

# The Affect of Birth Order on Intelligence and Personality

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## Introduction

As each child is born, they enter into a different environment than the previous child. Because parents are more experienced upon arrival of a second child, they may be calmer, yet now, the children need to compete for their parents attention and resources (Zanjonc 2001). According to the 2004 government census (<http://factfinder.census.gov>) the average family size in the United States in 2004 was 3.18. Therefore, in most families, there is a first born, middle child and last born. The different environments these successive children are born into may affect them in different ways.

The ways in which birth order and family size can effect the development of a child has been studied in many ways. Researchers have looked for a link between birth order and a number of human conditions, from intelligence and personality to homosexuality (Bogaert 2002), risk of cancer (Brown 2001) and sports anxiety (Flowers and Brown 2002). Researchers have even looked for a connection between birth order and the chances of a child having an imaginary friend (Bouldin and Pratt 1999).

Almost everyone has some preconceived notion of the stereotypical personality of the first-born verses the later-born. Herrera and Zonjanc (2003) conducted research on what people's beliefs were about personality traits of children with different birth rank. They found that first-borns were considered the most intelligent, responsible, obedient, stable, the least emotional and the least creative. Middle children were considered envious. Last-borns were seen as creative, emotional, extroverted, disobedient, irresponsible and talkative. Only children were considered disagreeable. There were also differences in

what occupation children of differing birth rank were expected to have. Participants in the study believed that first-borns were more likely to be an accountant, airline pilot, architect, professor, teacher, lawyer or doctor to name a few. Last-borns on the other hand were seen to be more likely to work as actors, artists, musicians, photographers or firefighters.

Are these stereotypes accurate? How does birth order actually affect intellectual development, personality and behavior? Understanding how birth order can affect a child can help make parents and society more sensitive to the unique situation each child is born into and can help parents and caregivers mold their care giving techniques to fit the child's unique needs, whether it's helping to mitigate differences in birth rank or to just appreciate the differences and uniqueness in personality that birth rank can bring. In this paper I will examine the effect of birth order and family size on personality, and intelligence.

## Discussion of Research

### The birth order intelligence connection

Herrera and Zonjanc (2003) found that the number of years of schooling decreased for each successive child in a family. For example, first-borns completed an average of 12 years of schooling in this study, while 4<sup>th</sup> borns completed only 10 years. Additionally, Zonjanc and Mullally (1997) found that as the birth rank of a child increases (the later born they are born) the child's SAT score decreased. Other researchers, however, have found no difference in intelligence between children of different birth order. Rodgers

(2001) has failed to find a connection between intelligence and birth order. This discrepancy between Zonjanc and Rodgers seems to be primarily due to the way data is gathered. Zonjanc used cross-sectional data, where a large number of first-borns across many families are compared to large numbers of later-borns across many families.

Rodgers claims this is flawed because it ignores intra-family effects of birth order on IQ. Instead Rodgers compares first-borns to later-borns within families. As it turns out, cross-sectional data supports the association between birth order and intelligence. Rodgers claims that within family data do not support such conclusions.

#### What causes birth order intelligence patterns?

Zonjanc (2001) offers a reason for this discrepancy in intellectual performance between first and last-borns. He suggests that an older child, until the birth of younger siblings, will be exposed to only adult language, while later-borns will be exposed to adult language but also to the less mature vocalizations of their older siblings. This essentially dilutes the verbal environment of the younger sibling. This dilution becomes more pronounced for each additional child born. This differential exposure to mature language may be the reason for later-borns reduced performance on verbal fluency, vocabulary and reading comprehension tests as compared to first-borns. An additional reason put forth by Zonjanc (2001) is that older children have the opportunity to fulfill the role of tutors to younger siblings. This may give older children an intellectual advantage, because they get the benefit of practice by having to explain the meaning of words to younger siblings. If a child is the last-born, they do not get the advantage of playing tutor to younger siblings.

### Birth Order and the Personality connection

Sulloway (1997) argues that birth order explains the vastly different personalities that siblings seem to have. He argued that the sibling's first goal is to find a family niche. This spawns competition between siblings for parental resources and as first-borns development strategies compete within the family, this encourages later-borns to development counterstrategies, resulting in what he calls an "evolutionary arms race". It is this competition to find a family niche and the strategies that result from that competition that cause the vastly different personalities seen among siblings. But is there empirical evidence to support the theory that there is a relationship between birth order and personality traits? As it turns out, there is. Eckstein (2000) did a survey of 151 empirically based studies, which found a statistically significant connection between birth order and personality. Out of these 151 studies, he found some common trends. For the oldest sibling, the six most frequently appearing personality attributes were highest achieving, highest IQ, greatest academic success, highest motivation, overrepresented among learned groups and the most affected by stress. For the middle child, the three most common attributes found were, fewest acting out problems, sociable and feelings of not belonging. For the youngest sibling, the three most common attributes found were, greatest overrepresentation of psychiatric disorders if from a small family, empathetic and tendency toward alcoholism. Most popular and creative received an honorable mention. Finally, the four most common personality attributes found among only children were, the most need for achievement, higher achievers than all except for first-borns, most likely to go to college and the most behavior problems.

These findings differ slightly from the beliefs people have about personality attributes associated with children of different birth order as discussed in the introduction, however there are some striking similarities. For example, first borns were considered the least emotional, although the above studies found them to have the most tendencies toward being “stressed-out”. The perception, however, that first borns were considered more intelligent than later borns, appears to have some merit, as oldest children appear to be higher achieving, have higher IQ and more academic successes. We need to be cautious, however, at attributing those traits to higher intelligence, as there are many different types of intelligences. Middle children were perceived as being the most envious, although studies found them to be sociable and having the fewest acting out problems. Researchers did, however, find them to have the greatest feelings of not belonging, which could contribute to the perception that middle children are “envious”. Some of the personality beliefs about last borns were fairly accurate. For example, last-borns were perceived as being extroverted, talkative and emotional, and indeed, it was found they were more popular and empathetic. They were also found to be more creative than first or middle-borns. Only children were perceived as being the most disagreeable, and indeed it was found they had the most behavioral problems. However, it should be mentioned that it was found, although to a lesser degree, that only children were also trusting and cooperative.

Zweigenhaft and Von Ammon (1999) conducted a study in which they looked at the effects of birth order on civil disobedience. They found that during a labor strike, later

borns were more likely to be arrested than first borns, supporting Sulloway's (1997) theory that later-borns are more likely to challenge the status quo than first-borns.

### Conclusions

Is there anything parents can do to help children deal with their own birth-order experience? Meri Wallace, author of *Birth Order Blues*, has a few suggestions on how to mitigate behavioral problems associated with being first, middle, or last-born. When the oldest is feeling displaced by a new baby, she suggests spending time looking over the first-borns baby pictures so that she can see that she received the same type of attention when she was a baby. Focusing on last-borns achievements can keep him from feeling second best as can making a special effort to help him feel included during older child activities. She suggests that, because middle children can often feel stuck in the middle, you help your middle child to draw some boundaries in order to build a stronger sense of himself.

Although, the connection between birth-order and intelligence appears unresolved, the connection between birth-order and certain personality traits seem to have much support. This makes sense. The birth-order experience is unique to each child and is not an environmental factor shared by other siblings. Birth-order is unique to each child and it makes sense that it has a powerful affect on how each child experiences the world. However, it is my opinion, that we need to be cautious when examining trends in personality and intelligence as it relates to birth order. I think it is important to also consider the effects of such things as family atmosphere, family values, and quality of parenting and such things as genetics, gender and age differences between siblings. We

need to be careful not to pigeonhole children into stereotypes before we have had a chance to get to know them or they have had a chance to get to know themselves. I think there is a danger of labeling a child with certain personality traits, which then may become self-fulfilling prophecies. It is important to let children decide for themselves their personality. Understanding these trends can be helpful in explaining certain traits we do find in children we come in contact with and they give us a point from which to start understanding them through their personal history family histories.

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## Abstract

As each child is born, they enter into a different environment than the previous child. Because parents are more experienced upon arrival of a second child, they may be calmer, yet now, the children need to compete for their parents' attention and resources. The different environments these successive children are born into may affect them in different ways. Although, the connection between birth-order and intelligence appears unresolved, the connection between birth-order and certain personality traits seem to have much support. Sulloway (1997) explains this by arguing that the sibling's first goal is to find a family niche. This spawns competition between siblings for parental resources and as first-borns develop strategies to compete within the family, this encourages later-borns to develop counterstrategies, resulting in what he calls an "evolutionary arms race". It is this competition to find a family niche and the strategies that result from that competition that cause the vastly different personalities seen among siblings. Birth-order is unique to each child and it makes sense that it has a powerful affect on how each child experiences the world. However, it is my opinion that we need to be cautious when examining trends in personality and intelligence as it relates to birth order. I think it is important to also consider the effects of such things as family atmosphere, family values, and quality of parenting and such things as genetics, gender and age differences between siblings.