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Birth Order Effects on Style of Life as Revealed by Thematic Apperception Test Stories of Adolescents: An Examination of Some Adlerian Hypotheses

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by

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DEDICATION

To the memory of Erich Fromm (1900-1980), whose writings kindled my love for psychology, as a humanism, a philosophy, a social-historical science, and as an instrument for change.

VITA

Norman N Silverman, the author, was born in St. Paul, Minnesota, on May 12, 1925, the son of Jacob and Sarah Silverman, both immigrants from the Jewish Pale of Tsarist Russia.

His elementary and secondary education was in the public schools of Oak Park, Ill., where he was graduated from Oak Park-River Forest High School in 1943.

In 1945 he received an Associate of Arts with Honors, from the University of Florida. Subsequently he was matriculated in the inter-departmental Committee on International Relations in the Division of Social Science of the University of Chicago. After two years, including a summer at the Universidad Nacional Autónoma de México, he left the academic world to take over his father's fur business.

Twenty-five years later he returned to academia. He took courses at Aurora College, Rosary College, and by correspondence from the University of Florida, while pursuing an undergraduate major in Psychology at George Williams College in Downers Grove, Ill. He was graduated from the latter with a B.A. in Social Science, Summa cum Laude, in 1973.

Since 1973 he has been enrolled simultaneously in graduate programs in Loyola University of Chicago (in Clinical Psychology) and in the Alfred Adler Institute (in Psychotherapy). He has interned in clinical psychology at Hines V.A. Hospital and the West Side V.A. Hospital, in counseling at the Loyola Counseling Center, and in psychotherapy at the Alfred Adler Institute, all of Chicago.

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CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

Introduction

Many writers, both theoretical and empirical, claim that birth order has an effect on, or correlation with, the personality of an individual. This study attempts to research this claim through the use of imaginative creations. Personality is here understood as style of life. Birth order effects are hypothesized to be those predicted by Adlerian theory (Individual Psychology). The imaginative productions consist of 750 stories told in response to Thematic Apperception Test (TAT) cards.

First this paper reviews some of the literature concerning birth order and style of life, and attempts to define the way these concepts are used here.

Birth Order

An extensive literature deals with the putative psychological effects of one's position in the family constellation. The literature refers to this position as "ordinal position," "sibling position," "sibling status," or "birth order," with little consistency in usage or definition.

"Ordinal position" clearly refers to a mathematical concept having to do with a numbered series. Thus, in a family with four children, their ordinal positions would be first, second, third, and fourth.

"Sibling position" is the term preferred by Toman (1976). He states, "Sibling positions may be looked upon as roles that a person has learned to take in the family and tends to assume in situations outside the family, whether merely initially or more permanently" (p. 143). By combining ordinal position with consideration of sex, he comes up with ten "basic types of sibling positions," viz., oldest brother of brothers, youngest brother of brothers, oldest brother of sisters, youngest brother of sisters, male only child, oldest sister of sisters, youngest sister of sisters, oldest sister of brothers, youngest sister of brothers, and female only child (p. vi).

Sutton-Smith and Rosenberg (1970) object that "ordinal position," which "refers only to birth order" is inadequate since it neglects the sex status of the siblings, so they choose the term "sibling status to refer to both of these characteristics in combination, birth order and sex" (p. 2).

"Birth order" is the most popular term. It is generally used in the sense of "ordinal position" above. In this paper, however, the term is used as it was by Alfred Adler.

Adlerian Views on Birth Order

Starting in 1918, Adler (1918/1973) often underscored the importance of the family constellation in the formation of one's personality. His is a social, or interpersonal psychology (Hall & Lindzey, 1970)

which deals with the way people handle the problems of living together, rather than with intrapsychic conflicts. In his view the family of origin is the prototype of social living for most people. Consequently, the children's interpretations of their early experiences within the family shape their personalities for life.

Adler's use of the concept of birth order is like our modern use of "role." The role the child comes to play within his family becomes a prototype for the role he will play in later life. The child trains himself for this role vis-a-vis his siblings as well as in relation to his parents. He learns how to compete or cooperate, and he develops the character traits he thinks he needs in order to feel significant in his world (Dreikurs, 1933/1950, p. 41).

Adler considers that the understanding of an individual's birth order position is one of the five most trustworthy means to explore personality--along with early recollections, childhood disorders, dreams, and exogenous factors (Ansbacher & Ansbacher, 1956, p. 328). Harris (1964) says that Adler tended to emphasize the importance of siblings partly because he himself was a fourth-born, whereas his arch-rival, Freud, was a firstborn, who focused on the intimate relationship of a child to his parents. Freud dealt with Oedipal conflicts while Adler dealt with the maneuvering for power, prestige, and status within the group, as well as the feelings of inferiority and compensations for these feelings. Apparently the only mention Freud made of birth order effects was when, in the midst of a lecture on incest and the Oedipus Complex, he states, "you will infer from this that a child's position in the sequence of brothers and sisters is of very great significance for

the course of his later life'' (Freud, 1917/1935, p. 343).

Adler describes five basic birth order categories, which we can best understand as roles which the child might play in the family constellation. These categories are: firstborn, secondborn, youngest or lastborn, only child, and middle child.

Toman (1976), while crediting Adler for being ''the first to try to characterize sibling position'' (p. 284), criticized him for being unsystematic about it, presumably because he only discussed five positions. One may ask why Adler did not classify birth order effects into ten types, as Toman later did. Indeed, why not into the 642 possible permutations and combinations of six children and two sexes? The answer, of course, is that Adler does not mean for this to become a <u>typology</u> (English & English, 1958, p. 568; Maddi, 1976, p. 15), but rather uses these five positions as <u>ideal types</u> (Wolman, 1973, p. 185). That is to say, they are not meant to be mutually exclusive and exhaustive partitions of the population. They are only meant as examples of what might, possibly or probably, become the style of life of an individual brought up in a given position in his micro-society, within the normally competitive, sexist larger society in which Adler lived and in which we still live.

The following quotations from Adler's works make it evident, (1) that he does consider age differences between adjacent siblings to be important, (2) that he does advise taking sex into consideration, and (3) that he thinks the determining factor is the child's <u>perception</u> of the situation, and his or her <u>decision</u> as to what to do about the situation.

> It does not matter what really has happened, whether an individual is really inferior or not. What is important is his <u>interpretation</u> of his situation. (1927/1954, p. 124)

> There has been some misunderstanding of my custom of classification according to position in the family. It is not, of course, the child's number in the order of successive births which influences its character, but the situation into which it is born. Thus, if the eldest child is feeble-minded or suppressed, the second child may acquire a style of life similar to that of an eldest child; and in a large family, if two are born much later than the rest, and grow up together separated from the older children, the older of these may develop like a first child. (1929/1964, p. 96)

> Various combinations are possible in which several brothers and sisters of the same or opposite sexes compete with each other. The evaluation of any one case therefore becomes exceedingly difficult. (1927/1954, pp. 127-128)

> The tension between a boy and a girl is higher than the tension between two boys or two girls. In this struggle the girl is favored by nature; till her sixteenth year she develops more quickly, bodily and mentally, than a boy. Such an older boy gives up the fight, grows lazy and discouraged. (1931/1958, p. 150)

> I have not completed my researches in connection with the development of an only girl among boys and of an only boy among girls. According to what I have noticed up till now I expect to find that both will tend to extremes, either in a masculine or in a feminine direction. (1933/1964, p. 214)

That children are not doomed or predetermined to develop certain "typical" traits because of their birth order is evident in the following quotation. Adler here is advising parents on how to deal with a firstborn when another child comes into the family.

> Children should have the situation explained and then be helped to socialize themselves...If he sees that he is to have a new friend, that he has from everyone as much love as he had before, the belligerent, fighting element is replaced by a happy, cooperative attitude. (1928, p. 52)

"Although Adler's statements have a categorical ring to them, he made it clear that none of the effects needed to occur" (Sutton-Smith & Rosenberg, 1970, p. 4). Shulman and Mosak (1977, pp. 119-120), leading present-day Adlerians, draw attention to the following factors which influence birth order effects: age differences, large vs. small families, extra-familial competitors, sex differences, deaths, specialness of

one sibling, and availability of roles. Mosak goes so far as to say, "the individual's perceptions of his position and role and his conclusions about them, rather than the position itself, would constitute the subject of the Adlerian's study" (p. 117).

Nevertheless, despite Adler's favorite maxim, "alles kann auch anders sein [everything can also be different]" (Ansbacher & Ansbacher, 1956, p. 194), some nomothetic statements may be made about the birth order effects he avouched. This paper will next consider what characteristics Adler ascribed to persons in each birth order category.

Characteristics of the firstborn.

> I have always found that the firstborn possesses a sort of conservative tendency. He takes the element of power always into consideration, comes to an understanding with it and exhibits a certain amount of sociability. (1918/1973, p. 321)
>
> The eldest child, partly because he often finds himself acting as representative of the parental authority, is normally a great believer in power and the laws. (1929/1964, p. 101)
>
> Power is something which is quite self-understood for the oldest child, something which has weight and must be honored. It is not surprising that such individuals are markedly conservative. (p. 126)
>
> Oldest children generally show, in one way or another, an interest in the past....he likes to take part in the exercise of authority and he exaggerates the importance of rules and laws....Among such oldest children we find individuals who develop a striving to protect others and help them....sometimes they develop a great talent for organization....a striving to protect others may be exaggerated into a desire to keep those others dependent and to rule over them. (1931/1958, p. 147)
>
> He is very likely to be conservative, to understand power and to agree with it. If he is strong enough he becomes a fighting child. (1928, p. 14)

The foregoing quotations seem to point to five general characteristics: (1) conservatism, that is, an interest in and respect for the past and for the status quo; (2) law and order, a feeling that the

established practices and morality are good and right; (3) power, a belief that the powers that be are the powers which should be respected and obeyed; (4) responsibility, the acceptance of the duty and right to protect and help other people; (5) leadership, a belief that they have the ability and the right to lead other people. Obviously, these five attitudes are not independent; they are closely connected with one another. They add up to a syndrome, the attitude of the firstborn.

Characteristics of the second born.

> The striving for power in the case of a second-born child also has its especial nuance. Second-born children are constantly under steam, striving for superiority under pressure: the race-course attitude which determines their activity in life is very evident in their actions....The second born may place his goal so high that he suffers from it his whole life. (1927/1954, pp. 126-127)
>
> He is forever animated by a desire to win. But he does not value or recognize power. He fights against established power and is likely to be a revolutionary. (1928, p. 14)
>
> By this feeling for life as a race, however, the second child usually trains himself more stiffly, and if his courage holds is well on the way to overcome the eldest on his own ground. If he has a little less courage he will choose to surpass the eldest in another field, and if still less, he will become more critical and antagonistic than usual, not in an objective but in a personal manner....In later development, the second child is rarely able to endure the strict leadership of others or to accept the idea of "eternal laws." He will be much more inclined to believe, rightly or wrongly, that there is no power in the world which cannot be overthrown. Beware of his revolutionary subtilities! (1929/1964, pp. 105-106)
>
> He trains continually to surpass his older brother and conquer him. In dreams the firstborn is afraid of falling; the second "run after trains and ride in bicycle races." (1931/1958, p. 149)

The characteristics of the second born could be summarized as: (1) competitiveness, a feeling that they are in a race, an eagerness to catch up; (2) rebelliousness, a refusal to accept the status quo, an attitude of challenging the given order; (3) overambition, setting such

high goals that they either overexert themselves or give up in the face of such unattainable aims.

Characteristics of the lastborn.

> He is able as a rule to attract to himself all the love and tenderness of the environment without giving anything in return....he thus learns to expect to have everything done for him by others....A second type of last-born is the [biblical] "Joseph type." Restlessly pushing forward, they surpass everyone by their initiative, frequently transcending the normal and become pathfinders. (1918-1973, p. 322)

> His very place in life makes a speeder, trying to beat out all others, of the youngest....Among the youngest we find active and capable individuals who have gone so far that they have become the saviors of their whole family....Another type, which grows secondarily from the first, is often found....When a youngest child of this type loses his courage he becomes the most arrant coward that we can well imagine. (1927/1954, pp. 124-125)

> In the former case (of over-indulgence) the child will strive throughout life to be supported by others. In the latter case [of over-stimulation] the child will rather resemble a second child, proceeding competitively, striving to overtake all those who set the pace for him, and in most cases failing to do so. Often, therefore, he looks for a field of activity remote from that of the other members of the family--in which, I believe, he gives a sign of hidden cowardice. (1929/1964, p. 107)

> He faces the difficulties of a pampered child but, because he is so much stimulated, because he has many chances for competition, it often happens that the youngest child develops in an extraordinary way, runs faster than the other children, and overcomes them all....Youngest children are always ambitious; but the most ambitious children of all are the lazy children. Laziness is a sign of ambition joined with discouragement; ambition so high that the individual sees no hope of realizing it. (1931/1958, pp. 150-151)

To summarize, Adler describes two possible consequences of this birth order position. In the one case children are pampered and they respond passively, becoming dependent. In the other case the children are over-stimulated and they respond actively, becoming high achievers. They may turn out either the most successful or the most dependent and discouraged. In either case, the youngest would tend to exhibit what Karen Horney (1950, pp. 24-25) calls "the search for glory," a "neurotic

ambition.'' This leads to an underlying attitude which we would expect to find among the last borns: a sense of being somebody special, either expecially destined for greatness, or especially inferior and needy of support.

Characteristics of the only child.

> He becomes dependent to a high degree, waits constantly for someone to show him the way, and searches for support at all times. Pampered throughout his life, he is accustomed to no difficulties, because one has always removed diffidulties from his way. Being constantly the center of attention he very easily acquires the feeling that he really counts for something of great value. (1927/1954, p. 127)

> Retaining the centre of the stage without effort, and generally pampered, he forms such a style of life that he will be supported by others and at the same time rule them....Only children are often very sweet and affectionate, and later in life they may develop charming manners in order to appeal to others, as they train themselves in this way, both in early life and later. (1929/1964, p. 111)

> The difficulties of an only child are more or less known. Growing up among adults, in most cases looked after with excessive solicitude, with his parents constantly anxious about him, he learns very soon to regard himself as the central figure and to behave accordingly. (1933/1964, p. 230)

Adler, then, saw only children as growing up under special family conditions. Firstly, they have no siblings. Secondly, they are likely to be more pampered. Thirdly, the parents who choose to have only one child may be more timorous or more egotistical than most (Ansbacher & Ansbacher, 1956, p. 381). How they typically might develop under these circumstances may be seen in the above quotations.

Thus the characteristic attitudes one would expect to find in only children are: (1) dependency, an expectancy that other people will do things for them; (2) self-centeredness, lack of empathy, a feeling of being of greater value than other people; (3) a desire to rule others,

to put them into their service, often by pleasing or charming them.

Characteristics of the middle child.

Contemporary Adlerians often refer to the middle child concept, particularly with the term "squeezed middle." Adler's writings--at least those readily available in English--nevertheless, only hint obliquely at this category. In fact, in a 1928 publication Adler refers to the first, the second, and the third or youngest as the "three most important types of children" (p. 14). Some of his case studies, however, make it clear that "middle child" was a noteworthy psychological birth order position (see, e.g., "A Student Repeats a Grade" in Adler, 1963.) This position can be defined only rather subjectively. In a family with four children, for example, more or less equally spaced, numbers two and three might be called "middles." But more likely, number two is psychologically a "second," and number three is psychologically a "first," each being defined in terms of his relation with his perceived competitor. In a family of three, two of whom are close in age while one is more separated, they may be psychologically a first, a second, and an only, rather than a first, middle, and last.

Several of Adler's epigones have given us descriptions of what may be the characteristic attitude of a middle child, viz.:

> If there are three children, the middle child finds himself in a characteristic situation. He has neither the same rights as the older nor the privileges of the younger. Consequently, a middle child often feels squeezed out between the two. He may become convinced of the unfairness of life and feel cheated and abused. (Dreikurs, 1933/1950, p. 41)

> Middle child--there is a standard bearer in front and a pursuer in the rear. He is surrounded by competitors. He may feel squeezed into a small area in his search for significance....The

> middle child tends to be sensitive to mistreatment or unfairness. He is afraid he will miss out on his share. ("Shulman's view." Shulman & Mosak, 1977, p. 115)
>
> The middle child, having neither the advantages of the first nor the youngest, sometimes gets lost in the shuffle unless he succeeds in making a place for himself. He tends to feel squeezed out of place, a percept often accompanied by a concern with fairness and unfairness." (Forgus & Shulman, 1979, p. 105)

It is to be expected, then, that a middle child would be particularly sensitized to issues of fairness and justice, with perhaps a feeling of being cheated or unfairly deprived.

Opinions and Research About Birth Order by Non-Adlerians

Perhaps because birth order seems easily quantifiable, or because of its face validity, scholars keep churning out papers on this subject. Between 1967 and 1971, 272 studies appeared (Vockell, Felker, & Miley, 1973). Forer (1977) shows 375 of them merely between 1970 and 1976. Psychological Abstracts listed 300 references under "birth order" between October 1973 and March, 1979. Authors have reported significant correlations to personality adjustment and problems, education, need for achievement, intelligence, anxiety, need for affiliation, dependence, and conformity (Adams, 1972).

Yet this research has been subjected to repeated criticism In 1966 Warren reviewed the literature and decided that only two or three hypotheses were well supported, saliently, that "Firstborn of both sexes are more susceptible to social pressure and are more dependent than later born" (p. 38). He concluded that "birth order remains a confused but intriguing concept" (p. 48). Within a year both Altus (1966) and Kammeyer (1967) found significant birth order effects, but both of them said the reasons for these effects were unclear.

In 1972 separate critical reviews of the birth order literature appeared. Adams (1972) commented on the lack of a good theory of early socialization with which to guide research. He does not mention the phenomenological-cognitive Adlerian theory among the six which he lists and calls inadequate. He nevertheless concluded that at least two findings seem to be well supported, that firstborns are the most outstanding in educational attainment, and are the most affiliative and dependent. Schooler's (1972) critique is more mordant. He concedes that birth order may have affected personality in traditional societies, but not in modern America (pp. 172-173). He insists that few birth order studies which controlled for social class or family size showed important birth order effects. Breland (1973), in a rejoinder to Schooler, demonstrated that firstborns had higher verbal achievement, even after considering Schooler's caveats.

In a 1975 dissertation Vaughn factor analyzed the answers 102 undergraduates gave to six objective personality tests, and reached the conclusion that birth order was indeed related to their personality characteristics.

Among non-Adlerian authors who have written books about birth order effects are Forer (1969), Forer and Still (1976), Sutton-Smith and Rosenberg (1970), and Toman (1976). The latter two books cite large numbers of empirical studies, whereas Forer's books are more theoretical, popular, and speculative. Innumerable others have done empirical research on the subject. At this point, I shall only cite studies which support or contradict those characteristics of each birth order which are enunciated in the Adlerian literature.

The firstborn. Adlerians would expect that the following would be important issues or attitudes to firstborns: conservatism, law and order, power, responsibility, and leadership.

In a 1956 sociological study, Bossard and Boll describe the first-born in a large family as typically the most responsible one. Forer (1969) seems largely in agreement with Adler, often using cognate terms. He describes firstborns as "strong-willed and stubborn" (p. 33), "their consciences are more severe" (p. 34), "more socially conforming" (p. 35), "tends to carry the past into the present because he adheres to the standards of his parents and these standards come from the past" (p. 39). "The older child as an adult may still be controlling and anxious about achievement" (p. 53). "His seriousness, his adherence to relatively strict standards of behavior and his imposition of these on others, his tendencies to take charge of situations and to tell others what to do..." (p. 105).

Toman (1976) cites experimental evidence that "Oldest siblings and only children were found to be leaders of (male) youth groups (Bernhöft, 1967 [note 1]) and the elected class leaders in school (Oswald, 1963 [note 2]) more frequently than would be expected by chance" (p. 293). Osgood, Suci, and Tannenbaum (1957) found firstborns scored highest in the "power" dimension when rating themselves on the semantic differential. Moran (1967) found that firstborns had a greater need for recognition by others than later borns. Becker, Lerner, and Carroll (1966) and Becker and Carroll (1962) found that firstborn children are the most likely to conform to group consensus in contrived group conformity experiments.

In a study of 40 four-member, task-oriented student groups,

Klebanoff (1975) found firstborns to be significantly more likely to become task leaders. Zweigenhaft (1975) discovered that U.S. Senators (who would be expected to be interested in power, responsibility, and leadership) were firstborns in a significantly high proportion. Sutton-Smith and Rosenberg (1970) summarize a great many experiments as demonstrating firstborns are "conservative...of high conscience...powerful and domineering in their relationship to their subordinates" (p. 115).

Although the literature attributes many other characteristics to firstborns as well, such as anxiety, higher IQ, need for achievement, etc., it generally agrees with those attributes which Adler assigned to them, if it agrees at all with birth order effects.

At least five clear disconfirmations, however, appear in the recent empirical literature. Penn (1973), using the Rokeach Value Survey on 168 female undergraduates, concluded that the value system structure of the firstborns was not markedly dissimilar from later borns. Sandler and Scalia (1975) failed to find firstborns occupying more leadership roles in religious orders. Nystul (1976) administered the Tennessee Self-Concept Scale to 217 white undergraduates, and concluded that the mean scores of firstborns did not differ at the .01 level from the mean scores of later borns. Grossman (1974) looked for projected "aggressive drives" in TAT stories of college students. He found no differences in "aggressive projection" between firstborns and later borns. Biegelsen (1976) studied 1883 students, looking for differences between first and later borns with respect to vocational, academic, and personality variables. He concluded that the birth order effects may be important for any particular individual, but common effects were not significant.

Of course, these critics did not compare all five birth order positions, only firstborns vs. laterborns.

The second born. The Adlerian literature generalized that the second born would be competitive, rebellious, and overambitious--which could be expressed through overexertion or giving up.

Second borns have been dealt with far less in the non-Adlerian literature than have firstborns, onlies, and lasts. Often they are grouped with "later borns" (Forer, 1969; Forer & Still, 1976; Toman, 1976). Rarely is a distinction drawn between seconds and middles.

Perhaps researchers have not looked for competitiveness as a characteristic of second borns because of a problem in defining the concept. Adler and his followers see competition in situations which others might interpret as accommodation. Dreikurs and Soltz (1964) point out "Competition between children is expressed by their fundamental differences in interest and personality" (p. 29). Thus competition might consist in each seeking superiority, but via different routes. Adler enumerated three different ways second borns might compete with the firstborns, depending on how courageous the former might be. The second might set out to overcome the firstborn in the same area; he might try to excel in another area; or he might become personally truculent and antagonistic (1929/1964, p. 105).

Harris (1964) suggested that the second child would be a revolutionary, and pointed to Hobbes and Machiavelli as examples. But for the most part the non-Adlerian literature supplies scant support for the Adlerian view of the second born.

The lastborn. The Adlerian position predicts that the youngest child would have a sense of being somebody special, whether destined for greatness, or especially inferior and needy of support.

Forer (1969) does not address himself to this proposition, but instead observes other characteristics of the youngest. Nevertheless, he does indirectly uphold the contention that they will feel needy of support when he writes, "A frequent adjustment of the youngest is to find strength in his very weakness" (p. 125).

Otherwise, the literature neither supports nor weakens Adler's view. This is probably because almost all the research deals with overt behavior rather than with underlying attitudes or feelings about one's self.

The only child. Adlerians would expect to find dependency, self-centeredness, and a desire to rule others in an only child.

Rosenberg (1965) found only children to exhibit more self-esteem than others. This might be construed as self-centeredness. Sutton-Smith and Rosenberg (1970) claim that only children seem "driven to school grades, to college, and to eminence by a need to achieve" (p. 79). This might be understood as a desire to rule others. They also conclude that onlies are more dependent and self-esteeming (p. 152). Forer and Still (1976) state, "For the only child, particularly if a boy, the absence of competition seems to increase self-confidence" (p. 9). This "self-confidence" might equal self-centeredness plus a desire to rule others.

Falbo, on the other hand, concludes in his review of the only child literature that, "there is no evidence that supports the popular belief that only children are selfish" (1977, p. 57).

Many writers group onlies with firstborns in their analysis. Feldman (1978) raised the question in an empirical test of female only children as compared with firstborns. She used three psychological tests followed by a factor analysis. She concluded that the two groups were indeed different, the firstborns being more responsible, and the onlies more confident, resourceful, and assertive. At least obliquely, this would seem to buttress the Adlerian viewpoint.

The middle child. The concept of the "squeezed middle," who is sensitized to fairness and unfairness, does not seem to exist outside of the Adlerian literature. Forer and Still recognize the middle child position, but say, "the second of three is wedged in a situation which stimulates maximum competitive potential" (1976, p. 57). Sutton-Smith and Rosenberg found middle borns less achieving, more aggressive, less popular, and more role diffuse (1970, p. 154). This does not seem to confirm, but neither does it deny, the idea of the middle child as feeling cheated. However, it is questionable whether they defined "middle" the way an Adlerian would. They seem to mean any child between the oldest and the youngest.

Since this investigation will attempt to link birth order to style of life, in the next section I will discuss the meaning of "style of life."

Style of Life

This study might have related TAT stories to the "traits" (Cattell, 1957) of firstborns, second borns, and other sibling positions, or it might have investigated "needs" (Murray, 1951), "motives" (Maslow, 1970), "drives" (Brenner, 1955; Hull, 1951), or some other alleged element of personality. For that matter, it might have related the stories to some more global construct such as "personality," or "character." There is, however, a solid rationale for relating imaginative productions to style of life, as the term is understood by Adlerians.

Style and Life Style as Generally Used

First to be noted is that life style is used sociologically as well as psychologically. Max Weber (1946, pp. 187, 191, & 300; 1947, p. 429) used the term before Adler did. Weber, however, used life style to refer to what we would call subcultures or collective ways of life. He observed that those who earn their living in similar conditions also showed similarities in their dress, opinions, and habitual behaviors. It is probably from this use of the term that we derive the contemporary use of "lifestyle" (now usually written as a single word or hyphenated) to refer to an aspect of group dynamics of group behavior, as in "suburban lifestyle," "the lifestyle of the surfers," or whatever the real estate agents peddle when they hawk luxury condominiums as "lifestyles for sale."

These sociological and popular uses of lifestyle do indeed share a feature with the psychological sense of style of life. In both cases

they refer to a global, overall, holistic aspect of behavior and imply a hypothesis that somehow human nature, group or individual, is an emergent Gestalt rather than an "Und-Verbindung" (Max Wertheimer's term for the way the structuralists characterized mind as a bundle of discrete elements [see Boring, 1950, p. 600]).

Style is what makes both the Choral Symphony and Fidelio unmistakeably Beethoven although all the elements are different; it is what unifies Picasso's Guernica with his Demoiselles d'Avignon. "Style represents the most complex and most complete form of expressive behavior ....It involves the very highest levels of integration, reminding one of the concept of the 'total personality,'" wrote Gordon Allport in 1937 (pp. 489-490). Twenty-four years later he still observed, "We have made some progress in manufacturing building blocks (traits) and in labeling them, but little progress in architecture....Concepts such as congruence, life-style, total pattern remain for the most part mere concepts" (Allport, 1961, p. 386).

Besides the global quality, another generally understood aspect of style is that it implies creativity and self-shaping. In 1937 Allport wrote, "Style analysis refers to the study of all types of creative activity of a person" (p. 379). We commonly think of a computer as having a program, but not a style; style is generally reserved for humans and their creations.

A third aspect of style is its consistency. If a writer's opus showed no consistency, it would be devoid of a style. Most personality theorists would agree with Coleman (1972) that, "The individual tends

to develop a relatively consistent life style, an essential element of which is his motive pattern--the needs, goal objects, and means that characterize his strivings" (p. 114). The Freudian ego psychologist David Shapiro had recourse to the term when he described certain neurotics in his book Neurotic Styles (1965). He said style is "a mode of functioning...that is identifiable, in an individual, through a range of his specific acts" (p. 1). In this sense, Edward Spranger's Types of Men (1928) and Erich Fromm's "character orientations" (1947) obviously refer to generic styles of life. Indeed, "Le style est l'homme même [The style is the man himself]" (Buffon, 1753/1937).

Adler's Style of Life (Lebenstil)

Alfred Adler began using the term Lebenstil in 1929, although he had referred to the developing concept earlier with such terms as Lebensplan (life's plan), Lebenslinie (life line), Leitlinie (guiding line), and leitende Idee (guiding idea) (see Ansbacher, 1967). For Adler, psychic life was movement, not fixedness; becoming, not being (Adler, 1963, p. ix); so unlike Freud or Sullivan, he avoided the reification of concepts into catchy terminology. Lebenstil might as well be translated "style of life," or even "style of living," as "life style." In this paper the former is preferred because it is more indicative of movement and less like the faddish "lifestyle."

How Adler himself used the term. Although Robert Woodworth could write in 1948 that Adler's "conception of a 'style of life' is a valuable contribution to the still embryonic psychology of character and personality" (p. 197), Adler was by no means clear in defining the term. "Adler equates

life style variously with self, ego, a man's own personality, the unity of the personality, individuality, individual form of creative activity, the method of facing problems, the whole attitude to life, and other terms'' (Ansbacher, 1978, p. 353). Nowhere in his writings have I found an operational, or even a formal definition. Here I shall present a series of pertinent quotations from Adler, after which I shall attempt to summarize the concept as he used it and as his leading epigones construe it.

Already in 1926 Adler speaks of the ''life line'' as a person's ''total attitude toward life'' (p. 20). And he regards the person as ''a self-consistent being and thus as a goal-directed and purposeful whole'' (p. 400). The following further quotations from Adler illustrate the breadth and depth of the concept of style of life:

> The answers to the questions put by life are dictated, not by the truth of relations in themselves, but by certain automatised attitudes, which we call the <u>style</u> of the individual (1929/1964, p. 7)

> After his fourth or fifth year every individual possesses an established life style, and, according to his life style, the individual assimilates, applies, and digests the data of all later experiences. He draws from them only such conclusions as fit into his already established apperception schema, attaching importance only to those aspects of any experience which correspond with the picture of the world which he has already formed and with the particular life style which he has developed for coping with that world. (1930/1973, p. 122)

> What is new in the outlook of Individual Psychology is our observation that the feelings are never in contradiction to the style of life. Where there is a goal, the feelings always adapt themselves to its attainment. (1931/1958, p. 30)

> The life style dominates. The person is cast all of one piece. This you must find again in all its parts. In this self-consistent casting, the striving for fictive superiority is contained. (1932/1973, p. 198)

> I am convinced that a person's behavior springs from his opinion. We should not be surprised at this, because our senses do not receive actual facts, but merely a subjective image of them, a reflection of the external world. Omnia ad opinionem suspensa sunt....How we interpret the great and important facts of existence depends upon our style of life. (1933/1964, p. 19)

> Thus we reach the conclusion that every one possesses an "idea" about himself and the problems of life--a life-pattern, a law of movement--that keeps fast hold of him without his understanding it, without his being able to give any account of it. (1933/1964, pp. 26-27)

> The unity in each individual--in his thinking, feeling, acting, in his so-called conscious and unconscious--in every expression of his personality, we call the "life style" of the individual. What is frequently labeled the ego is nothing more than the style of the individual. (1935b, p. 7)

> The style of life arises in the child out of his creative power, i.e., from the way he perceives the world and from what appears to him as success. (1937/1973, p. 25)

To recapitulate and summarize: What permeates these comments is, above all, that Adler is talking about the self, "the indivisible unity that makes a particular individual different from all others, consistently and peculiarly himself" (Sahakian, 1977, p. 153). The style of life, as described in the above quotations, is, however, the self as discerned in a particular way--it is a statement about the essence and source of the self. Adler describes some attributes of the style of life, makes a statement about its genesis, and discusses its relation to overt behavior. Above all, though, Adler declares that the heart of the ego, self, or style of life is (a) the individual's idiosyncratic goal of superiority, his idea of what it means to be a success, to overcome (see Adler, 1963, p. 11, in which he asserts that anyone who is not feeble-minded has a goal, therefore a style of life.) The style of life includes (b) one's

attitudes, or opinions about oneself and about the environment. It also includes (c) one's apperceptive schema, or the filter through which one selectively perceives and interprets reality, thus cybernetically reinforcing one's Weltanschauung.

Individual Psychology is, then, a cognitive approach to personality which adumbrated other cognitive theories such as Personal Construct Theory (Kelly, 1955), Information Processing Theory (Attneave, 1959; Haber, 1969; Neisser, 1967), and Cognitive Dissonance Theory (Festinger, 1957; McClelland, 1951). Cognitive concepts such as attitudes, convictions, goals, set, and apperceptive schema are the essence of Adler's style of life. He goes on to describe some attributes of the life style: (1) It is what unifies and gives pattern to all aspects of one's thinking, feeling, and behaving. (2) It leads a person to be self-consistent, not, as Freud (1952-1974, passim) would have it, internally ambivalent and conflicted. (3) It is self-created by a trial-and-error process starting in earliest infancy, thus it is mostly non-conscious. (4) It guides overt behavior, emotions, symptoms, and thoughts, which are all goal-directed, and which serve synergistically to maintain the style of life.

How later Adlerians view style of life. Adler's epigones agree that most overt behavior is not a part of the style of life. "It seems that within a given life style a wide choice of actions is possible" (Dreikurs, 1967, p. 237). "Behavior may change throughout a person's lifespan in accordance with both the immediate demands of the situation and the long-range goals inherent in the life-style" (Mosak & Dreikurs, 1973, p. 40; cf. Sweeney, 1975, p. 7). Nevertheless, the "basic decisions about modi operandi" (Forgus & Shulman, 1979, p. 103) give

behavior its theme. In other words, the style of life may include convictions about what kinds of behavior are successful or moral. Ansbacher includes one's "characteristic way of striving for his goal" (1978, p. 353) as an integral part of life style. Finally, Shulman (1973) includes "methods that consistently throughout the life history of the person are used as behavioral techniques for striving toward the dominant goal" (pp. 25-26). One of his examples is the life style of the schizoid who consistently uses "distance-keeping" to achieve his goal of safety.

In 1954 Mosak summarized the style of life as a group of attitudinal convictions, including (1) the self-concept, (2) the self-ideal, (3) the Weltbild (a picture of the world), and (4) ethical convictions, ideas about personal right and wrong (Mosak 1954/1977, p. 52; Mosak & Shulman, 1961, p. 7). Shulman summarized the style of life as a " 'rule of rules' for the individual" (1973, p. 17), which develops "according to the rubric: 'I am thus, the world is so, life demands such and such, therefore...' " (1965, p. 18). Allen (1971) adds "it is in terms of the proposition which follows the 'therefore' that the person thinks, feels, perceives, dreams, recollects, emotes, behaves, etc." (p. 5).

It is evident that style of life has certain similarities to formulations which other personality theorists have made to account for the consistency and unity of behavior. The following is a partial list of such constructs: Radix (Max Wertheimer, cited in Allport, 1937, p. 147 & p. 358), unity thema (Murray, 1938), person (Stern, 1938), projective systems (Kardiner, 1939), phenomenal self (Snygg & Combs, 1949), neurotic claims (Horney, 1950), Einstellung (Luchins, 1951), dynamisms (Sullivan, 1953), supraordinate constructs (Kelly, 1955), the proprium

(Allport, 1955), self-identity (Erikson, 1959), plans (Miller, Galanter, & Pribram, 1960), assumptive system (Frank, 1961), being-in-the-world (Binswanger, 1963; Boss, 1963), generalized expectancies of reinforcement (Rotter, 1966), mode-of-existence (Van Kaam, 1966), ustanovka [set] (Uznadze, 1966), rule-governed behavior (Skinner, 1969), personality syndrome (Maslow, 1970), and cognitive structure (Forgus & Shulman, 1979).

Relation of Imaginative Productions to Style of Life

The term "imaginative production" is used here rather than the more common "fantasy production" so as to avoid the Freudian connotation of fantasy as "primary process" and "wish fulfillment" (Freud, 1900/1938). Both Holt (1961, p. 37) and Arnold (1962, pp. 10-11) agree that TAT stories do not represent fantasy in this sense. Arnold maintains that TAT stories reveal habitual convictions which motivate action, and do not "project" anything. She says that projection implies the nativist Kantian notion, subscribed to by Freud, that "mind has its own categories and forms sense data in accord with these categories, projecting the formed space-time objects outside" (Note 3).

A test of apperception, such as the TAT, would seem prima facie to be sensitive to style of life. In fact, Adler discussed "apperceptive schemas" (Ansbacher & Ansbacher, 1956, p. 2) and "tendentious apperception" (Adler, 1935a, p. 4) as factors which form and maintain the style of life.

> By the end of the fifth year of life...the world is seen through a stable scheme of apperception: experiences are interpreted before they are accepted, and the interpretation always accords with the original meaning given to life. (Adler, 1931/1958, pp. 12-13)

One definition for "apperception" is "the process by which the apprehended qualities of an object are articulated with similar, or related, already existing knowledge and attitude in such a way as to be understood" (English & English, 1958, p. 37). The term seems to be out of favor lately, perhaps because modern cognitive psychology recognizes that all perception is affected by previous knowledge and attitudes (Bruner, 1951; Neisser, 1967). Adler seems to have anticipated the "new look" in perception, but he and his followers were working in education, psychiatry, and counseling. Only recently have Adlerians had much involvement with academic experimental psychology (e.g., Ferguson, 1976; Forgus & Melamud, 1976).

If indeed birth order affects the style of life, and if at the heart of life style is a set of convictions about reality and a biased perceptual filter, then it follows that birth order should affect the apperception of equivocal pictures. "An ambiguous picture will be perceived in accordance with how the person in general regards himself and the world as part of his life style" (Tyler, 1977, p. 101).

Yet a computer search through the Psychological Abstracts uncovered only six papers which dealt with birth order and also used TAT cards. Not one of these studies looked for the characteristic attitudes predicted by Individual Psychology. One (Ziegler & Musliner, 1977) was about 30 firstborns only; a second (Grossman, 1974) looked for "aggressive drives" and compared only firstborns vs. later borns; a third (Eisenman & Hajcak, 1972) was a single case study; a fourth (Maitra & Banerjea, 1967) dealt with homosexuality in an Indian reformatory; a fifth (Rees & Palmer, 1970) was about I.Q. in India; and a sixth concerned "schizophrenogenic mothers" (Mitchell, 1968).

A search of the older Adlerian literature revealed two discussions of the use of imaginative material to investigate style of life. In 1936 Bader suggested that the play and spontaneous stories of children could be interpreted like their dreams, in accord with their styles of life. Then Seidler (1937) gave illustrations of how she used school compositions to uncover the styles of life of school children. However, both these papers were anecdotal rather than experimental.

The use of apperceptive tests such as the TAT, the Rorschach, and Early Recollections is taught at the Alfred Adler Institute of Chicago. Adlerians use them in their clinical work therapeutically, as well as to uncover life style convictions and current concerns of their patients (Mosak & Gushurst, 1972). But their writings on the subject are mostly about the use of their own speciality, Early Recollections (e.g., Adler, 1929; Mosak, 1958). As far as I can discover, none of them has tried to correlate supposed birth order effects with attitudes, themes, and concerns revealed through TAT stories.

CHAPTER II

STATEMENT OF THE PROBLEM

The present research, then attempted to test a theoretically plausible, but until now untested, expectancy about birth order effects in imaginative productions. It was proposed to discover whether the attitudes which subjects of five different birth orders expressed in TAT stories corresponded to those predicted by Adlerian theory.

A first problem was to determine whether TAT stories could be scored reliably for Adlerian themes, and whether suitable inter-scorer reliability could be achieved. If this were successfully demonstrated, then the principal problems could be investigated. These were, firstly, whether there really were birth order effects in the themes or attitudes which appeared in the TAT stories. Were we actually dealing with five differing populations, or not? The second principal problem was whether the attitudes which subjects of different birth orders expressed in their TAT stories indeed corresponded to those predicted by Adlerian theory.

Ten themes were named and defined for the purposes of this study. For each theme or attitude, it was hypothesized that subjects of a certain birth order would exhibit it more than would other subjects. Thus were derived the following ten hypotheses:

1. Conservatism would be disproportionately exhibited by first-borns.

2. Responsibility and leadership would be disproportionately exhibited by firstborns.

3. Competitiveness would be disproportionately exhibited by second borns.

4. Overambition would be disproportionately exhibited by second borns.

5. Rebelliousness would be disproportionately exhibited by second borns.

6. Specialness would be disproportionately exhibited by lastborns.

7. Dependency would be disproportionately exhibited by lastborns and only children.

8. Self-centeredness would be disproportionately exhibited by only children.

9. Manipulativeness would be disproportionately exhibited by only children.

10. Fairness would be disproportionately exhibited by middle children.

Since the subjects consisted of three different age cohorts, it was also planned to investigate age effects for these same themes, but no specific hypotheses about age effects were proposed.

CHAPTER III

METHOD

Materials

The analyzed materials consisted of 750 stories told in response to TAT cards. The stories had been given by 75 youngsters when shown the following ten TAT cards: 1, 2, 3BM, 4, 6BM, 7BM, 8BM, 10, 14, and 16. Aaron Cooper had collected the stories for his doctoral dissertation (Cooper, 1977). He had presented the TAT cards and collected the stories under the conditions and following the instructions recommended in the TAT manual (Murray, 1943). Details of the method of presentation and collection are in the dissertation (Cooper, 1977, pp. 53-56).

Subjects

The subjects were 25 11-year-olds, 25 14-year-olds, and 25 17-year-olds, all white males. They were ramdomly selected from two urban schools located in a middle to upper-middle class neighborhood. School drop-outs, institutionalized youngsters, learning-disabled, or emotionally disturbed were excluded. They were non-typical of the general population in that Jews were over-represented, and their economic status was higher than average. Table 1 gives demographic information on the subjects.

The birth order of the subjects was ascertained by asking them to list the ages of all their siblings. Unfortunately they were not asked about deceased siblings, stillbirths, or other children close enough so

TABLE 1*

Background Information On 75 Subjects

		AGE		PARENTS' MARITAL STATUS△				RELIGION¤				
Group	N	Range	Mean	M	S	D	W	J	C	P	O	N
Pre-adolescent	25	10.5-11.5	11.1	23 (92%)	0 -	2 (8%)	0 -	16 (64%)	6 (24%)	2 (8%)	1 (4%)	0
Mid-adolescent	25	13.5-14.5	13.9	19 (82.6%)	0 -	3 (13%)	1 (4.3%)	18 (78%)	2 (8.7%)	3 (13%)	0 -	0 -
Late-adolescent	25	16.5-17.5	17.0	22 (88%)	1 (4%)	2 (8%)	0 -	19 (76%)	0 -	4 (16%)	0 -	2 (8%)

△ Marital status categories include: married (M), single (S), divorced (D), and widowed (W).

¤ Religion categories include: Jewish (J), Catholic (C), Protestant (P), Other Religion (O), and no religious affiliation (N).

* From Cooper, 1977, Table 3, p. 54

as to be virtual siblings. According to Adlerian theory these may have affected the child's felt position in the family constellation. For the purposes of this paper, however, these possible influences were ignored.

The birth orders were assorted into firstborns, second borns, middle children, lastborns, and only children. Each category was further divided into "sure" and "probable" groups. "Sures" were those for whom the prima facie ordinal position corresponded with the presumed psychological birth order. "Probables" were those who were assigned into a birth order category which either contradicted ordinal position or whose ordinal position was ambiguous. Idioms which I followed in these cases were the following: (1) An interval of more than six years between adjacent siblings was considered to create separate sibships. (2) A sibship of three was considered a first, middle, and last. (3) A sibship of four was considered a first, second, first, second. (4) A sibship of more than four was divided into groups of two or three according to their spacing; the subject was then assigned his birth order according to his position within his sub-group. There were 60 "sures" and 15 "probables". Table 2 shows the numbers of subjects in each category.

TABLE 2

Number of Subjects by Age, Birth Order, and Sure△ or Probable¤

Sure or Probable	Age	First Born	Second Born	Middle Child	Last Born	Only Child	Totals
Sure	11	12	5	0	4	1	22
	14	7	2	3	3	1	16
	17	8	4	2	4	4	22
	Total	27	11	5	11	6	60
Probable	11	2	1	0	0	0	3
	14	3	0	2	2	2	9
	17	1	2	0	0	0	3
	Total	6	3	2	2	2	15
Total Sure & Probable	11	14	6	0	4	1	25
	14	10	2	5	5	3	25
	17	9	6	2	4	4	25
	Total	33	14	7	13	8	75

△ "Sure" means the subjects' prima facie ordinal position corresponded to assigned birth order.

¤ "Probable" means the subjects' assigned psychological birth order for the purposes of this study differed from prima facie ordinal position.

Procedure

Judges

Two judges scored the stories. A third potential judge was dropped because he persisted in using his own criteria. Neither of the judges had read any books on Adlerian psychology, birth order effects, or apperceptive tests. One was a 25-year-old single woman doing graduate work in Fine Arts. The other was a 57-year-old married man with a B.A. in Economics. The former was paid, while the latter worked gratis. I worked along with each of them separately, scoring TAT stories other than the ones finally selected, until I was satisfied they understood my criteria and could score the stories approximately as I would. They were allowed to see each TAT card prior to scoring the stories based on that card. They were aware that the research had to do with age and birth orders, but they did not know my hypotheses. The stories were presented to the judges in order of TAT card, and the 75 stories pertaining to each card were randomized by shuffling. The judges soon broke the age code, but there was no coding at all on the stories as to birth order.

Criteria

Judges were presented with a check list of ten descriptions of attitudes or themes. They were requested to check, on a 5-point ordinal Likert-type scale, the degree to which each story reflected each attitude of theme, either on the part of the author or on the part of any of the characters in the story.

Each of the themes was given a working definition in phenomenological terms. A group of statements were given which expressed the point

of view or attitude of a person with that characteristic. These statements were in terms of typical life style convictions.

The themes or attitudes which the judges were asked to look for were the following:

(1) Conservatism. I respect law, order, and power. I believe that the best ways are the present or the old ways. Rebels, lawbreakers, and upstarts deserve punishment. The powers that be and the established morality should be respected and obeyed.

(2) Responsibility and leadership. I should do my duty. I have the right, ability, and the duty to help, guide, and protect other people. I believe I should be in charge.

(3) Competitiveness. I am eager to catch up with and surpass other people. I feel like I am in a race.

(4) Rebelliousness. I think that things are not the way they should be. I refuse to accept the status quo. I want to challenge and change the established order.

(5) Overambition. I set very high goals, which are hard to achieve. In the face of such lofty goals I either (a) overexert myself, or (b) give up trying.

(6) Specialness. Either (a) I feel that I have an important mission in life, or that I am destined for greatness, or (b) I feel especially flawed, less capable than others, and in need of support.

(7) Dependency. I consider it perfectly normal and right that other people should do things for me.

(8) Self-centeredness. I fail to take the feelings of other people into consideration. I feel that my point of view is the only valid one. I feel of greater value than other people.

(9) Manipulativeness. I tend to put other people into my service by charming them, by pleasing them, or by cajoling them.

(10) Fairness. I am sensitive to fairness and justice. I often feel cheated or unfairly deprived. It is important to me that people get their just deserts, no more and no less.

The judges soon came to share understanding of what I was seeking. For example, they learned to distinguish between a feeling of weakness or inferiority (one form of "specialness") and an expectancy that other people can be put into one's service ("dependency.")

The order of the ten themes was randomized with the use of a random number list prior to printing the scoring forms.

Scoring

For each story the judges were requested to fill in a form which had a 5-point scale for each of the ten themes. For each theme the judge was to indicate one of the following options: (1) There is no evidence of any interest in this theme. It is completely irrelevant. (2) There seems to be some interest in this theme, but it does not seem of much importance or is not made explicit. (3) The theme is definitely present and made apparent in a clearly definable way. (4) The theme is repeated more than once, or is dominant in the story. (5) The writer seems to make this theme the whole point of the story.

The appendix shows a copy, reduced in size, of the scoring form.

RESULTS

Mean Scores

Mean scores were calculated for each theme by assigning a value of 0 to "no evidence," 2 to "some interest," 3 to "definitely present", 4 to "repeated, dominant," and 5 to "whole point" on the scaling. It was felt that the psychological distance between "no evidence" and "some interest" was greater than that between any two other adjacent levels. Table 3 shows the mean scores, averaged for the two readers, for each theme on each card, plus overall means for each card and each theme. Card 2 elicited the fewest scorable responses.

Reliability

The reliability of each theme was assessed by means of Cronbach's Alpha. The results were very good for a projective instrument, ranging from .73 to .92, with a mean for the 10 themes of .86. See Table 4.

Inter-Rater Reliability

The scorings of the two judges were correlated by calculating a Pearson r for each of the 10 themes on each of the 10 cards. This yielded 100 inter-rater reliability coefficients. They varied from .49 to 1.00, all significant beyond four decimal places. Table 5 shows all the 100 inter-rater reliability coefficients, plus averages for each card and for each theme. The overall mean inter-rater reliability coefficient was .89.

TABLE 3

Mean Scores (Averaged for the 2 Readers) for each TAT Card and Each Theme

CARD NUMBER	1	2	3	4	6	7	8	10	14	16	Means for Themes
Conservatism	.6800	.2267	.5467	.2066	.3867	.6000	.5666	.3733	.3600	.3134	.4260
Competitiveness	.1400	.1133	.0267	.2600	0.0000	.1533	.1800	.1000	.0533	.6867	.1713
Fairness	.2533	.4200	.3800	.1800	.2400	.3667	.2867	.1534	.3800	.2200	.2880
Manipulativeness	.0533	.0734	.0400	.2067	0.0000	.2133	.0534	.1467	.0400	.1200	.0947
Specialness	.2600	.2000	.1333	.1866	.1800	.2467	.4067	.1600	.7400	.4933	.3007
Self-Centeredness	.0134	.2400	.1533	.4067	.4000	.5266	.1600	.1400	.2934	.1133	.2447
Dependency	.1800	.0534	.6334	.0733	.3000	.3067	.4200	1.0534	.2466	.1934	.3460
Rebelliousness	.7733	.0734	.2267	.1200	.1400	.2066	.0333	.0666	.2867	.1133	.2040
Responsibility & Leadership	.1000	.4733	.1200	.6200	.6200	.8933	.6133	1.0933	.4067	.4200	.5360
Overambition	.1134	.0733	0.0000	0.0000	.1000	.2000	.0534	.0800	.1800	.1666	.0967
MEANS FOR CARDS	.2567	.1947	.2260	.2260	.2367	.3713	.2773	.3367	.2987	.2840	.2708

TABLE 4

Reliability (Cronbach's Alpha) of Each Theme

1.	Conservatism	.79351
2.	Competitiveness	.76945
3.	Fairness	.92366
4.	Manipulativeness	.81270
5.	Specialness	.84151
6.	Self-Centeredness	.73317
7.	Dependency	.68489
8.	Rebelliousness	.77512
9.	Responsibility	.76510
10.	Overambition	.71938
	MEAN	.86003

TABLE 5

Mean Inter-Judge Reliabilities (Pearson *r*'s) for Each TAT Card and Each Theme*

CARD NUMBER	1	2	3	4	6	7	8	10	14	16	Means for Themes
Conservatism	.9838	.4965	.8787	.8630	.8230	.9413	.9528	.8212	.8786	.7916	.8430
Competitiveness	.9855	.5508	1.0000	.9595	¤	.9394	.9789	.8423	1.0000	.9527	.9121
Fairness	.9069	.7862	.9092	.9270	.9555	.9135	.9941	.9135	.9107	.9431	.9160
Manipulativeness	.8297	.5059	1.0000	.9779	¤	.9622	.8297	.7608	1.0000	1.0000	.8740
Specialness	.8877	.6943	.9595	.9853	.9270	.9256	.9494	.9790	.8686	.9141	.9091
Self-Centeredness	Δ	.8075	.9849	.9256	.8870	.9710	.7879	.7896	.7980	.7005	.8502
Dependency	.9225	.8297	.9211	.8533	.9184	.9130	.8829	.9074	.8984	.9856	.9032
Rebelliousness	.9731	.9533	.8398	.7516	.7896	.8782	1.0000	.8109	.8849	.9132	.8795
Responsibility & Leadership	.8767	.9737	.9635	.9258	.9263	.8496	.8834	.8904	.8960	.7580	.8943
Overambition	.9894	.9921	¤	¤	.9818	1.0000	.5695	1.0000	.9905	.9899	.9391
MEANS FOR CARDS	.9284	.7590	.9396	.9077	.9011	.9294	.8829	.8715	.9126	.8949	.8924

* All significant beyond 4 decimal places.
Δ Not computable because one Judge had no scores in this cell
¤ Not computable because neither Judge had scores in this cell

Overall Significance of Age, Birth Order, and Interaction

Before considering the tenability of the initial hypotheses about the effects of birth order on attitudinal themes, it was first considered important to test for the overall significance of age and of birth order. That is, did age really make a difference in which themes the subjects exhibited? Did birth order make a difference? If not, any further statistical analysis would have been unwarranted. One or another effect may seem to be significant, yet still be accidental, because there were so many individual effects to be tested.

A multivariate analysis of variance was performed to test for overall age and birth order effects. A significant overall age effect was found, F (20,102) = 1.96, p = .0153. Also a significant overall birth order effect was found, F (40,202) = 5.40, $p < 0.0001$. A significant age x birth order interaction was not demonstrated, F (70,352) = .94, p = .6168. Independent analyses for specific age and birth order effects were therefore justified, while ignoring interaction effects.

Age Effects

Although no particular age effects were hypothesized, age was found to be significant beyond the .05 level on seven of the ten themes. See Table 6. However, age effects accounted for very little of the variance, 7.8% at the most. The themes which showed the greatest age effects were Fairness, Dependency, and Self-Centeredness. Of the three, only Self-Centeredness showed a constant increase with age. Perhaps this says something about growing up in upper-middle-class America. It may also speak to the psychoanalytic-vs.-Vygotsky (1934/1963) traditions in developmental theory. The former sees individuals as proceeding from

TABLE 6

Scores (Means of 2 Readers) For Each Age on Each Theme For All 75 Subjects, with Results of ANOVA's For Age Effects

	Mean All Ages	Age 11	Age 14	Age 17	$F(2,61)$*	p	% of variance accounted for by age ($100r^2$)	% of variance accounted for by age, birth order, and interaction
n	75	25	25	25				
Conservatism	8.520	7.920	9.920	7.720	.52	.5997	1.3	25.75
Competitiveness	3.427	2.840	2.640	4.800	1.39	.2571	3.0	34.85
Fairness	5.507	3.120	9.760	3.640	3.28	.0443	7.8	27.12
Manipulativeness	1.893	1.920	1.160	2.600	.75	.4823	1.5	37.47
Specialness	6.013	5.520	7.240	5.280	.51	.6041	1.0	37.99
Self-Centeredness	4.893	3.360	4.640	6.680	3.77	.0287	5.4	56.11
Dependency	6.920	6.080	9.280	5.400	3.24	.0462	7.1	32.72
Rebelliousness	4.680	4.360	3.880	5.800	.96	.3901	1.6	49.13
Responsibility & Leadership	10.333	8.400	12.400	10.200	1.60	.2110	3.5	32.73
Overambition	1.933	1.880	1.880	2.040	.03	.9740	0.0	55.86

* Result of analysis of variance (2,61) for significance of effect of age scores of themes.

"primary narcissism" to socialization. The latter sees all psychological processes as initially social, then developing to become more individual and internal. The Adlerian view approximates that of Vygotsky, for Adler believed the natural tendency was toward social interest. These data seem to support the Vygotsky viewpoint.

Fairness showed a strong U-shaped curve, being more important to 14-year-olds than to 11- or 17-year olds. Perhaps 14 is the age when children discover this is not a fair world. At 17 they may begin to become reconciled to this fact.

Table 6 also shows the total percentage of variance accounted for by age plus birth order plus the age x birth order interaction, combined.

Birth Order Effects

All birth order hypotheses were confirmed, with a high degree of probability. Table 7 shows the mean score for each theme for each birth order. It also shows the results of an analysis of variance which was performed for each theme. The birth order effect was highly significant in every case. Birth order accounted for 4% to 40% of the variance, most for overambition and self-centeredness, least for rebelliousness. Perhaps rebelliousness is more widespread among all adolescents.

Table 8 shows the results of planned comparison contrasts which were calculated in order to test the predicted differences among birth orders for each theme. In each case the weighting was placed on the birth order group which was hypothesized to exhibit that theme. The specific predicted birth order effects were confirmed with a high degree of probability.

TABLE 7

Scores (Means of 2 Readers) For Each Birth Order On Each Theme For All 75 Subjects, With Results of ANOVA's For Birth Order Effects

Theme	First Born	Second Born	Middle Child	Last Born	Only Child	F(4,61)*	p	% of variance accounted for ($100r^2$)
n	33	14	7	13	8			
Conservatism	12.970	4.500	6.571	5.385	4.000	4.34	.0037	21.1
Competitiveness	2.758	9.143	3.000	0.615	1.125	5.92	.0004	28.9
Fairness	3.061	3.214	19.714	7.769	3.500	3.22	.0183	15.4
Manipulativeness	0.606	2.500	1.714	0.308	8.875	6.87	.0001	28.2
Specialness	3.333	3.857	3.000	15.462	8.125	6.88	.0001	28.0
Self-Centeredness	3.273	3.429	3.000	4.615	16.250	14.53	.0001	41.8
Dependency	4.727	6.571	6.714	12.154	8.250	3.89	.0071	17.2
Rebelliousness	2.909	13.286	5.000	0.385	3.625	13.02	.0001	4.3
Responsibility & Leadership	13.879	7.143	11.000	9.462	2.125	4.90	.0017	21.6
Overambition	1.182	6.857	0.571	0.000	.750	13.88	.0001	40.1

* Result of analysis of variance (4,61) for significance of effect of birth order on scores of themes.

TABLE 8

Results of Planned Comparison Contrasts to Test Hypotheses About Birth Order Effects

WEIGHTS						POOLED VARIANCE ESTIMATE			
Firstborn	Second Born	Middle Child	Last Born	Only Child	THEMES	All 75 Subjects T (1,70)	p	60 "sures" Only T (1,55)	p
-4	1	1	1	1	Conservatism	-4.041	0.000	-3.609	0.001
1	-4	1	1	1	Competitiveness	-4.677	0.000	-3.740	0.000
1	1	-4	1	1	Fairness	-3.834	0.000	-4.758	0.000
1	1	1	1	-4	Manipulativeness	-4.751	0.000	-8.232	0.000
1	1	1	-4	1	Specialness	-4.570	0.000	-5.625	0.000
1	1	1	1	-4	Self-Centeredness	-7.405	0.000	-8.298	0.000
2	2	2	-3	-3	Dependency	-2.532	0.014	-2.843	0.006
1	-4	1	1	1	Rebelliousness	-6.710	0.000	-6.780	0.000
-4	1	1	1	1	Responsibility & Leadership	-3.355	0.001	-3.091	0.003
1	-4	1	1	1	Overambition	-6.454	0.000	-5.449	0.000

A further comparison was made--see Table 8. Before starting the experiment I divided the subjects into "sure" and "probable" representatives of each birth order. By "sures" I meant those whose birth order was incontestable, prima facie, and equal to their ordinal position. The final comparison was done using just the 60 "sure" subjects. As would be expected, the $\underline{T}$ values and the $\underline{p}$'s were also very high. In other words, the use of the "probables" did not substantially change the results.

CHAPTER V

DISCUSSION

This seems to be the first experimental study which uses TAT stories to test the principal Adlerian hypotheses about the relation of life style convictions to birth order. The results were positive in every case. This research indicates that firstborns are especially attuned to or favorable to conservatism and responsibility/leadership; second borns to competitiveness, rebelliousness, and overambition; middle children to fairness; lastborns to specialness and dependency; and only children to manipulativeness, self-centeredness, and dependency. At least this seems to be the case when these themes are defined as they are in the scoring forms used in this study, that is, as certain attitudes about oneself, one's relations with others, and ethical postures.

It was also demonstrated that two judges could reliably rate TAT stories for Adlerian attitudes. Finally, several age effects were discovered.

Perhaps the reason this research showed more positive birth order effects than many others is because it set out to relate these effects to Adler's "style of life" rather than to actions. In Adlerian theory, thinking, feeling, and acting derive from intentions and goals. Goals in turn are intimately related to life style convictions. So these differences in the attitudes of different birth orders would be expected to affect overt behavior. But the same action can be motivated by quite different life style attitudes and goals. As long as actions are the focus of study, birth order differences may become obscured. The

question is, for what purpose or due to what world-view does the person act? X may become a policeman due to a respect for law and order; Y may do the same as a way to fulfill a mission; Z in order to dominate other people. Thus the same behavior may be undertaken for reasons related to the style of life of a firstborn, a lastborn, or an only child. The analysis of imaginative productions helps uncover the style of life, but to analyze actions the observer must also consider the exogenous situation and the individual's typical modus operandi. There is nothing in this research to indicate whether or in what manner these convictions or attitudes become operative in any behavior other than composing TAT stories.

The theory which this research supports can be useful in clinical work, in personality assessment, and in personality research. Just to know the psychological birth order of patients or subjects can suggest some probabilities about their personalities and about the particular convictions and attitudes under which they operate. Presented with a compulsive client, for example, a therapist might investigate what psychological function this compulsiveness subserves. In the case of a firstborn it may be an exaggerated demonstration of responsibility ("I must see that everything goes perfectly.") In an only child it might subserve self-centeredness ("I'll do it my way.") In a second born it may show overambition ("Anything worth doing at all is worth overdoing.")

It would be profitable to replicate this research with other populations, since these 75 youths represent only a subset of the general public. In race, religion, class, and historical epoch they are rather

homogenous and atypical. It is also conceivable that in some way experimenter bias or the judges' desire to be helpful may have contributed to the rather powerful positive results.

Another finding, which might bear some theory-based research, emerged from a perusal of the mean scores per theme (Table 3). If the means are divided by the number of subjects who would be expected to express that theme, some interesting irregularities emerge. There was an average score of .288 for fairness, which, divided by seven (for seven middle children) yields .0411. There was an average score of .0967 for overambition, which, divided by 14 (for the 14 second borns) yields only .0069. The other scores when corrected for expectancy range between these. A study of these means may reveal something about the average style of life of this population.

It might also be of interest to follow up the apparent age effects with some theory-based research.

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APPENDIX A

SCORING FORM (Reduced in size)

Subject number _____

Story number _____

Reader _____

	1 There is NO EVIDENCE of any interest in this theme. It is completely irrelevant.	2 There seems to be SOME INTEREST in this theme, but it does not seem of much importance or is not made explicit.	3 The theme is DEFINITELY PRESENT and made apparent in a clearly definable way.	4 The theme is REPEATED more than once, or is DOMINANT in the story.	5 The writer seems to make this theme the WHOLE POINT of the story.
CONSERVATISM. I respect law, order, and power. I believe that the best ways are the present or the old ways. Rebels, lawbreakers, and upstarts deserve punishment. The powers that be and the established morality should be respected and obeyed.		C O N S	E R V A T	I S M	
COMPETITIVENESS. I am eager to catch up with and surpass other people. I feel like I am in a race.	C	O M P E	T I T I V	E N E S S	
FAIRNESS. I am sensitive to fairness and justice. I often feel cheated or unfairly deprived. It is important to me that people get their just deserts, no more and no less.		F A	I R N E	S S	
MANIPULATIVENESS. I tend to put other people into my service by charming them, by pleasing them, or by cajoling them.	M	A N I P	U L A T I	V E N E S	S
SPECIALNESS. I feel either (a) that I have an important mission in life or am destined for greatness, or (b) that I am especially flawed, less capable than others, and in need of support.		S P E	C I A L	N E S S	
SELF-CENTEREDNESS. I fail to take the feelings of other people into consideration. I feel that my point of view is the only valid one. I feel of greater value than other people.	S E	L F - C	E N T E R	E D N E	S S
DEPENDENCY. I consider it perfectly normal and right that other people should do things for me, protect me, and attend to me.		D E	P E N D E	N C Y	
REBELLIOUSNESS. I think that things are not the way they should be. I refuse to accept the status quo. I want to challange and change the established order.		R E B E L	L I O U	S N E S S	
RESPONSIBILITY and LEADERSHIP. I should do my duty. I have the right, ability, and the duty to help, guide, and protect other people. I believe I should be in charge.	R E	S P O N S I B	I L I T Y and	L E A D E R S	H I P
OVERAMBITION. I set very high goals for myself, which are hard to achieve. In the face of such lofty goals I either (a) overexert myself, or (b) give up and cease trying.		O V E	R A M B I	T I O N	

APPROVAL SHEET

The thesis submitted by Norman N Silverman, has been read and approved by the following committee:

James E. Johnson, Ph.D.,
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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

April 16, 1960
Date

James E. Johnson
Director's Signature