer than fraternal opposite-sex pairs. As adults, however, the attachment appears to decrease. Husén (1959), for example, who studied adult male twin pairs, found that while identicals, as compared to fraternal, were more likely to emphasize the desire to be alike, to be together, and to feel loyal to each other, the attachment did appear to be less marked as adults than when they were younger.

An explanation for the varying degrees of closeness between the twin groups may be found in the amount of competition and rivalry

Table 2.1.--Systematic Studies of the Twin Relationship

Author(s) and Location of Study	Subjects	Age of Subjects
Husén (1959), Sweden	48 identical pairs 47 fraternal pairs	20 yrs.
Koch (1966), U.S.	35 identical pairs 36 fraternal same-sex pairs 19 fraternal opposite- sex pairs 432 non-twins matched with twin pairs on various demographic variables	4-7 yrs.
Paluszny & Gibson (1974), U.S.	10 fraternal pairs	3-5 yrs.
Shields (1954), England	36 identical pairs 26 fraternal pairs	12-15 yrs.
von Bracken (1934), Germany	15 identical pairs 12 fraternal pairs	6-16 yrs.
Winestine (1969), U.S.	30 identical pairs	8-12 yrs.

between twins, which is another indicator of separation-individuation. Both von Bracken (1934) and Koch (1966) found that the fraternal twin relationship, as compared to the identical twin relationship, was characterized by more competition and jealousy between the co-members of a pair. When identical twins were involved in competitive tasks,

reported von Bracken, they tried to preserve harmony between themselves, and if one got ahead of the other on a particular task, the one who was ahead would either wait for the other twin to catch up, or even assist his/her twin in the task. This finding was not true of fraternal twins, who constantly tried to excel their partners on the tasks. Koch (1966) believes that this marked competitive relationship within fraternal pairs is the result of the constant comparisons to which fraternal twins are subjected. Twins are usually compared excessively, with identicals scanned for likenesses, and fraternal twins for differences. Unfortunately, comparisons based on perceived differences within the pairs include a less favorable evaluation for one of the twins. In her opinion, this results in a more stressful relationship for fraternal twins than for identical twins, and contributes to the lower attachment between fraternal pairs.

Previous research has indicated a great variance in the degree of closeness within twin pairs, as might be expected. Paluszny & Gibson (1974) and Winestine (1969) did not compare various twin-types for closeness, but instead compared closeness within fraternal pairs, and identical pairs, respectively. In both studies it was found that the degree of closeness varied considerably from pair to pair. Thus, even when examining only fraternal pairs, Paluszny & Gibson (1974) found that mutual dependency between the pairs varied considerably from strong, in which one twin spoke for the other and the co-twins would only play with each other, to almost non-existent, in which each member of a pair interacted freely with peers and adults when the opportunity was provided. Winestine (1969), in her study on psychological differentiation in identical twins, reported a similar variation

in the extent of twinning. Some twin pairs were noticeably more capable than others in interacting with peers, separating from the twin without anxiety or guilt, perceiving themselves as a whole, and resolving the competition and jealousy with the twin. Similar findings were reported by von Bracken (1934) and Shields (1954), and in some instances they found fraternal pairs who were more closely attached than other identical pairs.

In summary, these systematic studies reveal that identical twins are closer to each other than fraternal twins, and fraternal same-sex twins are closer to each other than fraternal opposite-sex twins. The fraternal relationship appears to be more competitive than the identical relationship, and although the degree of attachment between twins may decrease with age, competitiveness does not appear to. Finally, there appears to be some variability in the degree of attachment between members of different twin pairs.

Discussion

The prime characteristic which distinguishes twins from non-twins is the close emotional and physical proximity to another individual in the same phase of development. Because of this proximity, at such an early age, twins must not only separate and individuate from the mother, but from the twin as well. From birth, then, the experience of being a twin is different from that of being a non-twin.

Many of the same characteristics which indicate difficulties with the separation-individuation process--for example, over-attachment, dependency, and identity confusion--are also characteristics of the intertwin relationship. On the basis of the case-study literature, it was found that the twin relationship usually includes some or all of

the following attributes: (a) deleterious effects on ego development because of cultural and/or parental attitudes which encourage treatment as a "unit" rather than as individuals; (b) identification and imitation between the partners; (c) dependence; (d) exaggerated ambivalence; (e) complementary relationships; (f) feelings of lack of completeness and a disturbed sense of identity; (g) a need to recreate the twinship with other individuals. Naturally, the extent to which these characteristics develop or are maintained depends on constitutional factors, and parent-child and twin-twin interactions.

The results of the systematic studies revealed a wide range in dependency and the extent of the twinning reaction. Overall, however, comparisons of the twin types revealed that twins were in fact closer than non-twins, and that the order of closeness within the pairs, from high to low, was identical, fraternal same-sex, and fraternal opposite-sex, respectively.

The case study literature, while it is useful for determining any difficulties which may be inherent in the twin relationship, suffers from a certain bias in that while many of the twins studied were adults, many were in psychotherapy, or had been referred for therapy. This factor necessarily influences what might be considered "inherent problems" in the twin relationship, as it does not include a non-therapeutic analysis of the intertwin relationship. On the other hand, while the systematic studies that have been done are useful in that the authors utilized a "more normal" population, with the exception of Husén's work, all concern young twins. Furthermore, with the exception of Winestine's study, none have addressed the separation-individuation process, and even Winestine only included identical twins in her study.

Summary

The study of parental patterns and attitudes in transactions with their children reveal certain salient factors. In this culture, for the most part, the twinship of both identical and fraternal twins is accentuated, so that they are frequently referred to as "the twins," rather than by their own individual names. Even when differences between the twins are identified and emphasized by the parents, there may be "splitting" of the twins between the mother and father, so that one twin is preferred by the mother and the other by the father. Such preferences can be detrimental in that they can encourage one twin to compensate for the loss of the parent by identifying with other members of the family, particularly the twin.

In general, twins are subjected to pressures which emphasize their similarities, closeness, mutual love, and uniqueness. Because of the presence, from birth, of another individual in the same developmental phase, it is difficult for twins to establish a clear self-image, as they tend to identify with each other. Rivalry problems may be denied or minimized, with the twins adopting the same interests and sacrificing an individual identity. Jealousy between the twins may result in hostile death wishes, which in turn must be denied, resulting in the twins maintaining their close relationship, and at times sacrificing outside relationships. All of these factors make twinship an unusual sibling relationship, and one that is particularly difficult with which to deal.

CHAPTER III

DESIGN AND METHODOLOGY

Sample

The twin sample for this study was obtained from the Michigan State University student population. There were about 40,000 students enrolled at the Michigan State University East Lansing campus in Spring, 1980, when the data were collected. Because twins occur in about one of every 80 births, it was estimated that if their college attendance rate was comparable to that of non-twins, and if both members of a twin pair attended Michigan State, there was a maximum of approximately 1,000 twins attending Michigan State.

Signs were posted on bulletin boards in the campus dormitories, library, and various snack areas throughout campus. All signs were 8 x 14 inches in size and included a statement to the effect that volunteers were needed for a study on twins, and that the researcher could be contacted by phone if they were interested in participating in the study (Appendix A). In addition, two advertisements, comparable to the signs but smaller in size, were placed in the Michigan State University newspaper, The State News, one appearing on April 28, 1980, and the other on May 8, 1980 (Appendix B). The advertisement appearing on May 8 was placed because of a deficit of male twins, especially fraternal.

Using this procedure, 259 twins, including 48 pairs, contacted the researcher. A total of 231 questionnaires were returned, for a response

rate of 89%. Included in these forms were responses from 28 individuals who were either not students or over the age of 25, responses from 14 individuals which were incomplete, and responses from three individuals who were uncertain whether they were identical or fraternal twins. All of these response forms were eliminated. This left a balance of 186 forms. The distribution by twin-type was as follows:

<u>Twin Pairs</u>	<u>n</u>
Identical female	14
Identical male	6
Fraternal female	6
Fraternal male	0
Fraternal opposite-sex	7
<u>Individual Twins</u>	
Identical female	22
Identical male	21
Fraternal female	22
Fraternal male	20
Fraternal opposite-sex female	16
Fraternal opposite-sex male	19

The non-twin sample was obtained from classes at Michigan State University. Responses from 48 people were obtained, of which two were discarded because of incompleteness. This left a balance of 46 forms, 25 from females and 21 from males.

To obtain the final sample of 160 subjects, 20 males and 20 females from each group, i.e., non-twins (NT), identical twins (ID), fraternal same-sex twins (FSS), and fraternal opposite-sex twins (FOS),

were selected at random. While twins from twin pairs were included in the selection process, care was taken to ensure that only one member of a pair was included in the final sample. (There was no random selection of the 20 fraternal same-sex male twins because there were only 20 of them available.) The average age of all respondents was 20.5 years; most respondents (92%) were single; and most of them did not live at home (82%) or with their twin or closest sibling (85%) (Table 3.1). The groups are similar across a number of demographic variables; exceptions to this finding are that 35% of the identical twins stated that they lived with each other, which is a higher percentage than that of the other groups; and 47.5% of identical twins stated that their twin was attending the same school as they were, which is, again, a higher percentage than those of the other groups (Table 3.2).

Instrumentation

Separation-Individuation Instrument

The instrument used in this study to measure separation-individuation was derived from the instrument used by Maroda (1979) in her research on separation anxiety in adults. Her instrument, Form A (Appendix C), contained 143 items, some of which lack clarity. Because of this factor, and because the degree of internal consistency of some of the clusters was moderately low, it was decided to revise Form A before administering it to the persons to be used in this study.

Included in the revision of the instrument was a consideration of response styles. While an equal number of items phrased in positive and negative directions was not possible because of distortion of the

Table 3.1.--Demographic Information on the Complete Sample

Age ^a	<u>n</u>	(%)
18	21	(13.1)
19	39	(24.4)
20	26	(16.2)
21	31	(19.4)
22	19	(11.9)
23	11	(6.9)
24	3	(1.9)
25	10	(6.3)
Race		
Black	16	(10.0)
White	143	(89.4)
Other	1	(.6)
Marital Status		
Single	148	(92.5)
Married	5	(3.1)
Living with someone romantically in- volved with, but not married	7	(4.4)
Live at Home		
Yes	29	(18.1)
No	131	(81.9)
Live with Twin or Sibling		
Yes	24	(15.0)
No	136	(85.0)
Twin or Sibling Attending Same School		
Yes	40	(25.0)
No	120	(75.0)

^aThe average age of the entire sample was 20.5 years.

Table 3.2.--Demographic Information on the Sample by Twin Type

	Non-Twin		Twin Type		FSS Twin		FOS Twin	
	<u>n</u>	(%)	<u>n</u>	(%)	<u>n</u>	(%)	<u>n</u>	(%)
Age ^a								
18	8	(20.0)	3	(7.5)	5	(12.5)	5	(12.5)
19	9	(22.5)	10	(25.0)	11	(27.5)	9	(22.5)
20	5	(12.5)	9	(22.5)	8	(20.0)	4	(10.0)
21	4	(10.0)	7	(17.5)	8	(20.0)	12	(30.0)
22	5	(12.5)	8	(20.0)	2	(5.0)	4	(10.0)
23	4	(10.0)	1	(2.5)	2	(5.0)	4	(10.0)
24	2	(5.0)	0		1	(2.5)	0	
25	3	(7.5)	2	(5.0)	3	(7.5)	2	(5.0)
Race								
Black	7	(17.5)	4	(10.0)	3	(7.5)	2	(5.0)
White	33	(82.5)	36	(90.0)	37	(92.5)	37	(92.5)
Other	0		0		0		1	(2.5)

Table 3.2 (continued)

	Non-Twin		ID Twin		Twin Type		FOS Twin	
	n	(%)	n	(%)	n	(%)	n	(%)
Marital Status								
Single	36	(90.0)	37	(92.5)	36	(90.0)	39	(97.5)
Married	1	(2.5)	1	(2.5)	4	(10.0)	1	(2.5)
Living with someone romantically involved with, but not married	3	(7.5)	2	(5.0)	0		0	
Live at Home								
Yes	8	(20.0)	11	(27.5)	7	(17.5)	3	(7.5)
No	22	(80.0)	29	(72.5)	33	(82.5)	37	(92.5)
Live with Twin or Sibling								
Yes	1	(2.5)	14	(35.0)	6	(15.0)	3	(7.5)
No	39	(97.5)	26	(65.0)	34	(85.0)	37	(92.5)
Twin or Sibling Attending Same School								
Yes	4	(10.0)	19	(47.5)	9	(22.5)	8	(20.0)
No	36	(90.0)	21	(52.5)	31	(77.5)	32	(80.0)

^aThe average age of the non-twins was 20.6 years; the average age of ID twins was 20.4 years; the average age of FSS twins was 20.5 years; and the average age of FOS twins was 20.6 years.

meaning of the item, about one-third of the items were negatively worded. This wording was used so that persons with an acquiescence set did not obtain scores simply by their tendency to say "true" instead of "false" to any question put to them (Berg, 1967; Sundberg, 1977). It was decided to retain the same response format as that used by Maroda. Thus, a response of "one" indicated that the respondent found the item to be "completely true"; a response of "two" that the item was "mostly true"; a "three" that the item was "mostly false"; and a "four" that the item was "completely false."

A new form of the instrument, Form B (Appendix D), containing 100 items, was derived and administered to 211 college students during Summer Term, 1979, at Michigan State University. A background questionnaire (Appendix E) was also given with this instrument. An analysis of the data included the elimination of items which were not discriminating among individuals (for example, almost 100% of the sample answered the question, "I love to eat" with "completely true"), followed by a cluster analysis of the remaining items. The cluster analysis yielded five clusters (Appendix F), with measures of internal consistency ranging from .72 to .84 (Appendix G).

The first cluster, Individuation I-Past, with a standard score coefficient alpha of .75, is composed of items which reflect school attendance behaviors, stranger anxiety, and other indicators of separation-individuation. For example, included are "When I was in elementary school one of my parents would want to take me to school," and "From the very first day of kindergarten I enjoyed school and couldn't wait to go."

The second cluster, Individuation II - Present Status, with a standard score coefficient alpha of .84, is composed of items which concern current relationships with other people, including feelings of rejection, acceptance of others, guilt, dependence, and how independent a person perceives him-/herself to be. Included in this cluster, for example, are "I fear that I will be rejected by people I really care about if I express hostility toward them," and "I don't depend on others too much for my happiness."

The third cluster, Father Involvement, with a standard score coefficient alpha of .83, is an experimental cluster. There has been very little research on the impact of the father on the separation-individuation process, but the research on this subscale by Maroda (1979) provided some evidence that the father should not be ignored. This cluster includes, for example, the items "I am very close to my father," and "My father was deeply involved in the emotional life of our family."

The fourth cluster, Family Rivalry, with a standard score coefficient alpha of .72, contains items which reflect the relationships in the family unit. This subscale has the lowest coefficient alpha of all of the subscales. Included in this subscale are such items as "I have said terrible things to my mother," and "There was hardly any sibling rivalry in my family."

The final cluster, Body Image, with a standard score coefficient alpha of .74, contains a variety of self-descriptive items concerning a person's image of him-/herself. For example, the items, "I am not too fat or too thin," and "I think I am sexy" are in this cluster.

These five clusters contain a total of 60 items, and while it was originally thought that these 60 items could be taken, by themselves, and used as the new instrument, an examination of such an instrument revealed that it might have a negative impact on the subjects because most of the questions appeared to be "highly charged" emotional items. Therefore, the new form of the instrument, Form C (Appendix H), is composed of the same items that were used in Form B, with the following exceptions: (a) item 75, "I have never been shy," was eliminated because it was a duplicate of item 25 (an inadvertent error on the part of the researcher); (b) item 95 was changed from "I don't think I'm very attractive" to "I don't think I'm very attractive/handsome," thus eliminating the perceived sexual bias in the term "attractive"; (c) grammatical corrections were made in items 10, 33, 68, 70, 77, and 79. Thus, Form C contains 99 items and is quite similar to Form B.

For the scoring of the instrument, a format comparable to Maroda's (1979) was used. After reversing the values of the items which were negatively worded, the scores for each subscale were summed and then divided by the number of items on that particular subscale. Because a "one" or "two" response indicated that the item was "completely true" or "mostly true," respectively, a low score represents less separation-individuation than a high score.

Background Questionnaire

In designing the two background questionnaires, one for use with the twins and the other for use with the non-twins, an attempt was made to ask questions which could be used with both groups. Another consideration in the design of the questionnaire was length; while

more questions could have been asked, it was decided that three pages was a reasonable but maximum length.

Included on the Twin Background Questionnaire (Appendix I) were questions concerning basic demographic variables, such as age, race, and sex. Also included were questions concerning school attendance and fear of going to school, as these are indicators of problems in the separation-individuation process (Maroda, 1979). Questions about residence, dress, alliterative names, a secret language, closeness to the twin, and feelings about being a twin were also asked.

Zygoty was determined by inquiring about the sex of the twin (item 9), the similarities between the twins in eye color, body build, blood type, hair color, and hair texture (item 23), and a direct question concerning twin type (item 24). The questions asked were similar to those used by Claridge, Canter, & Hume (1973), who found that answers to such questions were consistent with medical tests used to determine zygoty, and were thus highly accurate in discriminating between identical and fraternal twins.

It is encouraging that even quite crude information about physical similarity allows zygoty to be determined with an acceptably low degree of error. Certainly the error, though not quantifiable, is likely to be so small as to have little material effect on the results of statistical studies of twins using reasonably large samples. (pp. 16-17).

Included on the Background Questionnaire (Appendix J), which was used for the non-twin sample, were the same questions concerning demographic variables and school attendance. The difference between this questionnaire and the Twin Background Questionnaire was that, instead of inquiring about dress, alliterative names, a secret language, and closeness to the twin, the same questions were asked

about the closest sibling. In addition, there were no parallel questions for non-twins about feelings of being a twin nor the physical resemblance to the twin.

Procedure

Originally, the questionnaires were to be individually administered, but with the large number of respondents this procedure was deemed unfeasible. Instead, when a twin called the researcher, the purpose and other details of the study were briefly explained; this explanation included that it was a study on twins; that there were two questionnaires to complete; that it involved about 20 to 30 minutes of time at any time within the next week; that there was to be a \$50.00 prize for one of the twins, selected at random, who participated in the study; and that responses were anonymous. At this point, twins were asked whether they were still interested (only one twin said no), and, if so, they were told that the forms would be mailed to them if they lived off campus, and placed in their dormitory mailbox if they lived on campus. Within the same or next day, the forms were placed in the mail or delivered to the dormitories. About one-half of the twins who called lived off campus, and the other half on campus.

Accompanying the questionnaires were a sheet of directions (Appendix K), including a note to call the researcher if the directions were not clear; an answer sheet; a self-addressed, stamped envelope in which to return the questionnaires; and a postcard to be returned to the researcher to provide feedback to the respondents. The separate mailing of the responses to the questionnaires and the postcard

ensured anonymity and, in addition, it enabled the researcher to contact those twins who had not completed the questionnaire within 10 days. If the forms were not returned within this period, twins were contacted and encouraged to respond if at all possible. However, this procedure was not necessary in most instances, and it was useful in that it enabled the researcher to ensure respondent receipt of the questionnaires.

Returned questionnaires were examined for completeness, and if they were incomplete, they were discarded. In addition, if the respondent was not in the predefined category of student and between the ages of 18 and 25, the form was not used. Then the response to the question concerning twin-type (item 24) on the background questionnaire was examined for appropriateness of response; contradictory information on this item (e.g., if the respondent had indicated that the twin was of the opposite sex, but had checked "identical" as twin-type) led to elimination of the form. Similarly, if the respondent indicated that the twin had differing eye color, body build, blood type, hair color, or texture of hair (item 23), but checked "identical" as twin-type, the form was discarded. Thus, only those identical twins who checked "yes" to all the criteria on the physical similarity items were included in the identical twin sample. Finally, if the twin indicated that he/she was "uncertain" as to twin-type (item 24), the form was discarded. The responses on the separation-individuation instrument were also examined for completeness; in general, if the respondent had left more than five questions unanswered, the form was discarded. The only exception to this was if the respondent had no father and was unable to answer the Father

subscale questions; these forms were included in the final sample. Forms that were consistently answered were then coded for twin type, and the responses for both questionnaires were placed on computer scoring sheets.

Analysis

This study involved four groups of subjects: 40 non-twins, 40 identical twins; 40 fraternal same-sex twins, and 40 fraternal opposite-sex twins. Separation-individuation was assessed using the separation-individuation instrument. Thus, the independent variable was twin-type, and the dependent variable was the score on the separation-individuation subscales.

Because there was a specific and limited number of hypotheses to be tested, with the comparisons being both a priori and orthogonal, the data were analyzed with the t-ratio. Each comparison was evaluated at the .05 level of significance, with the conceptual unit for the significance level being the individual comparison. Because the number of degrees of freedom associated with the MS error was sufficiently large, the tests of significance can, for all practical purposes, be regarded as independent (Kirk, 1968).

Hypotheses

H₀₁: No difference will be found in separation-individuation as measured by the separation-individuation instrument between non-twins and twins.

H_a₁: The non-twin mean score on a measure of separation-individuation will exceed that of twins.

Ho₂: No difference will be found in separation-individuation as measured by the separation-individuation instrument between fraternal and identical twins.

Ha₂: The fraternal twin mean score on a measure of separation-individuation will exceed that of identical twins.

Ho₃: No difference will be found in separation-individuation as measured by the separation-individuation instrument between fraternal opposite-sex and fraternal same-sex twins.

Ha₃: The fraternal opposite-sex twin mean score on a measure of separation-individuation will exceed that of fraternal same-sex twins.

Summary

In this study of separation-individuation, 40 non-twins, 40 identical twins, 40 fraternal same-sex twins, and 40 fraternal opposite-sex twins completed a separation-individuation instrument. All of the participants were college students between the ages of 18 and 25. The hypotheses were evaluated using planned orthogonal contrasts, and the results are discussed in the next chapter.

CHAPTER IV

RESULTS

This study was designed to (a) assess the extent of separation-individuation in twins as compared to non-twins, (b) assess the extent of separation-individuation in identical twins as compared to fraternal twins, and (c) assess the extent of separation-individuation in fraternal same-sex twins as compared to fraternal opposite-sex twins. In addition, based on the above design, the validity of the separation-individuation instrument itself was to be assessed.

The sample consisted of 40 non-twins, 40 identical twins, 40 fraternal same-sex twins, and 40 fraternal opposite-sex twins. Based on the literature review on twins, a set of three orthogonal planned comparisons was formulated to test the hypotheses; these hypotheses were tested using the t-ratio, with the probability of significance set at the .05 level.

The results of the three major hypotheses tested in this study, stated in the alternative form, follow. In the tables accompanying the results, the subscale Individuation I-Past was abbreviated to Past, the Individuation II-Present Status subscale was abbreviated to Present, and the Family Rivalry subscale was abbreviated to Rivalry. The reader is reminded that high mean scores on subscales indicate fewer difficulties in separation-individuation than low mean scores. The mean subscale scores on the separation-individuation instrument by twin-type are presented in Table 4.1.

Table. 4.1.--Cell Means and Standard Deviations by Twin-Type on the
Five Subscales of the Separation-Individuation Instrument

Subscale	<u>n</u>	Mean	S.D.
Past			
NT	39	2.8513	.3556
ID	40	2.9100	.3718
FSS	39	3.0308	.2820
FOS	40	2.9250	.3949
Present			
NT	40	2.5437	.3219
ID	40	2.3888	.3819
FSS	40	2.4487	.4017
FOS	40	2.4150	.4474
Father			
NT	40	2.9056	.4184
ID	40	2.8833	.6204
FSS	39	2.9031	.5181
FOS	38	3.8830	.5689
Rivalry			
NT	40	2.8361	.4173
ID	40	2.9889	.3448
FSS	39	2.8547	.3748
FOS	38	2.8830	.4791
Body Image			
NT	40	2.8893	.3291
ID	40	2.8786	.4311
FSS	40	2.8964	.3759
FOS	40	2.8571	.4970

Hypotheses TestsHa₁

The non-twin mean score on a measure of separation-individuation will exceed that of twins.

Out of the five subscales on the separation-individuation instrument, only one, Individuation II-Present Status, produced significant findings (Table 4.2). On this subscale, twins scored lower than the non-twins, indicating that twins were less separate and individuated than non-twins. On the remaining subscales, there were no differences between twins and non-twins. On two subscales, Individuation I-Past, and Family Rivalry, the mean of the twins exceeded that of the non-twins, although not significantly.

Ha₂

The fraternal twin mean score on a measure of separation-individuation will exceed that of identical twins.

No significant differences were found between identical and fraternal twins on any of the five subscales (Table 4.3). On four of the five subscales, the means were in the predicted direction, i.e., identical mean scores were below fraternal mean scores, but this was not true on one subscale, Family Rivalry.

Ha₃

The fraternal opposite-sex twin mean score on a measure of separation-individuation will exceed that of fraternal same-sex twins.

Comparisons between fraternal same-sex and fraternal opposite-sex twins revealed no significant differences on any of the five subscales (Table 4.4). On four of the five subscales, fraternal

Table 4.2.--Cell Means and Tests of Significance of Differences
between Non-twins (NT) and Twins (T) on the Separation-
Individuation Instrument

Subscale	<u>n</u>	Mean	<u>MS</u> _w	<u>df</u>	<u>t</u>
Past					
NT	39	2.8513	.1253	154	-1.592
T	119	2.9546			
Present					
NT	40	2.5437	.1527	156	1.769*
T	120	2.4175			
Father					
NT	40	2.9056	.2877	153	.160
T	117	2.8898			
Rivalry					
NT	40	2.8361	.1651	153	- .978
T	117	2.9098			
Body Image					
NT	40	2.8893	.1706	156	.158
T	120	2.8773			

* $p < .05$

Table 4.3.--Cell Means and Tests of Significance of Differences
between Identical Twins (ID) and Fraternal Twins (F)
on the Separation-Individuation Instrument

<u>Subscale</u>	<u>n</u>	<u>Mean</u>	<u>MS_W</u>	<u>df</u>	<u>t</u>
Past					
ID	40	2.9100	.1249	116	.990
F	79	2.9772			
Present					
ID	40	2.3888	.1691	117	.542
F	80	2.4318			
Father					
ID	40	2.8833	.3262	114	.088
F	77	2.8931			
Rivalry					
ID	40	2.9889	.1620	114	-1.530
F	77	2.8687			
Body Image					
ID	40	2.8786	.1914	117	.021
F	80	2.8768			

Table 4.4.--Cell Means and Tests of Significance of Differences
between Fraternal Same-Sex Twins (FSS) and Fraternal
Opposite-Sex Twins (FOS) on the Separation-Individuation
Instrument

Subscale	n	Mean	MS _w	df	t
Past					
FSS	39	3.0308	.1182	77	-1.370
FOS	40	2.9250			
Present					
FSS	40	2.4487	.1807	78	- .355
FOS	40	2.4150			
Father					
FSS	39	2.9031	.2957	75	- .162
FOS	38	2.8830			
Rivalry					
FSS	39	2.8547	.1844	75	.290
FOS	38	2.8830			
Body Image					
FSS	40	2.8964	.1941	78	- .399
FOS	40	2.8571			

same-sex mean scores exceeded fraternal opposite-sex mean scores, but on the Family Rivalry subscale, the reverse was true, i.e., the mean was in the predicted direction.

Overall, out of the 15 comparisons, only one, twins as compared to non-twins on the Individuation II-Present Status, was significant.

Additional Results

In addition to the exploration of differences in separation-individuation that exist between non-twins and twins, it will be recalled that a purpose of this study was to investigate the validity of the separation-individuation instrument. While no formal hypotheses concerning the validity were formulated, questions were included on the background questionnaire which would help to assist in the evaluation of the validity of the instrument. The data were analyzed using a one-way analysis of variance, with the probability of significance set at the .05 level. The comparisons between groups in this section do not concern differences between twins and non-twins, but between groups delineated on the basis of differences in school attendance, sex, residence with the twin or closest sibling, and other variables.

The first comparison involved respondents who reported fear of going to school as a child as opposed to those who did not report fear of going to school as a child. Based on the findings of Maroda (1979), this researcher would predict that those who were afraid to go to school as a child would score significantly lower on the instrument subscales than those who were not afraid to go to school as a child, as fear of going to school appears to be one of the initial indicators

of possible separation-individuation difficulties. While the mean subscale scores were in the predicted direction on the Father and Family Rivalry subscales, they were not significantly different from each other (Table 4.5 and Table 4.6). The results of the analysis of variance showed that the expected results occurred on three of the five subscales, including Individuation I-Past, Individuation II-Present, and Body Image.

The second question which provided information on the validity of the instrument concerned frequency of absence from school. On the basis of Maroda's (1979) findings, this researcher predicted that those who missed school more often than most children would score significantly lower on the instrument than those who missed school less often than most children. While the original intention was to compare these two groups, there were few respondents ($n = 7$) who reported missing school more often than most children. Thus, it was decided to merge the "more often" and "average amount" groups and to compare this group to the "less often" group. The means for Individuation II-Present, Father, and Family Rivalry subscales were in the predicted direction, but were not significantly different (Table 4.7 and Table 4.8). The analysis of variance revealed that only the Individuation I-Past subscale was significant.

A third analysis of variance involved the sex of the participants. Maroda (1979) found some evidence that females had more difficulties with separation-individuation than did males. In this study, however, this was not found to be the case except on the Family Rivalry subscale, in which the male mean score exceeded the female mean score (Table 4.9 and Table 4.10). (A two-way analysis of variance

Table 4.5.--Cell Means and Standard Deviations for All Subjects on
the Five Subscales of the Separation-Individuation
Instrument on the Variable of Childhood Fear of Going
to School

Twin Background Questionnaire Item 7/Background Questionnaire Item 7:				
"There were times when I was afraid to go to school as a child:				
	<div> <div>—</div> <div>Yes</div> </div> <div> <div>—</div> <div>No"</div> </div>			
<u>Subscale</u>	<u>n</u>	<u>Mean</u>	<u>Standard Deviation</u>	
Past				
Yes	42	2.6159	.2911	
No	116	3.0425	.3074	
Present				
Yes	44	2.3057	.4092	
No	116	2.5034	.3722	
Father				
Yes	43	2.8191	.5582	
No	114	2.9220	.5205	
Rivalry				
Yes	44	2.8409	.4649	
No	113	2.9105	.3823	
Body Image				
Yes	44	2.7078	.4280	
No	116	2.9458	.3841	

Table 4.6.--Analysis of Variance on Childhood Fear of Going to School as a Child for All Subjects on the Five Subscales of the Separation-Individuation Instrument

<u>Subscale</u>					
Past					
	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
	Between	5.6131	1	5.6131	61.0650**
	Within	14.3396	156	.0919	
Present					
	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
	Between	1.2477	1	1.2477	8.5228*
	Within	23.1297	158	.1464	
Father					
	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
	Between	.3306	1	.3306	1.1727
	Within	43.7025	155	.2819	
Rivalry					
	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
	Between	.1535	1	.1535	.9270
	Within	25.6606	155	.1656	
Body Image					
	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
	Between	1.8073	1	1.8073	11.4949**
	Within	24.8412	158	.1572	

*p < .005

**p < .001

Table 4.7.--Cell Means and Standard Deviations for All Subjects on the
Five Subscales of the Separation-Individuation Instrument
on the Variable of Missed School as a Child

Twin Background Questionnaire Item 8/Background Questionnaire Item 8:			
"As a child I missed school: __ less often than most children.			
__ an average amount.			
__ more often than most children."			
	<u>n</u>	<u>Mean</u>	<u>S.D.</u>
<u>Subscale</u>			
Past			
Less often	105	2.9879	.3241
Average/more often	53	2.8126	.3909
Present			
Less often	107	2.4607	.4063
Average/more often	53	2.4255	.3626
Father			
Less often	104	2.9017	.5119
Average/more often	53	2.8784	.5721
Rivalry			
Less often	104	2.9049	.3844
Average/more often	53	2.8637	.4501
Body Image			
Less often	107	2.8785	.4413
Average/more often	53	2.8841	.3397

Table 4.8.--Analysis of Variance on Missed School as a Child for All Subjects on the Five Subscale of the Separation-Individuation Instrument

	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
<u>Subscale</u>					
Past	Between	1.0831	1	1.0831	8.954*
	Within	18.8697	156	.1210	
Present	Between	.0441	1	.0441	.286
	Within	24.3333	158	.1540	
Father	Between	.0191	1	.0191	.067
	Within	44.0141	155	.2840	
Rivalry	Between	.0595	1	.0595	.358
	Within	25.7546	155	.1662	
Body Image	Between	.0011	1	.0011	.007
	Within	26.6474	158	.1687	

p < .005

Table 4.9.--Cell Means and Standard Deviations for All Subjects on the Five Subscales of the Separation-Individuation Instrument on the Variable of Sex

<u>Subscale</u>	<u>n</u>	<u>Mean</u>	<u>S.D.</u>
Past			
Female	80	2.9009	.3632
Male	78	2.9567	.3499
Present			
Female	80	2.4325	.3982
Male	80	2.4656	.3866
Father			
Female	79	2.9128	.5592
Male	78	2.8746	.5044
Rivalry			
Female	80	2.8264	.4305
Male	77	2.9582	.3716
Body Image			
Female	80	2.8857	.4107
Male	80	2.8750	.4106

Table 4.10.--Analysis of Variance on Sex for All Subjects on the
Five Subscales of the Separation-Individuation Instrument

	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
<u>Subscale</u>					
Past					
	Between	.1230	1	.1230	.9678
	Within	19.8297	156	.1271	
Present					
	Between	.0439	1	.0439	.2850
	Within	24.3335	158	.1540	
Father					
	Between	.0571	1	.0571	.2014
	Within	43.9760	155	.2837	
Rivalry					
	Between	.6812	1	.6812	4.2011*
	Within	25.1329	155	.1621	
Body Image					
	Between	.0046	1	.0046	.0272
	Within	26.6439	158	.1686	

p < .05

revealed no interaction between twin-type and sex on any of the five subscales of the separation-individuation instrument.)

Further analyses of the data were based on other comparisons of groups delineated on the basis of responses on the background questionnaire. It was found that separation-individuation was not related to (a) residence with the twin or closest sibling, (b) attendance at the same school with the twin or closest sibling, (c) parental emphasis of similarities or differences between the twins, (d) alliterative names, (e) a secret language between the twins, or (f) dressing alike in elementary or high school. While it had been planned to compare those groups who rated themselves "not close at all" to their twin or closest sibling to those who rated themselves "extremely close" to their twin or closest sibling, none of the respondents rated themselves as "not close at all" on the seven-point scale that was utilized to measure closeness. Because of the low number of respondents who rated themselves as somewhat less than "moderately close," it was necessary to compare those who rated themselves "extremely close" (a "seven" on the seven-point scale) to those who rated themselves less than "moderately close" (a "two," "three," or "four" on the seven-point scale). Using these two criterion groups, it was found that separation-individuation was not related to rated closeness to the twin or closest sibling. However, comparison of those who dressed alike currently to those who never dressed alike currently revealed a significant difference on the Individuation I-Past subscale (Table 4.11 and Table 4.12).

Table 4.11.--Cell Means and Standard Deviations for All Subjects on the
Past Subscale of the Separation-Individuation Instrument

Twin Background Questionnaire Item 17/Background Questionnaire Item 16:

"Currently, my twin/closest sibling and I dress alike:

___ Almost always

___ Frequently

___ Sometimes

___ Hardly ever

___ Never"

<u>Subscale</u>	<u>n</u>	<u>Mean</u>	<u>S.D.</u>
Past			
Almost always, frequently, sometime, hardly ever	44	2.8288	.3302
Never	114	2.9678	.3601

Table 4.12.--Analysis of Variance on Currently Dressing Alike for all
Subjects on the Past Subscale of the Separation-
Individuation Instrument

	<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
<u>Subscale</u>					
Past	Between	.6138	1	.6138	4.951*
	Within	19.3389	156	.1240	

*p < .05

Descriptive Material on Twins and Non-Twins

The remainder of this chapter concerns the frequency of responses to various items on the background questionnaires that were asked to investigate similarities and differences between twins and non-twins. The responses to questions that were asked of both twins and non-twins will be discussed first, and then the responses to the questions that were asked of only the twin sample will be examined.

Frequency of Alliterative Names

In chapter two, it was noted that twins are frequently given alliterative names to emphasize their twin status, and both the twin and non-twin sample were asked whether they had alliterative names. About 65% of the twins had alliterative names, and 20% of the non-twins reported having alliterative names (Table 4.13). Overall, about 66% of the female twins and 50% of the male twins reported having alliterative names.

Frequency of Dressing Alike

Another method to emphasize the twin relationship is to dress like the twin, and twins and non-twins were asked about their frequency of dressing alike in elementary school, high school, and currently. In elementary school, neither the non-twins nor the fraternal opposite-sex twins always dressed alike, and only 15% of the identical and 20% of the fraternal same-sex twins always dressed alike (Table 4.14). About 70% of both the non-twins and fraternal opposite-sex twins never dressed alike. About 10% of the male twins and 25% of female twins reported always dressing alike, while about 28% of both male and female twins never dressed alike.

Table 4.13.--Frequency of Alliterative Names by Twin-Type and Sex

Twin Background Questionnaire Item 14/Background Questionnaire Item 13:
 "My twin/closest sibling and I have twin-type or alliterative names
 (for example, Jill and Jane, Judy and Jack, or Robert and Ronald):

___ Yes

___ No"

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>(%)</u>
<u>Non-twin</u>				
Yes	5	3	8	(20.0)
No	15	17	32	(80.0)
<u>Identical twin</u>				
Yes	9	14	23	(57.5)
No	11	6	17	(42.5)
<u>Fraternal same-sex twin</u>				
Yes	11	13	24	(60.0)
No	9	7	16	(40.0)
<u>Fraternal opposite-sex twin</u>				
Yes	9	13	22	(55.0)
No	11	7	18	(45.0)

Table 4.14.--Frequency of Dressing Alike in Elementary School by
Twin-Type and Sex

Twin Background Questionnaire Item 15/Background Questionnaire Item 14:
"During elementary school, my twin/closest sibling and I were dressed
alike: _____ Almost always

_____ Frequently
_____ Sometimes
_____ Hardly ever
_____ Never"

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>(%)</u>
<u>Non-twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	2	2	(5.0)
Sometimes	3	1	4	(10.0)
Hardly ever	4	1	5	(12.5)
Never	13	16	29	(72.5)
<u>Identical twin</u>				
Almost always	2	4	6	(15.0)
Frequently	4	4	8	(20.0)
Sometimes	7	5	12	(30.0)
Hardly ever	3	6	9	(22.5)
Never	4	1	5	(12.5)
<u>Fraternal same-sex twin</u>				
Almost always	2	6	8	(20.0)
Frequently	3	6	9	(22.5)
Sometimes	7	3	10	(25.0)
Hardly ever	7	5	12	(30.0)
Never	1	0	1	(2.5)
<u>Fraternal opposite-sex twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	0	0	(.0)
Sometimes	1	1	2	(5.0)
Hardly ever	7	3	10	(25.0)
Never	12	16	28	(70.0)

In high school, most twins were not dressing alike; only one of the identical female twins always dressed like her twin (Table 4.15). Slightly more than 80% of the non-twins and fraternal opposite-sex twins never dressed alike, while about 30% of the identical and fraternal same-sex twins hardly ever dressed alike. About 60% of male twins and 70% of female twins reported never dressing alike.

At the time of this study, there was only one twin, an identical female, who reported always dressing like her twin (Table 4.16). The dressing patterns appeared to be quite similar between the four groups, with about 75% of both male and female twins reporting never dressing alike.

Initially, then, the dressing patterns of identical and fraternal same-sex twins resembled each other, and those of the non-twins and fraternal opposite-sex twins resembled each other. With time, however, all four groups of twins came to resemble one another in their dressing patterns, with most of the non-twins and twins not dressing like their closest sibling or twin.

Frequency of a Secret Language

In chapter two, it was reported that unique communication patterns, or a secret language, may develop between twin pairs. In this study, 60% of the identical twins reported the existence of a secret language with their twin (Table 4.17). This was a considerably higher incidence than that reported by fraternal same-sex twins (28%), which was in turn higher than that reported by fraternal opposite-sex twins (12%). A secret language appeared to be about as common among male twins as among female twins.

Table 4.15.--Frequency of Dressing Alike in High School by Twin-
Type and Sex

Twin Background Questionnaire Item 16/Background Questionnaire Item 15:
"During high school, my twin/closest sibling and I dressed alike:

___ Almost always
___ Frequently
___ Sometimes
___ Hardly ever
___ Never"

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>(%)</u>
<u>Non-twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	0	0	(.0)
Sometimes	3	0	3	(7.5)
Hardly ever	1	3	4	(10.0)
Never	16	17	33	(82.5)
<u>Identical twin</u>				
Almost always	0	1	1	(2.5)
Frequently	1	0	1	(2.5)
Sometimes	2	1	3	(7.5)
Hardly ever	7	5	12	(30.0)
Never	10	13	23	(57.5)
<u>Fraternal same-sex twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	0	0	(.0)
Sometimes	2	4	6	(15.0)
Hardly ever	9	4	13	(32.5)
Never	9	12	21	(52.5)
<u>Fraternal opposite-sex twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	0	0	(.0)
Sometimes	0	1	1	(2.5)
Hardly ever	3	2	5	(12.5)
Never	17	17	34	(85.0)

Table 4.16.--Frequency of Currently Dressing Alike by Twin-Type and Sex

Twin Background Questionnaire 17/Background Questionnaire Item 16:

"Currently, my twin/closest sibling and I dress alike:

- ☐ Almost always
☐ Frequently
☐ Sometimes
☐ Hardly ever
☐ Never"

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>(%)</u>
<u>Non-twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	4	4	(10.0)
Sometimes	4	3	7	(17.5)
Hardly ever	2	1	3	(7.5)
Never	14	12	26	(65.0)
<u>Identical twin</u>				
Almost always	0	1	1	(2.5)
Frequently	0	0	0	(.0)
Sometimes	3	2	5	(12.5)
Hardly ever	3	2	5	(12.5)
Never	14	15	29	(72.5)
<u>Fraternal same-sex twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	0	0	(.0)
Sometimes	1	0	1	(2.5)
Hardly ever	5	6	11	(27.5)
Never	14	14	28	(70.0)
<u>Fraternal opposite-sex twin</u>				
Almost always	0	0	0	(.0)
Frequently	0	0	0	(.0)
Sometimes	0	2	2	(5.0)
Hardly ever	2	2	4	(10.0)
Never	18	16	34	(85.0)

Table 4.17.--Frequency of a Secret Language by Twin-type and Sex

Twin Background Questionnaire Item 18/Background Questionnaire Item 17:
 "As youngsters, my twin/closest sibling and I had our own secret
 language which others could not understand:

___ Yes
 ___ No

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>(%)</u>
<u>Non-twin</u>				
Yes	1	1	2	(5.0)
No	19	19	38	(95.0)
<u>Identical twin</u>				
Yes	14	10	24	(60.0)
No	6	10	16	(40.0)
<u>Fraternal same-sex twin</u>				
Yes	6	5	11	(27.5)
No	14	15	29	(72.5)
<u>Fraternal opposite-sex twin</u>				
Yes	1	4	5	(12.5)
No	19	16	35	(87.5)

Closeness to the Parents

In chapter two, it was stated that some twins are "split" between the two parents, either because of a parental preference for one twin over the other, or because one twin claims or appropriates the mother, and the other the father. To determine the extent of the frequency of this occurrence, both twins and non-twins were asked which parent they were closer to, and which parent their twin or closest sibling was closer to. It was found that for about 75% of the twins, both members of a twin pair were closer to the same parent, with most being closer to their mother (Table 4.18). This was also true of the non-twin sample. The splitting of the parents occurred least frequently in the case of identical twins: only six identical twins reported instances in which one twin was closer to the mother and the other to the father, or vice versa.

Closeness between Twins and Non-Twins

In the discussion of the intertwin relationship, it was seen that there appeared to be varying degrees of closeness between twins, and between twins and non-twins. Both the twin and non-twin samples were asked to rate their closeness to each other on a 7-point scale, with "one" indicating "not close at all," a "four" indicating "moderately close," and a "seven" indicating "extremely close." The entire sample, both twins and non-twins, rated themselves, on the average, as being more than "moderately close." In order of closeness, the identical twins rated themselves as being closest, followed by fraternal same-sex twins, fraternal opposite-sex twins, and non-twins (Table 4.19). An analysis of variance by rating of closeness, followed by post hoc

Table 4.18.--Frequency of Closeness to the Same or Different Parent
by Twin-Type

Twin Background Questionnaire Items 19 & 20/Background Questionnaire
Items 18 & 19: "I am closer to (choose only one):

___ My mother
___ My father

My twin/closest sibling is closer to (choose only one):

___ My mother
___ My father"

<u>Group</u>	<u>n</u>
NT	
Both closer to same parent	24
Mother (20)	
Father (4)	
Each closer to different parent	11
ID	
Both closer to same parent	32
Mother (26)	
Father (6)	
Each closer to different parent	6
FSS	
Both closer to same parent	30
Mother (23)	
Father (7)	
Each closer to different parent	10
FOS	
Both closer to same parent	24
Mother (19)	
Father (5)	
Each closer to different parent	11

Table 4.19.--Cell Means and Standard Deviations on the Variable of Closeness to the Twin/Closest Sibling at the Present Time by Twin-Type

Twin Background Questionnaire Item 21/Background Questionnaire Item 20:
 "How would you rate your closeness to your twin/closest sibling at the present time on the following scale? Put an "X" on the line below that indicates how close you are."

<u>Group</u>	<u>Mean</u>	<u>S.D.</u>
NT	4.91	1.29
ID	6.05	1.10
FSS	5.96	1.17
FOS	5.35	1.34

comparisons, revealed that non-twins rated themselves as being significantly less closer to each other than did identical twins.

By sex and twin-type, female twins reported themselves as being closer to each other than did male twins (Table 4.20), with the degree of closeness ranging from about 5 to 6.5. A two-way analysis of variance, followed by post hoc comparisons, showed that identical females rated themselves as being significantly closer to each other than did non-twin males, non-twin females, and fraternal opposite-sex males.

On the basis of closeness, it seems as if there are three distinct groups: the first includes non-twin males, non-twin females, and fraternal opposite-sex males; the second includes fraternal same-sex males, identical males, fraternal same-sex females, and fraternal opposite-sex females; the third includes, in a class all by themselves, identical females.

Table 4.20.--Cell Means and Standard Deviations on the Variable of
Closeness to the Twin/Closest Sibling at the Present Time
by Twin-Type and Sex

Twin Background Questionnaire Item 21/Background Questionnaire Item 20:
"How would you rate your closeness to your twin/closest sibling at the
present time on the following scale? Put an "X" on the line below
that indicates how close you are."

<u>Group</u>	<u>Mean</u>	<u>S.D.</u>
NT-Male	4.90	1.32
NT-Female	4.92	1.28
FOS-Male	4.93	1.45
FSS-Male	5.54	1.14
ID-Male	5.60	1.27
FSS-Female	5.66	1.24
FOS-Female	5.77	1.10
ID-Female	6.49	.69

Parental Emphasis of Similarities or Differences between Twins

It was reported in chapter two that parents of twins may emphasize the similarities between their twins, which in turn encourages the development of a unit identity. On the background questionnaire, the twins were asked whether their parents had emphasized the similarities or differences between the twins when they were young. About 50% of the twins reported that their parents had not emphasized the similarities or differences between them (Table 4.21). Excluding this response, most twins stated that their parents had emphasized the differences rather than the similarities between them and their twin.

Table 4.21.--Frequency of Parental Emphasis of Similarities or Differences between Twins by Twin-Type

Twin Background Questionnaire Item 13:					
"When I was young, my parents (please check one of the following):					
<input type="checkbox"/>	Emphasized the similarities between me and my twin.				
<input type="checkbox"/>	Emphasized the differences between me and my twin.				
<input type="checkbox"/>	Neither of the above.				
<input type="checkbox"/>	I don't recall."				
	<u>ID</u>	<u>FSS</u>	<u>FOS</u>	<u>Total</u>	<u>(%)</u>
Emphasized similarities	7	5	3	15	(12.5)
Emphasized differences	9	19	7	35	(29.2)
Neither of the above	22	13	24	59	(49.2)
Don't recall	2	3	6	11	(9.2)

Feelings about Being a Twin

In the last question asked of twins, they were asked to check whether or not various statements concerning feelings of being a twin applied to them when they were in elementary school. For the total twin sample, the response checked most frequently, by 65% of the sample (Table 4.22), was that they liked some things about being a twin, but not others (response 5). The next three highest responses that were checked reflected positive feelings about being a twin: It was enjoyable to share things with the twin (response 7), the twin was the best friend (response 8), and the twin relationship offered a closeness not to be found in any other relationship (response 9). Only 14% of the sample felt too competitive with the twin (response 10), and less than 1% thought that being a twin was boring or annoying (response 1).

Table 4.22.--Frequency of Feelings Concerning Being a Twin for the
Total Twin Sample

Twin Background Questionnaire Item 22:		
"The following statements may or may not describe how you felt about being a twin when you were in elementary school. Please put a check in front of those statements which applied to the way you felt."		
	<u>n</u>	<u>(%)</u>
1. I thought that being a twin was a real drag.	2	(0.2)
2. I got tired of the comparisons that were made between my twin and me (for example, comparisons of physical characteristics, athletic ability, or academic achievement).	58	(48.3)
3. I was indifferent to being a twin; it didn't affect me one way or the other.	39	(32.5)
4. I felt that I had to do better or achieve more than my twin.	32	(26.7)
5. I liked some things about being a twin, but not others.	78	(65.0)
6. I resented sharing things with my twin (for example, gifts, time, toys, friends, and parents).	22	(18.3)
7. I liked sharing things with my twin.	67	(55.8)
8. My twin was my best friend; she/he understood me most.	67	(55.8)
9. I enjoyed being a twin; it offered a closeness that could not be found in any other relationship.	69	(57.5)
10. I felt too competitive with my twin.	17	(14.2)
11. I liked the competition between my twin and me because it encouraged both of us to do well.	34	(28.3)

Turning to the responses to these same questions by twin-type, it was found that the ambivalence (response 5) about being a twin was comparable between the groups (Table 4.23). This was the most frequently checked response by the fraternal opposite-sex twins, while fraternal same-sex twins most frequently checked that they got tired of the comparisons that were made between them and their twin (response 2). For identical twins, the most frequently checked response was that the twin was the best friend and the one who understood them the most (response 8).

More than half of the identical twins stated that they enjoyed being a twin (response 9), but they also stated that they got tired of the comparisons made between them and their twin (response 2). They stated less frequently than the other two groups that they felt that they had to do better or achieve more than their twin (response 4), and that they found their relationship with their twin too competitive (response 10). In fact, identical twins responded more frequently than did the other two groups that they enjoyed the competition with their twin because it encouraged both of them to do well (response 11).

Fraternal same-sex twins, in addition to stating that they tired of the comparisons, also stated more frequently than the other two groups that they felt that they had to do better or achieve more than their twin (response 4), and that they felt too competitive with their twin (response 10). On the other hand, however, about half of them liked sharing things with their twin (response 7), and enjoyed being a twin (response 9).

About half of the fraternal opposite-sex twins stated that they were indifferent to being a twin (response 3), that they liked sharing

Table 4.23.--Frequency of Feelings Concerning Being a Twin by
Twin-Type

Twin Background Questionnaire Item 22: "The following statements may or may not describe how you felt about being a twin when you were in elementary school. Please put a check in front of those statements which applied to the way you felt."			
	<u>ID</u>	<u>FSS</u>	<u>FOS</u>
1. I thought that being a twin was a real drag.	1	0	1
2. I got tired of the comparisons that were made between my twin and me (for example, comparisons of physical characteristics, athletic ability, or academic achievement).	21	27	10
3. I was indifferent to being a twin; it didn't affect me one way or the other.	13	7	19
4. I felt that I had to do better or achieve more than my twin.	8	13	11
5. I liked some things about being a twin, but not others.	30	26	22
6. I resented sharing things with my twin (for example, gifts, time, toys, friends, and parents).	8	8	6
7. I liked sharing things with my twin.	21	26	20
8. My twin was my best friend: she/he understood me most.	32	24	11
9. I enjoyed being a twin; it offered a closeness that could not be found in any other relationship.	25	25	19
10. I felt too competitive with my twin.	2	11	4
11. I liked the competition between my twin and me because it encouraged both of us to do well.	15	13	6

things with their twin (response 7), and that they enjoyed being a twin (response 9). Compared to other groups, they stated less frequently that their twin was their best friend (response 8) and that they liked the competition with their twin (response 11).

Summary

In this study of separation-individuation, the comparisons between (a) identical and fraternal twin mean scores on the five subscales of the separation-individuation instrument, and (b) fraternal same-sex and fraternal opposite-sex twin mean scores on the five subscales of the separation-individuation instrument, were not significant. However, comparisons between non-twin and twin mean scores on the five subscales revealed a significant difference on the Individuation II-Present subscale, indicating a difference between twins and non-twins in the areas of dependency, jealousy, and guilt. On the other four subscales, there were no significant differences.

The additional results provided some substantiation for the validity of the separation-individuation instrument used in this study. The mean scores on the Individuation I-Past, Individuation II-Present, and Body Image subscales were significantly different between those who reported being afraid to go to school as a child as compared to those who did not report being afraid to go to school as a child. In addition, mean scores on the Individuation I-Past subscale were significantly different between those who reported missing school an average amount or more often than most children as compared to those who reported missing school less often than most children.

The mean rating of closeness with the twin or closest sibling was in the order of, from high to low, identical twins, fraternal same-sex

twins, fraternal opposite-sex twins, and non-twins. Female twins rated themselves as being closer than male twins. An analysis of variance with post hoc comparisons revealed that non-twins, both male and female, and fraternal opposite-sex males, were significantly less close than identical female twins.

These and other findings of this study will be explored in more detail in the discussion which follows in the next chapter.

CHAPTER V

SUMMARY AND CONCLUSIONS

In this chapter, the study on separation-individuation in twins is summarized, and there is a discussion of the theory in relationship to the findings, including an examination of the limitations of the study. Finally, the implications for future research, and the implications of the findings for counseling practice are explored.

Summary

The purpose of this study was to assess separation-individuation between twins and non-twins, and to validate a revised objective measure of separation-individuation. It was postulated that significant differences between twins and non-twins, and between differing twin-types, would provide evidence for the validity of the test itself, and enlarge the field of knowledge concerning adult twins.

The sample in this study included 40 non-twins, 40 identical twins, 40 fraternal same-sex twins, and 40 fraternal opposite-sex twins. All of the participants in this study were volunteers, college students, and between the ages of 18 and 25. Each completed the separation-individuation instrument and a background questionnaire. The separation-individuation instrument consisted of five subscales, which had been derived from a previous administration of the instrument to 211 college-age students. The measure of internal consistency for each subscale, or

standard score alpha coefficients, was as follows:

Individuation I-Past	.75
Individuation II-Present	.84
Father	.83
Family Rivalry	.72
Body Image	.74

The data were analyzed with a t-ratio of planned orthogonal comparisons, with the probability of significance set at the .05 level. A summary of the results is provided in Table 5.1. Analyses of variance of comparisons based on (a) those who were afraid to go to school as a child, as compared to those who were not, and (b) those who were absent from school an average amount or more often than most children, as compared to those who were absent less often than most children, provided some support for the validity of three of the five subscales, including Individuation I-Past, Individuation II-Present, and Body Image. Further analyses of the data revealed that separation-individuation was not related to (a) residence with the twin, (b) attendance at the same school with the twin, (c) parental emphasis of the similarities or differences between the twins, (d) alliterative names, (e) a secret language between the twins, (f) rated closeness to the twin, or (g) dressing alike in elementary or high school. However, comparison of those who dressed alike currently to those who never dressed alike currently revealed a significant difference on the Individuation I-Past subscale.

Discussion

The discussion which follows will be centered around three major areas involved in this study. Included are the theory on which the

Table 5.1.--Summary of Significant Findings

Comparison	Subscale	Significance Level
Twins v. Non-Twins	Past	N.S.
	Present	$p < .05$
	Father	N.S.
	Rivalry	N.S.
	Body Image	N.S.
Identicals v. Fraternal	Past	N.S.
	Present	N.S.
	Father	N.S.
	Rivalry	N.S.
	Body Image	N.S.
Fraternal Same-Sex v. Fraternal Opposite-Sex	Past	N.S.
	Present	N.S.
	Father	N.S.
	Rivalry	N.S.
	Body Image	N.S.

study was based, the sample utilized in this study, the instrument used to assess separation-individuation, and the limitations of each.

As previously stated in the review of the literature, most of the conclusions regarding the intertwin relationship, and the separation-individuation process as it relates to twins, are based on twins who are in psychotherapy or undergoing psychoanalysis. While most of these researchers utilized adult twins, thus making their findings germane to this study, they utilized twins who were not necessarily representative of twins in general. On the other hand, those researchers who utilized "normal twins" in their studies had as their primary samples, with the exception of Husén's (1959) study in Sweden, young twins. Thus, a relative gap was left in the material available on "normal" adult twins, which was one of the reasons this study was undertaken.

On the whole, the authors of the case-study material concluded that the twin relationship was unique because of the presence, from birth, of another individual in the same developmental phase. This factor alone, at least theoretically, can lead to separation-individuation problems in twins, because of the necessity of not only separating and individuating from the mother (which all children must do for successful and normal development), but from the twin as well.

In the review of the material concerning parental reactions to twins, it was found that parents tended to emphasize the similarities between the twins, and that frequent splitting of the parents occurred, in which one twin appropriated the mother, and the other the father. However, in this study, about 50% of the twins stated that their parents did not emphasize either the similarities or the differences between

them and their twin. The next most frequent response, given by about 30% of the sample, was that the parents emphasized the differences between them and their twin, and only 12% stated that their parents emphasized the similarities. Concerning the issue of the splitting of the parents, three-quarters of the twin sample reported that they were both closer to the same parent, usually the mother. Furthermore, the responses of the non-twins resembled those of twins quite strongly, with the exception of identical twins, who reported a somewhat lower incidence of the splitting of the parents, as compared to the rest of the sample. Both the parental emphasis of similarities and the splitting of the parents are thought to contribute to separation-individuation problems, and that both occurred with relatively low frequency in this study may have contributed to the lack of significant differences, for the most part, between twins and non-twins, and among twins.

In the review of the material concerning the intertwin relationship, it was stated that dressing twins alike could also contribute to the difficulties in separation-individuation. While most identical and fraternal same-sex twins dressed alike in elementary school (most fraternal opposite-sex twins did not), by the time they reached high school, the majority of them did not. As a matter of fact, at the time the study was conducted, a slightly higher percentage of non-twins were dressing like their closest sibling, as compared to the percentage of twins who were dressing like each other. This, again, may have contributed to the finding of insignificant differences between the groups.

On the other hand, there were some notable differences between twins and non-twins in this study. About 58% of the twins in this study had alliterative names; this figure is somewhat higher than that

reported by Scheinfeld (1967) in his informal survey of twins. Also, about 60% of the identical twins, 28% of the fraternal same-sex twins, and 12% of the fraternal opposite-sex twins reported having a secret language between them and their twin when they were young. While Lézine (1951), Leonard (1961), and Zazzo (1978) have commented on the potential detrimental consequences of alliterative names and a secret language, as they may contribute to identity confusion and lack of separateness, it appears as if the twins in this study may have overcome these detrimental effects as they matured. A rather select sample was used in this study, i.e., all participants were college students, and perhaps this group of twins was able to overcome any handicaps associated with these variables. Perhaps study of twins with less educational background would reveal that this is not always the case.

An examination of the ratings of closeness between the twins, and of the non-twins to their closest sibling, revealed that most, on the average, saw themselves as being more than moderately close. There was a distinct pattern, as was found by Koch (1966), Shields (1954), and von Bracken (1934), with twins being closer than non-twins, and among the twins, identicals rated themselves as being closer than fraternal same-sex twins, who in turn rated themselves as being closer than fraternal opposite-sex twins. The female twins rated themselves as being closer to their co-twin than did male twins. However, the separation-individuation subscale scores were not significantly different from each other by twin rating of closeness. Perhaps the measure of closeness was too crude; a rating of closeness determined by more than one response may have been more appropriate and sensitive to differences that existed.

In an attempt to explore the rivalry, competition, and ambivalence that seem inherent in the twin relationship (Arlow, 1960; Joseph & Tabor, 1961), the twin sample was queried as to their feelings about being a twin when they were young. The most frequently checked response was, "I liked some things about being a twin, but not others." While, in hindsight, the researcher realizes that more specificity would have been desirable in the phrasing of this question, responding to this question does indicate some ambivalence about being a twin. Overall, however, there seemed to be more frequent responses to the positive items than to the negative ones. More than half of the respondents indicated that their twin was their best friend, and that being a twin offered a closeness that could not be found in any other relationship.

The responses to the items did vary by twin-type, and it was found that fraternal same-sex twins were more competitive with their twin than were identicals, as was found by Koch (1966), Husén (1959), and von Bracken (1934). Fraternal same-sex twins checked, more frequently than identicals, that they (a) got tired of the comparisons that were made between them and their twin, (b) felt they had to achieve more than their twin, and (c) felt too competitive with their twin. Overall, as judged by responses to these eleven statements concerning feelings about being a twin, the fraternal same-sex twins generally reported more negative feelings about being a twin, the identicals reported more positive feelings about being a twin, and the fraternal opposite-sex twins reported general indifference to being a twin. It is interesting that despite the more frequent response of fraternal same-sex twins to the negative feelings, they still rate themselves as being closer to each other than fraternal opposite-sex

twins, and almost as close as identical twins. Perhaps the passage of time accounts for these changes; they were asked about their feelings that they had as youngsters, but were asked to rate their closeness to their twin at the current time.

Overall, there seems to be some discrepancy between the case study material as gathered from past researchers, and the researcher's material on twins as gathered in this study. The theory on which separation-individuation in twins and the intertwin relationship is based seems to come from a pool of subjects who have multiple problems; parents initially had difficulty distinguishing one twin from the other, and encouraged the similarities between the twins, giving them alliterative names and dressing them alike. Between the twins, there is much rivalry and competition, feelings of being one-half of a whole, and an inability to separate from the twin. However, the parents of the twins used in this study apparently emphasized the differences rather than the similarities between the twins when they were young; most of the twins do not dress alike currently, although they did when they were younger; and most are not living with the twin or attending the same school as the twin. In brief, the twin sample used in this study appears to suffer from the lack of complicating and diverse psychological difficulties that were evidenced by the individuals discussed in the literature review.

Naturally, the question must be raised as to why this sample failed to be useful in substantiating the theory of separation-individuation in twins. First, this was a homogeneous sample of college students 18 to 25 years old who were attending a large Mid-western university. The twin sample consisted, then, of people who

probably would not have the range of problems that might be found in a more heterogeneous sample. The twin sample consisted entirely of volunteers; thus only those who had some interest in being a twin, or of helping a twin (the researcher stated in the advertisements that she was a twin doing research on twins) would probably be inclined to participate. (The researcher did obtain about 20% of the subjects used in this study from twins who knew other twins, or from people in the dormitories who knew of twins in residence halls throughout campus. These people were contacted by phone, but they were still volunteers in the study.) While the researcher does not regret, because of both time and financial considerations, conducting the study in this manner, a more representative and random sample could have been obtained by, for instance, obtaining a directory of members in twin organizations, and randomly selecting a cross-section of twins to participate in the study. However, this would have been a biased sample, too, in that it would include only those twins in such organizations, and again would probably include only twins who had some special interest in their status as a twin.

The non-twin sample was obtained from classes being conducted at Michigan State University during Spring Term, 1980, so this sample did not consist of volunteers. Thus, the twins were volunteers, and the non-twins were taken from classes; it is not known what effect this had on the study, but there do not appear to be any substantial or noticeable differences between the two samples.

The last issue to be discussed includes the instruments used in this study, their validity, and their sensitivity in detecting differences between the groups studied. The separation-individuation instrument subscales were derived from a clustering of the items based

on the responses of 211 college students. Because school phobia is one of the initial indicators of separation-individuation problems, items which discriminated between those who were afraid to go to school and those who were not afraid to go to school were retained. Those items which failed to discriminate between these groups were discarded; items which failed to discriminate between individuals were discarded (for example, if an item was answered by almost the entire sample as "completely true" or "completely false"); and items which did not cluster with any of the other items were eliminated. Thus, the subscales were constructed with a marked reliance on school phobia as an indicator of separation-individuation difficulties.

In this study, three of the five subscales were able to detect differences between school phobic individuals, but generally, the instrument was not sensitive enough to detect differences between twins and non-twins, if in fact these differences exist. The only exception to this finding was that it was able to detect a difference between twins and non-twins on the Individuation I-Present subscale. Currently, then, twins appear to have slightly more difficulty than non-twins in the areas of rejection, attachment, and jealousy.

Overall, however, the study did not help to validate the instrument to the extent that had been anticipated. It may be an instrument designed to assess separation-individuation problems as it relates to only one indicator, school phobia. It may be that it is not sensitive enough to be able to discriminate between twins and non-twins, or that there are no differences between twins and non-twins. Certainly, additional administrations of the instrument to other groups, including twins, would be helpful in clarifying those issues.

Concerning the background questionnaire, it was unfortunately necessary to limit it in length, although there were more questions concerning the twin relationship left unanswered than answered. It was useful in that it did provide information about behaviors or attitudes among adult twins as compared to non-twins, and uncovered some of the similarities and differences between the two groups. Many of the twins stated that they found the Twin Background Questionnaire to be quite interesting, as it prompted them to think about being a twin and their reactions to it. It was limited, however, because only rough estimates could be made of any of the characteristics of the twin relationship; the depth or any nuances of the relationship were not addressed.

A factor which no doubt affected the results of the entire study was that all of the information obtained was based on self-report, with no outside criteria to evaluate the validity of any of the responses. Even though the responses to all questionnaires were anonymous, social desirability of response was probably a factor in this study. Many of the questions concerned past events, and there may have been some forgetting about what happened or how respondents felt when they were younger. Despite the fact that the instruments used were "objective" pencil and paper ones, there is still a high degree of subjectivity involved in this study. As a simple example, most of the twins reported that they had alliterative names, but most also stated that their parents, if they stressed either similarities or differences between the twins, stressed the differences, not the similarities. However, most of the twins dressed alike in elementary school. Parental stress on differences, yet encouraging

like dress, appears to be a contradiction. Further elaboration on the questions asked appears to be necessary.

In summary, this researcher suggests not that the theory is necessarily wrong (certainly there are twins who do have difficulties in the separation-individuation process), but that perhaps generalizations have been over-extended to include most twins, when such may not be the case. In the interpretation of the findings, there is the possibility that Leonard (1961) suggests, i.e., that the identity à deux substitutes for an individual identity, and that this unit identity may be masking any separation-individuation problems that exist in this twin sample. However, it is the researcher's opinion that the findings relate in a more consistent manner to Joseph's (1961) comment.

Further analytic research with more apparently healthy and successful twin individuals may reveal the useful adaptations that can come out of the circumstances of being a twin, rather than maintain the (unfortunate) emphasis on special problems and pathology that arise from the investigation of psychopathological material only.
(p. 166)

This study was undertaken as a step in this direction.

The sample used was a non-random, non-representative homogeneous group of twins who were college students between the ages of 18 and 25. In many instances, they did not appear to have the problems in separation-individuation that were cited by the researchers on the intertwin relationship. With the exception of the difference found between twins and non-twins on the Individuation I-Present subscale, no differences were found between twins and non-twins, between identicals and fraternal, or between fraternal same-sex and fraternal opposite-sex twins. This result may have occurred because the instruments used

were not sensitive enough to detect the differences, if in fact they do exist. Specific recommendations and implications for further research are considered in the next section to improve upon research in this area.

Implications for Further Research

Based on a consideration of the limitations of this study, and an analysis of its strengths and weaknesses, there are a number of recommendations that can be made to improve upon research in this area. Perhaps the first and most important recommendation is that more needs to be known about separation-individuation in normal twins, both as youngsters and as adults. Too many of the conclusions regarding not just separation-individuation, but many psychodynamics, are based on the study of a small and limited number of case studies, or on samples which include people who are having some degree of difficulty in coping with their current life situation. This is certainly the case with twins. Most researchers have focused on the negative aspects of the twin relationship, very few on the positive aspects. Some twins may not have participated in this study, and perhaps would not in other studies, because of this bias in the literature on twins.

Part of the investigation of separation-individuation in normal twins should include a comparison of these individuals with non-twins. The perceived "uniqueness" of the twin relationship may be the result of only looking at the twin relationship and a lack of consideration of the fact that twinning can occur in non-twins as well as in twins. Koch (1966) was one of the few researchers who included non-twins in her study on twins, and while she did find that twins were closer than non-twins, she did not find that twins, as compared to non-twins, had

more problems. It does not seem that it would be that difficult to obtain a sample of non-twins to use as a comparison or a control group. It is also recommended that future research on twins be broadened to include a random, representative group of twins. The use of a homogeneous group makes it difficult to detect differences, and a more heterogeneous group would perhaps enable researchers to find any differences that might exist.

In addition to the above recommendations, the instrument used to assess separation-individuation requires further exploration. This was only the third time that it was used. Further use and refinement of the subscales would improve both their reliability and item content. In particular, both the Family Rivalry and Father subscale appear to need revisions. It is not known whether this is an instrument that is useful to assess only one aspect of separation-individuation, i.e., school phobia, or if it is useful to assess the entire process. Thus, more studies of the validity of this instrument, which incorporate external criteria for evaluating separation-individuation, are needed.

Further refinement of instruments used to acquire specific information about the twin relationship is also needed. The items used on the background questionnaires in this study could only provide a rough indication of how close twins were to each other, or how they felt about being a twin. A longer questionnaire, while it would require more time to complete, would also provide more information about the inter-twin relationship.

In sum, the researcher believes that more research on separation-individuation in twins and non-twins would be appropriate. With further revision of instruments, and with the use of random and representative

samples, more would be known about separation-individuation in both groups, and whether the twin relationship is indeed unique.

Implications for Counseling and Counseling Practice

Despite the fact that few significant differences between twins and non-twins were found in this study, some twins seem to have difficulty in the separation-individuation process as it relates to the twin. Counselors might well help twins to clarify their feelings about their twin, to dissolve the twin symbiosis, and to establish their own identity. The latter may be particularly difficult because to "be a person in your own right" may mean only one thing, i.e., to be without the twin.

In the treatment of twins, it is important for counselors to be aware of cultural stereotypes. Some counselors may have, just as other people do, a particular stereotype of what twins and the twin relationship is like. The twins in this study, for the most part, stated that they did not like having people think of them as being a unit, and that people were, in general, insensitive to twins and their particular needs. For example, one identical female stated, "Parents and teachers thought we should be alike in every way. They didn't look upon us as individuals and having individual interests." Fraternal same-sex twins in particular stated that they didn't like the comparisons that were made between them and their twin as to who was the smarter, the taller, the older, the heavier, or the more social. A female fraternal same-sex twin said, "We both resented the black and white contrasts of our personalities--my twin was always the 'emotional' one, and I was forced to play the part of the 'rational' shy twin." It is important for counselors to be

aware of these issues, and to not treat twins, as some do, as objects of curiosity, or as individuals who are a unit.

Another issue in the treatment of twins concerns Steele's (unpublished, cited by Joseph, 1961) comment that the counseling relationship is a situation par excellence for recreating the twinship. In some twins, there is a need to recreate the twinship with friends, spouses, and even counselors. Problems in terminating the therapy may result because of the desire, on the part of the twin, for perpetual treatment with the "twin-therapist."

Coupled with this need to recreate the twinship with the counselor is the problem of twins wanting to see the same counselor at the same time. For example, it is not infrequent for one twin to seek therapy, only to have the other twin immediately follow this step. As Joseph & Tabor (1961) and Burlingham (1963) found, the feeling is, "If my twin needs therapy, I must need it too." If the goal of therapy is to assist each twin in developing a separate identity, it would be unwise for both to share the therapy hour, or the same therapist.

The implications of this study for counselors and the counseling practice need not be restricted to twins themselves. As was noted in the discussion of the intertwin relationship, the phenomenon of twinning can occur in people who are not twins, e.g., between siblings, close friends, or husbands and wives. As an example, a non-twin, after seeing the newspaper advertisement, called the researcher and was insistent about participating in this study because, she said, she and her cousin had been raised as, and were just like, twins.

However, important as the twinship is in personality development, counselors would be well advised to recall Hartmann's (1934-35/1964)

warning against attributing too much to it. Not all problems result from the twinship itself. This study gives the preliminary, and perhaps accurate, impression that twins show as much variation in handling the separation-individuation process as do single individuals.

In Retrospect

In retrospect, although for the most part the null hypotheses in this study could not be rejected, it appears to be premature to state that there are no differences between separation-individuation in twins and non-twins. For the most part, no significant differences were found between non-twins and twins, nor between the different twin-types, but the null hypotheses can only "not be rejected," not "accepted." Thus, there may be some differences between the non-twin and twin separation-individuation process that were not detected in this study. There are many issues which are unresolved; there is a wealth of information stating that twins have a "unique" relationship, and some information which finds few differences between twins and non-twins, with the exception of closeness between twins and non-twins.

Based on the review of the literature, there seems to be a void in the knowledge concerning the connection between early separation-individuation in twins, and how adult twins cope with and adapt to interpersonal relationships involving attachment and separation. Given the view of many researchers, and some twins used in this study, that the twin relationship is one of the closest relationships that exist between two people, it could serve as a paradigm for investigating the separation-individuation process throughout the life cycle.

APPENDICES

APPENDIX A

POSTED SIGN TO RECRUIT TWINS
FOR THE STUDY

TWINS

I AM A TWIN WHO IS DOING RESEARCH ON TWINS, AND I NEED

YOU

WHETHER YOU ARE IDENTICAL OR FRATERNAL, MALE OR FEMALE.

IF YOUR TWIN IS NOT IN TOWN, DON'T WORRY AS I DON'T HAVE
TO HAVE TWIN PAIRS. CALL JILL AT 353-3726 OR 332-2912.

TWINS

APPENDIX B

NEWSPAPER ADVERTISEMENTS TO RECRUIT TWINS FOR THE STUDY

This advertisement appeared in the State News on April 29, 1980, p. 5.

TWINS

I am a twin who is doing research on the
Psychology of Twins, and I need

YOU

Whether you are fraternal or identical, male or
female (if your twin is not in town, don't
worry as I don't have to have pairs.) Please
call Jill at 353-3726 or 332-2912.

This advertisement appeared in the State News on May 8, 1980, p. 2.

Twins

I am a twin who is doing research
on the psychology of twins, and I
need

You

Whether you are fraternal or identical, male
or female (if your twin is not in town,
don't worry as I don't have to have pairs.)
Please call Jill at 353-3726 or 332-2912.
Male twins — I need you, too!

APPENDIX C

SEPARATION-INDIVIDUATION INSTRUMENT, FORM A

PLEASE NOTE:

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These consist of pages:

121-159

University
Microfilms
International

300 N. ZEEB RD., ANN ARBOR, MI 48106 (313) 761-4700

Please respond to the following statements as quickly and as accurately as you can. Please do not omit any items. Read each statement, then select one of the four responses listed below, according to whether you think the statement is completely false, mostly false, mostly true, or completely true.

If you were raised primarily by someone other than your mother--for example, by a stepmother, grandmother, older sister, or aunt--please answer the "mother" items with that person in mind. Do the same with the "father" items.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

1. In most situations there is no clear right or wrong.
2. When I was growing up I didn't know if my parents had sexual relations or not.
3. I am not a jealous person.
4. When I was a child I felt nervous about returning to school after a vacation, even when I really wanted to go.
5. I am not very concerned with whether people like me or not.
6. If someone I care about very much is upset or hurt, I seem to feel their pain almost as if it were my own.
7. When I was a child I didn't have to check everything with my parents before I did it.
8. I have often felt that my father needed me as much as I needed him.
9. My brother(s) or sister(s) and I fought quite often when we were kids.
10. I have had older women friends or relatives who were like mothers to me.
11. When I was a child I sucked my thumb.
12. When someone I like doesn't like me or want to be around me I try and figure out why.
13. I used to wish I had a different father.
14. I can't bear the thought of failing at anything.
15. I think I was tied to my mother's apron strings.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
16. My parents were so busy working and raising a family that they didn't go out much on weekends.
 17. My mother or father is my best friend.
 18. I usually know when to quit.
 19. I am neither too tall nor too short.
 20. I feel guilty when I leave someone.
 21. I don't hide very much about myself from others.
 22. Neither I nor anyone in my family has asthma. (Answer either 1 or 4).
 23. I am not sure of what I want to do with my life.
 24. I hate to make mistakes, because I am so hard on myself when I do.
 25. I don't feel guilty as often as most people do.
 26. I don't think I should take care of other people.
 27. I do not catch colds easily.
 28. I have often felt that my mother needed me as much as I needed her.
 29. I'm slow to let people know how much I like them because I'm afraid I'll come on too strong.
 30. I am not a stubborn person.
 31. I don't mind taking orders from my superiors.
 32. I am afraid of my father.
 33. My mother listens and doesn't get upset when I tell her my problems.
 34. As a child, I never felt uneasy about going to the movies.
 35. People think I am just like my mother or my father.
 36. The thought of committing suicide over failing at something does not occur to me.
 37. From the very first day of kindergarten I enjoyed school and couldn't wait to go.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
38. I usually express my anger or irritation when I feel it.
 39. I am a capable person.
 40. My parents encouraged me to bring along my brother or sister when I went out with my friends. (If only child, leave blank)
 41. I get frightened when one of my parents gets sick.
 42. I am very close to my father.
 43. Most people will not let you down.
 44. I like the way my face and body look.
 45. I always felt that my parents would be very unhappy if I moved away from home when I grew up.
 46. I have never been shy.
 47. If I had to choose, I would rather be taken care of than take care of others.
 48. Some people think I am aggressive.
 49. When people I am close to go away on a trip, I worry that something might happen to them.
 50. My father likes to tell me what to do.
 51. I never really give up, even when I should.
 52. I like less physical affection than most people.
 53. My mother was less critical of me than my father.
 54. I eat when I feel upset.
 55. As a child I was told more about sex than most children my age.
 56. I think I am lovable.
 57. My parents think it is awful if I get into a fight with my brother(s) or sister(s). (If only child, leave blank)
 58. I used to regularly have big fights with my mother.
 59. My father's children are his life.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
-
60. It doesn't really bother me when people refuse to admit they are wrong.
 61. I enjoy spending time in the house alone.
 62. I feel scared when someone I am close to goes away.
 63. I feel foolish when I cry.
 64. As a child I was not absent from school very often.
 65. My father is not overprotective towards me.
 66. I am a talkative person.
 67. I have never had trouble with my weight.
 68. I enjoy sex more than most people.
 69. I get attached to people easily.
 70. My mother likes to tell me what to do.
 71. When I am involved in a romantic relationship, I do not usually think that my partner will cheat on me.
 72. My father listens and doesn't get upset when I tell him my problems.
 73. I feel guilty when I think negative things about my mother.
 74. I expect much more of people in authority than of people in general.
 75. I am a self-conscious person.
 76. Most people do not take advantage of others.
 77. When my parents raised me, they hardly ever yelled at me.
 78. I can take care of myself in any situation.
 79. My expectations for myself are tremendous.
 80. When I was growing up, my father didn't mind if I wasn't home for dinner.
 81. You should take care of yourself more than other people.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
82. When I was a child and got into arguments and fights, my parents didn't get involved unless someone might get physically hurt.
 83. I am afraid of my mother.
 84. I want more affection from people than I have a right to expect.
 85. I get jealous when I see a close friend of mine having a really good time with someone else.
 86. I am a calm and relaxed person.
 87. I feel guilty when I think negative things about my father.
 88. It is possible to feel both love and hate for the same person.
 89. I threw tantrums when I was younger if I didn't get what I wanted.
 90. I have sometimes been homesick.
 91. As a teenager I picked my own clothes.
 92. I am not very critical of myself.
 93. Eating usually makes me feel better.
 94. I am never positive that I have done a good job until someone else tells me that I have.
 95. I get very frightened when I think that someday my parents will die.
 96. I used to regularly have big fights with my father.
 97. I have never smoked a pipe, cigarettes, or cigar regularly.
 98. I have an active social life.
 99. I enjoy it when my friends and family are physically affectionate towards me.
 100. I am very close to my mother.
 101. When I was younger I carried around a teddy bear, blanket, or favorite toy.
 102. I like my looks just the way they are.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
-
103. Caring for others makes me feel good.
 104. I am a quiet person.
 105. I, or someone in my family, get migraine headaches.
(Answer 1 or 4)
 106. I am often afraid that someone I care about very much will find
another person who they will like better than me.
 107. My parents encouraged me to make my own decisions.
 108. I was a late bloomer.
 109. Ending a relationship is not particularly difficult for me.
 110. I have had older men friends or relatives who were like fathers
to me.
 111. I have said terrible things to my mother.
 112. My mother is not overprotective towards me.
 113. Sometimes I think I need more love than anyone could possibly
give me.
 114. I used to wish I had a different mother.
 115. I used to get an upset stomach before I left for school in the
morning.
 116. I have not dated as often as I would have liked to.
 117. When I was in elementary school one of my parents would want to
take me to school.
 118. I like the idea of living alone.
 119. I have said terrible things to my father.
 120. I like my friends to be like me.
 121. When someone rejects me I get very angry inside.
 122. It doesn't bother me if someone close to me disagrees with me on
an important matter.
 123. If I ever let out all the anger in me I might really damage
someone.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
-
124. My mother has said that my father's relatives sometimes seem to mean more to him than we do.
 125. As a child in school, it was very important to me to please the teacher and have him/her like me.
 126. I do not hide the little kid in me.
 127. I can take criticism without feeling hurt or upset.
 128. I love to sing or whistle.
 129. As a child I spent a lot of time with my parents.
 130. People like to come to me with their problems.
 131. I am neither too fat nor too thin.
 132. No one will ever love me as much as members of my family do.
 133. I am an independent person.
 134. I, or someone in my family, have ulcers. (Answer either 1 or 4)
 135. When I was very young I was afraid of strangers.
 136. I rarely let people get close enough emotionally to hurt me.
 137. I don't feel responsible for my mother's happiness.
 138. When I was growing up, my mother didn't mind if I was not home for dinner.
 139. My family is not exceptionally close.
 140. My mother's children are her life.
 141. During some period in my life I was convinced I would die young.
 142. I sometimes go on eating binges.
 143. As a youngster, I did not take trips away from home by myself very often, such as going away to camp.

APPENDIX D

SEPARATION-INDIVIDUATION INSTRUMENT, FORM B

Please respond to the following statements as quickly and as accurately as you can. Please do not omit any items. Read each statement, then select one of the four responses listed below, according to whether you think the statement is completely true, mostly true, mostly false, or completely false.

If you were raised primarily by someone other than your mother, for example, by a stepmother, grandmother, older sister, or aunt, please answer the "mother" items with that person in mind. Do the same with the "father" items.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

1. My father's children are his life.
2. When I get angry I feel like smashing things.
3. I'm not very concerned about pleasing other people.
4. During some period in my life I was convinced I would die young.
5. Generally, I would say that sex is over-rated.
6. I used to regularly have big fights with my mother.
7. My sex life is very satisfactory.
8. When I was growing up, my father didn't mind if I wasn't home for dinner.
9. When I was a child I didn't have to check everything with my parents before I did it.
10. I wish that my father would have supported me more often when I disagreed with my mother.
11. I get very frightened when I think that someday my parents will die.
12. I don't pay as much attention to my physical appearance as I probably should.
13. I am not attracted to members of the opposite sex who are somewhat older than I am.
14. My mother always put her children's needs ahead of her own.
15. When I think about giving a party I worry that people won't come.
16. When I was very young I was afraid of strangers.

- | | | | |
|-------------------------|---------------------|----------------------|--------------------------|
| Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
17. My father listens and doesn't get upset when I tell him my problems.
 18. I have said terrible things to my mother.
 19. It takes me less time than most people to "loosen up" in a social situation.
 20. I am afraid of my mother.
 21. When I was in elementary school one of my parents would want to take me to school.
 22. I think pets can provide companionship almost like people.
 23. I am not too fat or too thin.
 24. My mother has said that my father's relatives sometimes mean more to him than we do.
 25. I have never been shy.
 26. I am never positive that I have done a good job until someone else tells me that I have.
 27. I think I was tied to my mother's apron strings.
 28. I don't usually pull for the underdog.
 29. I threw tantrums when I was younger if I didn't get what I wanted.
 30. I fill the gap in a conversation even when I don't feel like talking.
 31. I fear that I will be rejected by people I really care about if I express hostility toward them.
 32. Sometimes I just feel empty.
 33. I am often afraid that someone I care about very much will find another person who they will like better than me.
 34. I am very close to my father.
 35. I usually know when to quit.
 36. I believe that expressing hostility does more harm than good.

- | | | | |
|-------------------------|---------------------|----------------------|--------------------------|
| Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
37. I have sought out parent substitutes at some time in my life.
 38. Most people will not let you down.
 39. I am a capable person.
 40. I used to get an upset stomach before I left for school in the morning.
 41. My father was not at home as much as my mother wanted him to be.
 42. As a child I was not absent from school very often.
 43. I get attached to people easily.
 44. When I love someone, I feel that the person is a part of me.
 45. I used to wish I had a different father.
 46. I am a calm and relaxed person.
 47. My mother liked most of our neighbors.
 48. I am a self-conscious person.
 49. I have a sweet-tooth.
 50. I have often felt that my father needed me as much as I needed him.
 51. When I think about growing old I don't worry about being alone.
 52. My motto is, "If you want something done right, do it yourself."
 53. When I was a child I felt nervous about returning to school after a vacation, even when I really wanted to go.
 54. Sometimes I think I need more love than anyone could possibly give me.
 55. Adolescence was not a particularly difficult time for me.
 56. If people I care about knew how I really felt about them sometimes, they would not like me.
 57. My family is not exceptionally close.
 58. My parents encouraged me to make my own decisions.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
59. If I ever let out all the anger in me I might really damage someone.
 60. It is possible to feel both love and hate for the same person.
 61. When someone rejects me I get very angry inside.
 62. My father likes to tell me what to do.
 63. I am not afraid of failing.
 64. I feel guilty when I think negative things about my mother.
 65. I am a talkative person.
 66. No one will ever love me as much as members of my family do.
 67. I like being held as much as I like sex.
 68. My father is not overprotective towards me.
 69. When people I am close to go away on a trip, I worry that something might happen to them.
 70. I react strongly to being rejected, even by people that I don't know very well.
 71. The thought of committing suicide over failing at something does not occur to me.
 72. I used to regularly have big fights with my father.
 73. I don't feel responsible for my mother's happiness.
 74. I love to eat.
 75. I have never been shy.
 76. I am afraid of my father.
 77. For most of my life I was an underachiever.
 78. When someone is late for an appointment with me I immediately think that they are not going to show up.
 79. My father was deeply involved in the emotional life of our family.
 80. My mother is not overprotective towards me.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

81. I feel scared when someone I am close to goes away.
82. It doesn't bother me if someone close to me disagrees with me on an important matter.
83. I think I am sexy.
84. My parents never discouraged me from moving away from my hometown.
85. I get jealous when I see a close friend of mine having a really good time with someone else.
86. I have almost always worked up to my potential.
87. I like the way my face and body look.
88. I feel guilty when I think negative things about my father.
89. I don't depend on others too much for my happiness.
90. There was hardly any sibling rivalry in my family. (If only child, leave blank)
91. I don't get angry when other people try to tell me what to do.
92. I am not prone to depression.
93. As a child I spent a lot of time with my parents.
94. My mother likes to tell me what to do.
95. I don't think I'm very attractive.
96. I feel guilty when I leave someone.
97. It's not hard for me to really let go.
98. I tend to overexplain things to people.
99. From the very first day of kindergarten I enjoyed school and couldn't wait to go.
100. My father had no difficulty expressing his true feelings.

APPENDIX E

BACKGROUND QUESTIONNAIRE USED WITH
SEPARATION-INDIVIDUATION
INSTRUMENT, FORM B

BACKGROUND QUESTIONNAIRE

Please check the appropriate response to the following questions. Numbers following responses are for coding purposes only, so you can ignore them.

1. Age ☐ 17-23 (1)
☐ 24-30 (2)
☐ 31-40 (3)
☐ 41-50 (4)
☐ 50 or over (5)
2. Sex ☐ Female (1)
☐ Male (2)
3. Race ☐ Black (1)
☐ White (2)
☐ Other (3)
4. Marital status ☐ Single (1)
☐ Married (2)
☐ Separated (3)
☐ Divorced (4)
☐ Widowed (5)
5. Religious background ☐ Protestant (1)
☐ Catholic (2)
☐ Jewish (3)
☐ Other (4)
6. I currently live at home with my parents ☐ Yes (1)
☐ No (2)
7. There were times when I was afraid to go to school as a child
☐ Yes (1)
☐ No (2)
8. I have had or currently have asthma ☐ Yes (1)
☐ No (2)
9. I get severe or migraine headaches ☐ Yes (1)
☐ No (2)
10. I get more than two colds a year ☐ Yes (1)
☐ No (2)
11. When I get upset the physical symptom I experience most often is (check only one)

<input type="checkbox"/> upset stomach (1)	<input type="checkbox"/> backaches (4)
<input type="checkbox"/> diarrhea (2)	<input type="checkbox"/> constipation (5)
<input type="checkbox"/> headaches (3)	<input type="checkbox"/> other (6) _____

12. As a child I missed school _____less often than most children (1)
_____an average amount (2)
_____more often than most children (3)
13. My father owns his own business or worked in a business owned by
someone in our family _____Yes (1)
_____No (2)
14. My father is more than five years older than my mother _____Yes (1)
_____No (2)

APPENDIX F

CLUSTERS DERIVED FROM SEPARATION-INDIVIDUATION
INSTRUMENT, FORM B

Cluster 1, Individuation I-Past

- 2. When I get angry I feel like smashing things.
- 4. During some period in my life I was convinced I would die young.
- 11. I get very frightened when I think that someday my parents will die.
- 16. When I was very young I was afraid of strangers.
- 21. When I was in elementary school one of my parents would want to take me to school.
- 25. I have never been shy.*
- 38. Most people will not let you down.*
- 40. I used to get an upset stomach before I left for school in the morning.
- 42. As a child I was not absent from school very often.*
- 47. My mother liked most of our neighbors.*
- 53. When I was a child I felt nervous about returning to school after a vacation, even when I really wanted to go.
- 55. Adolescence was not a particularly difficult time for me.*
- 59. If I ever let out all the anger in me I might really damage someone.
- 77. For most of my life I was an underachiever.
- 99. From the very first day of kindergarten I enjoyed school and couldn't wait to go.*

*Item is reflected (reverse-scored).

Cluster 2, Individuation II-Present Status

- 3. I'm not very concerned about pleasing other people.*
- 26. I am never positive that I have done a good job until someone else tells me that I have.
- 31. I fear that I will be rejected by people I really care about if I express hostility toward them.
- 32. Sometimes I just feel empty.
- 33. I am often afraid that someone I care about very much will find another person who they will like better than me.
- 43. I get attached to people easily.
- 48. I am a self-conscious person.
- 51. When I think about growing old I don't worry about being alone.*
- 54. Sometimes I think I need more love than anyone could possibly give me.
- 61. When someone rejects me I get very angry inside.
- 63. I am not afraid of failing.*
- 64. I feel guilty when I think negative things about my mother.
- 70. I react strongly to being rejected, even by people that I don't know very well.
- 73. I don't feel responsible for my mother's happiness.*
- 81. I feel scared when someone I came close to goes away.
- 82. It doesn't bother me if someone close to me disagrees with me on an important matter.*
- 85. I get jealous when I see a close friend of mine having a really good time with someone else.

*Item is reflected (reverse-scored).

- 89. I don't depend on others too much for my happiness.
- 96. I feel guilty when I leave someone.
- 98. I tend to overexplain things to people.

Cluster 3, Father

1. My father's children are his life.*
17. My father listens and doesn't get upset when I tell him my problems.*
34. I am very close to my father.*
45. I used to wish I had a different father.
50. I have often felt that my father needed me as much as I needed him.*
57. My family is not exceptionally close.
76. I am afraid of my father.
79. My father was deeply involved in the emotional life of our family.*
93. As a child I spent a lot of time with my parents.*

*Item is reflected (reverse-scored).

Cluster 4, Family Rivalry

- 6. I used to regularly have big fights with my mother.
- 10. I wish that my father would have supported me more often when I disagreed with my mother.
- 18. I have said terrible things to my mother.
- 20. I am afraid of my mother.
- 29. I threw tantrums when I was younger if I didn't get what I wanted.
- 46. I am a calm and relaxed person.*
- 60. It is possible to feel both love and hate for the same person.
- 84. My parents never discouraged me from moving away from my hometown.*
- 90. There was hardly any sibling rivalry in my family. (If only child, leave blank.)*

*Item is reflected (reverse-scored).

Cluster 5, Body Image

7. My sex life is very satisfactory.*
12. I don't pay as much attention to my physical appearance as I probably should.
23. I am not too fat or too thin.*
66. No one will ever love me as much as members of my family do.
83. I think I am sexy.*
87. I like the way my face and body look.*
95. I don't think I'm very attractive.

*Item is reflected (reverse-scored).

APPENDIX G

STANDARD SCORE COEFFICIENT ALPHAS AND COMMUNALITIES IN THE
DIAGONAL FOR THE FIVE CLUSTERS

Communality in the Diagonal, Clusters 1-5

For ease of presentation, Cluster 1 = Individuation I-Past
Cluster 2 = Individuation II-Present Status
Cluster 3 = Father
Cluster 4 = Family Rivalry
Cluster 5 = Body Image

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
<u>1</u>	100	62	44	66	25
<u>2</u>		100	30	58	32
<u>3</u>			100	43	15
<u>4</u>				100	20
<u>5</u>					100

Standard Score Coefficient Alphas, Clusters 1-5

<u>Cluster</u>	<u>Coefficient Alpha</u>
1	.75
2	.84
3	.83
4	.72
5	.74

Communality in the diagonal, Cluster 1

Communality in the diagonal, Cluster 2

[illegible]

Communality in the diagonal, Cluster 3

	<u>34</u>	<u>79</u>	<u>57</u>	<u>45</u>	<u>50</u>	<u>17</u>	<u>93</u>	<u>1</u>	<u>76</u>
<u>34</u>	67	55	53	51	57	51	38	40	29
<u>79</u>		40	45	33	45	32	30	40	21
<u>57</u>			39	35	39	37	37	24	27
<u>45</u>				38	31	34	39	29	41
<u>50</u>					38	34	30	40	18
<u>17</u>						36	34	28	36
<u>93</u>							29	26	26
<u>1</u>								24	11
<u>76</u>									18

Communality in the diagonal, Cluster 4

	<u>6</u>	<u>18</u>	<u>10</u>	<u>20</u>	<u>90</u>	<u>29</u>	<u>46</u>	<u>84</u>	<u>60</u>
<u>6</u>	41	62	40	32	25	24	11	19	18
<u>18</u>		39	35	22	28	29	19	16	15
<u>10</u>			34	38	21	15	19	28	19
<u>20</u>				25	22	15	23	19	16
<u>90</u>					24	18	26	17	28
<u>29</u>						14	12	12	18
<u>46</u>							14	25	8
<u>84</u>								13	6
<u>60</u>									11

Communality in the diagonal, Cluster 5

	<u>95</u>	<u>87</u>	<u>23</u>	<u>83</u>	<u>12</u>	<u>7</u>	<u>66</u>
<u>95</u>	58	55	37	53	35	32	19
<u>87</u>		56	50	42	39	35	7
<u>23</u>			35	36	28	25	14
<u>83</u>				32	30	21	0
<u>12</u>					25	16	16
<u>7</u>						18	14
<u>66</u>							4

APPENDIX H

SEPARATION-INDIVIDUATION INSTRUMENT, FORM C

Please respond to the following statements as quickly and as accurately as you can. Please do not omit any items. Read each statement, then select one of the four responses listed below, according to whether you think the statement is completely true, mostly true, mostly false, or completely false.

If you were raised primarily by someone other than your mother, for example, by a stepmother, grandmother, older sister, or aunt, please answer the "mother" items with that person in mind. Do the same with the "father" items.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

1. My father's children are his life.
2. When I get angry I feel like smashing things.
3. I'm not very concerned about pleasing other people.
4. During some period in my life I was convinced I would die young.
5. Generally, I would say that sex is over-rated.
6. I used to regularly have big fights with my mother.
7. My sex life is very satisfactory.
8. When I was growing up, my father didn't mind if I wasn't home for dinner.
9. When I was a child I didn't have to check everything with my parents before I did it.
10. I wish that my father had supported me more often when I disagreed with my mother.
11. I get very frightened when I think that someday my parents will die.
12. I don't pay as much attention to my physical appearance as I probably should.
13. I am not attracted to members of the opposite sex who are somewhat older than I am.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

14. My mother always put her children's needs ahead of her own.
15. When I think about giving a party I worry that people won't come.
16. When I was very young I was afraid of strangers.
17. My father listens and doesn't get upset when I tell him my problems.
18. I have said terrible things to my mother.
19. It takes me less time than most people to "loosen up" in a social situation.
20. I am afraid of my mother.
21. When I was in elementary school one of my parents would want to take me to school.
22. I think pets can provide companionship almost like people.
23. I am not too fat or too thin.
24. My mother has said that my father's relatives sometimes mean more to him than we do.
25. I have never been shy.
26. I am never positive that I have done a good job until someone else tells me that I have.
27. I think I was tied to my mother's apron strings.
28. I don't usually pull for the underdog.
29. I threw tantrums when I was younger if I didn't get what I wanted.
30. I fill the gap in a conversation even when I don't feel like talking.
31. I fear that I will be rejected by people I really care about if I express hostility toward them.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

32. Sometimes I just feel empty.
33. I am often afraid that someone I care about very much will find another person whom they will like better than me.
34. I am very close to my father.
35. I usually know when to quit.
36. I believe that expressing hostility does more harm than good.
37. I have sought out parent substitutes at some time in my life.
38. Most people will not let you down.
39. I am a capable person.
40. I used to get an upset stomach before I left for school in the morning.
41. My father was not at home as much as my mother wanted him to be.
42. As a child I was not absent from school very often.
43. I get attached to people easily.
44. When I love someone, I feel that the person is a part of me.
45. I used to wish I had a different father.
46. I am a calm and relaxed person.
47. My mother liked most of our neighbors.
48. I am a self-conscious person.
49. I have a sweet-tooth.
50. I have often felt that my father needed me as much as I needed him.
51. When I think about growing old I don't worry about being alone.
52. My motto is, "If you want something done right, do it yourself."
53. When I was a child I felt nervous about returning to school after a vacation even when I really wanted to go.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

54. Sometimes I think I need more love than anyone could possibly give me.
55. Adolescence was not a particularly difficult time for me.
56. If people I care about knew how I really felt about them sometimes, they would not like me.
57. My family is not exceptionally close.
58. My parents encouraged me to make my own decisions.
59. If I ever let out all the anger in me I might really damage someone.
60. It is possible to feel both love and hate for the same person.
61. When someone rejects me I get very angry inside.
62. My father likes to tell me what to do.
63. I am not afraid of failing.
64. I feel guilty when I think negative things about my mother.
65. I am a talkative person.
66. No one will ever love me as much as members of my family do.
67. I like being held as much as I like sex.
68. My father is not overprotective toward me.
69. When people I am close to go away on a trip, I worry that something might happen to them.
70. I react strongly to being rejected, even by people whom I don't know very well.
71. The thought of committing suicide over failing at something does not occur to me.
72. I used to regularly have big fights with my father.

- | Completely
True
1 | Mostly
True
2 | Mostly
False
3 | Completely
False
4 |
|-------------------------|---------------------|----------------------|--------------------------|
|-------------------------|---------------------|----------------------|--------------------------|
73. I don't feel responsible for my mother's happiness.
 74. I love to eat.
 75. I am afraid of my father.
 76. For most of my life I was an underachiever.
 77. When someone is late for an appointment with me I immediately think that he/she is not going to show up.
 78. My father was deeply involved in the emotional life of our family.
 79. My mother is not overprotective toward me.
 80. I feel scared when someone I am close to goes away.
 81. It doesn't bother me if someone close to me disagrees with me on an important matter.
 82. I think I am sexy.
 83. My parents never discouraged me from moving away from my hometown.
 84. I get jealous when I see a close friend of mine having a really good time with someone else.
 85. I have almost always worked up to my potential.
 86. I like the way my face and body look.
 87. I feel guilty when I think negative things about my father.
 88. I don't depend on others too much for my happiness.
 89. There was hardly any sibling rivalry in my family. (If only child, leave blank.)
 90. I don't get angry when other people try to tell me what to do.
 91. I am not prone to depression.
 92. As a child I spent a lot of time with my parents.
 93. My mother likes to tell me what to do.

Completely True 1	Mostly True 2	Mostly False 3	Completely False 4
-------------------------	---------------------	----------------------	--------------------------

94. I don't think I'm very attractive/handsome.
95. I feel guilty when I leave someone.
96. It's not hard for me to really let go.
97. I tend to overexplain things to people.
98. From the very first day of kindergarten I enjoyed school and
couldn't wait to go.
99. My father had no difficulty expressing his true feelings.

APPENDIX I

TWIN BACKGROUND QUESTIONNAIRE USED FOR TWIN SAMPLE

Background Questionnaire. Please check the appropriate response to the following questions. Numbers following responses are for coding purposes only, so you can ignore them.

1. Age: ☐ 18(1) ☐ 23(6)
☐ 19(2) ☐ 24(7)
☐ 20(3) ☐ 25(8)
☐ 21(4) ☐ over 25(9). Please state your
☐ 22(5) age if you are over 25: _____
2. Sex: ☐ Female(1)
☐ Male(2)
3. Race: ☐ Black(1)
☐ White(2)
☐ Other(3)
4. Marital status: ☐ Single(1)
☐ Living with someone you are romantically
involved with, but not married(2)
☐ Married(3)
☐ Separated(4)
☐ Divorced(5)
☐ Widowed(6)
5. I am a student: ☐ Yes(1)
☐ No(2)
6. I currently live at home with my parents: ☐ Yes(1)
☐ No(2)
7. There were times when I was afraid to go to school as a child:
☐ Yes(1)
☐ No(2)
8. As a child I missed school: ☐ Less often than most children(1)
☐ An average amount(2)
☐ More often than most children(3)

For the following questions, please pick the brother or sister in your family that you are closest to, and answer these questions with this person in mind. (If you are an only child, leave all of the following questions blank--you're done.)

9. The person I am closest to is: ☐ A brother(1)
☐ A sister(2)
10. How old is this person? _____
11. I currently live with this person: ☐ Yes(1)
☐ No(2)

12. This person is currently attending the same school as I am:

_____ Yes(1)
 _____ No(2)

13. This person and I have alliterative names, or names which start with the same letter (for example, Jill and Jane, Judy and Jack, or Robert and Ronald):

_____ Yes(1)
 _____ No(2)

14. During elementary school, this person and I were dressed alike:

_____ Almost always(1)
 _____ Frequently(2)
 _____ Sometimes(3)
 _____ Hardly ever(4)
 _____ Never(5)

15. During high school, this person and I were dressed alike:

_____ Almost always(1)
 _____ Frequently(2)
 _____ Sometimes(3)
 _____ Hardly ever(4)
 _____ Never(5)

16. Currently, this person and I dress alike:

_____ Almost always(1)
 _____ Frequently(2)
 _____ Sometimes(3)
 _____ Hardly ever(4)
 _____ Never(5)

17. As youngsters, this person and I had our own secret language which others could not understand:

_____ Yes(1)
 _____ No(2)

18. I am closer to (choose only one): _____ My mother(1)
 _____ My father(2)

19. The sibling that I am closest to is closer to (choose only one):

_____ My mother(1)
 _____ My father(2)

21. How would you rate your closeness to your twin at the present time on the following scale? Put an "X" on the line below that indicates how close you are.

1	2	3	4	5	6	7
Not close at all			Moderately Close			Extremely Close

22. The following statements may or may not describe how you felt about being a twin when you were in elementary school. Please put a check in front of those statements which applied to the way you felt.

☐ I thought that being a twin was a real drag (1)

☐ I got tired of the comparisons that were made between my twin and me (for example, comparisons of physical characteristics, athletic ability, or academic achievements) (2)

☐ I was indifferent to being a twin; it didn't affect me one way or the other (3)

☐ I felt that I had to do better or achieve more than my twin (4)

☐ I like some things about being a twin, but not others (5)

☐ I resented sharing things with my twin (for example, gifts, time, toys, friends, and parents) (6)

☐ I like sharing things with my twin (7)

☐ My twin was my best friend; she/he understood me most (8)

☐ I enjoyed being a twin; it offered a closeness that could not be found in any other relationship (9)

☐ I felt too competitive with my twin (10)

☐ I liked the competition between my twin and me because it encouraged both of us to do well (11)

☐ Other feelings you may have had about being a twin: _____

23. My twin has:

- a. the same eye color as I have: ☐ Yes (1)
☐ No (2)
- b. the same body build (height and weight) as I have: ☐ Yes (1)
☐ No (2)
- c. the same blood type as I have: ☐ Yes (1)
☐ No (2)
☐ Uncertain (3)
- d. the same hair color as I have: ☐ Yes (1)
☐ No (2)
- e. the same texture of hair as I have: ☐ Yes (1)
☐ No (2)

24. I think I am a(n): ☐ Identical twin (1). (An identical twin has the same eye color, body build, blood type, and hair color and texture as his/her twin. In addition, identical twins are sometimes mistaken for one another by teachers and casual friends. They are of the same sex, and come from one egg.)
- ☐ Fraternal twin (2). (A fraternal twin may have the same features as his/her twin, but the resemblance will be less than for identical twins. While fraternal twins may have been mistaken for one another when they were young, as adults they probably would not be. They can be of either the same or different sex, and come from two eggs.)
- ☐ Uncertain (3).

20. How would you rate your closeness to your closest sibling at the present time, on the following scale? Put an "X" on the line below that indicates how close you are.

1	2	3	4	5	6	7
Not close at all		Moderately close			Extremely close	

APPENDIX K

DIRECTIONS FOR COMPLETION OF INSTRUMENTS

Thank you for responding to my request for your participation in my research.

Enclosed you will find:

1. A 99-item questionnaire, with an answer sheet for your answers;
2. A background questionnaire;
3. An envelope addressed to me, in which I would like to put your questionnaires and answer sheet when you have completed them;
4. A post card addressed to me, on which I would like you to put your name and address and phone number, so that you will be eligible for the \$50.00 lottery prize.

Directions:

1. First, complete the 99-item questionnaire, and put your answers on the enclosed answer sheet.
2. Second, complete the background questionnaire, checking the appropriate response on the form itself.
3. Third, insert the 99-item questionnaire, your answer sheet, and the background questionnaire in the envelope provided (sufficient postage is on the envelope), and mail it to me.
4. Fourth, put your name, address, and phone number on the postcard, and mail it to me.

This procedure has been designed to assure anonymity of your responses; NO IDENTIFYING INFORMATION (NAME OR STUDENT NUMBER) IS TO GO ON THE FORMS. The postcard, with your name and address, is sent separately to ensure anonymity. Upon receipt of the postcard, I will either call you (or send to you--check which you would prefer on the postcard) to provide you with feedback on the study being conducted.

I would also like to inform you that you have the right to withdraw from the study at any time. If you have any questions about any of the forms, or would like to provide me with feedback on the instruments being used, please feel free to call me at 353-3726 or 332-2912. Also, if you would just like to discuss your general reaction to being a twin, please call.

Finally, I would like to thank you once again for participating. There are not, as you know, that many of us around (twins, that is), and your cooperation is sincerely appreciated.

Jill Hirt
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