

Planetary qualities in child development: an independent research project

A detailed exploration of the planetary qualities as they manifest in the six stages identified by the Gesell Institute research

The Gesell Institute for Child Development and the Six Gesell Stages in Child Development

Introduction

Over the course of one hundred years, initially in association with Yale University, Arnold Gesell (1880-1961), psychologist and paediatrician, and the associates who followed him (in what became the Gesell Institute of Child Development¹) carried out detailed observations of children from Birth to Sixteen years. From these they developed profiles of typical development of the children in each age group. Well into this research, they noticed that children went through predictable changes in 'mood' or 'tendency' in different stages. Behaviour in these stages seem to alternate between being in equilibrium and in disequilibrium. Some stages were more expansive, some more inward, some more amenable, some outright challenging! They eventually identified six stages in a cycle which was repeated throughout childhood, with the stages increasing in length incrementally through the first seven years when the stages became one year in length. More exact details of when the stages occur through childhood are provided in the footnote.² Each cycle contains the Six Gesell Stages to which I refer. More about the Gesell Institute, their research and how they discovered these stages is described below.

History of the Gesell Institute of Child Development research

As early as 1911 in association with Yale University, Dr Arnold Gesell (1880-1961), psychologist and paediatrician, began research into children's development by conducting detailed normative studies of young children in the Yale Clinic of Child Development which he founded and lead as director until 1948. The children in the initial studies belonged to families of favourable socio economic status, often with professional, skilled fathers in the NE of the USA. As the research gathered pace over the years, Gesell and his co-workers interviewed many more children, their parents and their teachers, and from the descriptions of behaviours, developed some very comprehensive conglomerate pictures, rich with

¹The Gesell Institute was also called the Gesell Institute of Human Development at one stage, and I have used these two names interchangeably. The present Institute uses the name the Gesell Institute for Child Development and can be found on the internet under that name at www.gesellinstitute.org

²In Gesell, Arnold, Ilg, Frances L., Bates Ames, Louise *The Child from Five to Ten* (Harper & Row, New York 1977) p. 47 the Gesell researchers list the ages in each Stage, in the cycles of the Six Stages up to 16 years. The Stage is in brackets: Birth (Stage 6), 4 weeks (Stage 1), 6-12 weeks (Stage 2), 16 weeks (Stage 3), 20 weeks (Stage 4), 24-28 weeks (Stage 5), 32 weeks (Stage 6), 40 weeks (1), 44-48 weeks (2), 52-56 weeks (3), 15 months (4) 18 months (5), 21 months (6), 24 months (1), 2 ½ years (2), 3 years (3), 3 ½ years (4), 4 years (5), 4 ½ years (6), 5 years (1), 5 ½ -6 years (2), 6 ½ years (3), 7 years (4), 8 years (5), 9 years (6), 10 years (1), 11 years (2), 12 years (3), 13 years (4), 14 years (5), 15 years (6), 16 years (1) They more recently suggested some slight variations on these for the first year.

examples of the sorts of behaviours observed, in each age group. Many of these normative studies of thousands of children in the U.S.A. were made in the 1940s and 1950s.

This research was continued after Gesell's retirement (in 1948) in the Gesell Institute of Child Development (established in 1950 by Gesell's colleagues Dr. Frances Ilg and Dr. Louise Bates Ames), which continues the work today. Gesell, Ilg and Bates Ames and later other Gesell Institute researchers published their findings in a series of books over many years which outlined the detailed development of children from birth to sixteen, including a series of books, which are still available³ on each year group from One to Nine Years and a book on Ten to Fourteen Years.

In more recent years the Institute has concentrated more on children under seven years and in particular on school readiness. The Gesell Institute's most recent studies from 2010 on young children from different socio-economic and ethnic backgrounds across the USA confirmed that neurological development in children has not changed, though the environment has. They continue to use the stage descriptions we present in these essays in their present work.

For simplicity we will refer henceforth to all these researchers, Gesell himself, his collaborators and all in the Gesell Institute who have followed him to the present, mostly as just 'Gesell researchers' or just 'Gesell'.

Their findings: identification of the cycle of six Gesell Stages

While Gesell and his colleagues stressed that individual and gender variations as well as environment play a large role in children's development, they also discovered that there are remarkably patterned and lawful progressions in children's developmental behaviour, a 'rhythmic pattern in development', in which an 'underlying theme'⁴ repeats itself. Our interest lies particularly in these patterned developmental stages which they documented: they observed a pattern of six stages which were repeated over time. They described these stages and how they came to find them in their three main books documenting their research, *The First Five Years of Life* (1940), *The Child from Five to Ten* (1946,1977) and *Youth The Years from Ten to Sixteen* (1956) and a briefer synopsis of the first two books *Child Behaviour* (1955, 1970).⁵

In 1970, they noted: ⁶

Careful analysis of behaviour trends in the first ten years of life — supplemented by

³ They can be found under 'The Gesell Institute of Child Development', *Your One Year Old*, *Your Two Year Old*, etc up to *Your Ten to Fourteen Year Old* Various authors and dates. All are available from their bookstore at www.bookstore.gesellinstitute.org

⁴ Gesell, Arnold, Ilg, Frances L., Bates Ames, Louis *Youth The Years from Ten to Sixteen* Hamish Hamilton, London 1956 p18

⁵ Gesell, Arnold et al. *The First Five Years of Life A Guide to the Study of the Preschool Child* Harper and Row New York, 1940. Gesell, Arnold Ilg, Frances L., Bates Ames, Louise in collaboration with Bullis, Glenna E. *The Child from Five to Ten* Harper and Row New York, 1946, 1977. Gesell, Arnold, Ilg, Frances L., Bates Ames, Louis *Youth The Years from Ten to Sixteen* Hamish Hamilton, London 1956. Ilg, Frances L. Bates Ames, Louise *Child Behaviour* Hamish Hamilton London, 1955, 1970

⁶ Ilg, *Child Behaviour* op. cit. p10-14

later studies of the years from ten to sixteen — make it apparent that a rather distinctive sequence of behaviour stages seems to occur repeatedly as the child matures. Thus the first cycle, and the one we know most about, occurs between two and five years of age, repeats itself from five to ten, and occurs once again between the ages of ten and sixteen.

They then elaborate on this further:

First of all, we have observed that two years of age, five years and ten years all constitute focal points at which behaviour seems to be in good equilibrium, the child having relatively little difficulty within himself or with the world about him. Each of these relatively smooth and untroubled ages is followed by a brief period when behaviour appears to be broken up, disturbed and troubled, and when the child shows himself to be in marked disequilibrium. Thus the smoothness of 2-year-old behaviour characteristically breaks up at two and a half; 5-year-old behaviour breaks up at five and a half to six; and ten breaks up at eleven, the 11-year-old child characteristically showing himself to be at definite odds with his environment and with himself.

Each of these ages is followed, once more, by a period of relative equilibrium at three, six and a half and twelve years respectively, when life's forces seem to be in good balance. The child is happy both within himself and in his environment.

These are followed by ages when there is a very pronounced inwardizing or drawing in of outer impressions and experiences, to be mulled over, thought about, digested within. These ages are three and a half, seven and thirteen years. At three and a half this inner process often has disturbing side effects of general emotional instability, a variety of fears, poor spatial orientation, hand tremor, whining, high tremulous voice, stuttering and stumbling. Seven and thirteen are more stable ages and better ready to stand the strain of this inwardizing period of growth. The side effects at these latter ages are more apt to be expressed in marked sensitivity and touchiness, exclusive withdrawal and moroseness, and a minor and pessimistic attitude towards life in general.

All three of these ages are followed by periods of extreme expansiveness. Four, eight and fourteen are all times at which the child's behaviour is markedly outgoing in most major respects. He is even in danger of expanding too much. He wanders from home and gets lost at four, he demands to ride his bicycle in the street at eight and may get hit, and he gets tangled in his multiple and conflicting social plans at fourteen.

The next three ages (four and a half years, nine years and fifteen years) are ones about which we know the least, but we do know enough to recognise certain similarities about the three periods. In each of them, behaviour is less outgoing than the age which directly preceded it. In each it is in less good equilibrium. Child specialists have frequently described each of these three ages by the term "neurotic," though they may each represent perfectly normal stages of growth.

And then once more, in each instance, we come to ages of stability and of relatively good equilibrium: five, ten and sixteen.

We have here started this summary of cycles of behaviour at two years of age, but

actually it could have been begun in infancy, when the same kinds of alternation of ingoing and outgoing periods, periods of equilibrium and disequilibrium, do occur. It is important to note that in early infancy salient changes are very rapid and show up clearly at weekly intervals. As growth progresses, these changes are clearer at two-week intervals. The 6-week-old child smiles spontaneously, but the 8-week-old child smiles in a social response. With increased age (from twelve weeks to one year) monthly increments are readily defined. From one to two years, the intervals of change lengthen to three months, and from two years to seven years, to six months. From seven to ten years (and on to sixteen years) these salient changes appear to take place less frequently — at about yearly intervals. It is probable that this spiral of growth slows down even further during the twenties and thirties, but it seems quite possible that predictable age changes are continuing to take place, though less clearly defined, during these and the succeeding years and probably through the life span.

A brief and rather schematic tabular presentation of the age changes from two years on, as described above, follows: ⁷

2	5	10	16	Smooth, consolidated (Equilibrium)
2 ½	5 ½-6		11	Breaking up (Dis-equilibrium)
3	6 ½		12	Rounded —balanced Sorting out (Equilibrium)
3 ½	7		13	Inwardized (Dis-equilibrium)
4	8		14	Vigorous, expansive (Equilibrium)
4 ½	9		15	Inwardized-outwardized, troubled, “neurotic” , fitting together (Dis-equilibrium)

...it is *the order* in which these stages follow each other which is most important — far more important than the exact age at which any certain child reaches these stages. And each child gives his own individual twist to these age sequences. Also important is the fact that periods of relative calm equilibrium tend to be followed and preceded by periods when behaviour is less calm, less well adjusted.

Further they observe that it is not that the abilities at each stage are alike; the difference in skills is vast. But they are alike in “mode of adjustment to the world around him “and that “the change *in the same direction*” occurs in each case.⁸ Further that “the sub cycle completes another turn at a point of age which is both an ending and a new beginning.”

They say:

These rhythmic sequences make sense. They compose the process through which growth is achieved — not by addition, bit by bit, nor by a smooth homogenous enlargement, like an expanding balloon. Growth combines integration and differentiation...[it is] a patterning process involving varied alternatives in varying prominence. The process itself is inconceivably complex, but the underlying principle

⁷We have added extra words they have used since this time to describe the stage, as well as the Equilibrium/Disequilibrium descriptions in this table.

⁸Gesell, *Youth* op. cit. p18

is readily understandable.⁹

Further they point out that the human is bilateral in construction and “the whole pathway of development is beset with opposing alternatives”:

The problem of development, the task of the action system, is to bring the opposites into effectual control and counterpoise. This control is not a static balance, but a channelling of two-way tensions and conflicts in such a manner that the individual achieves integration, choice, and direction.... The growth process counterbalances one extreme of behaviour by offsetting or pairing it with its opposite.¹⁰

There are alterations of relative equilibrium and of transitional disequilibrium; there are rhythms of accent in introverted versus extroverted activity, in home versus school, in self versus group interests, in fine motor versus gross motor movements, in the to-and-fro shifts, in the delicate controls of eye movements. Only by identifying the developmental shifts in such counterbalanced traits can we arrive at a more accurate picture of what [children] are really like. Development does not advance in a straight line.

They stress it should also be kept in mind that:

The chronological age of the growing person to a very large extent determines the ways in which he may be expected to behave. This appears to be a primary rule of development. However ...behaviour as it matures does not necessarily improve and does not always continue in the same direction.¹¹

Reviewing and validating the observations over time.

These conclusions became clear only over time and were frequently questioned. *The Child from Five to Ten* was originally written in 1946 by Arnold Gesell, Francis L. Ilg and Louise Bates Ames but in 1974 a new edition was published, written in collaboration with Glenna E. Bullis. In the preface the authors wrote¹²:

It was a pleasure to us to reread the preface to the first edition of this book written in 1946. Those involved in the writing of the book had all viewed the child from his or her earliest beginnings from birth itself. We had expected the basic and dramatic phases of development as they expressed themselves in remarkably patterned and lawful progression. We came to respect growth and to enjoy each new manifestation. But as the child grew older and received the many new stimuli from a school environment, we anticipated that these clear cut growth patterns might not be as easy to define.

The opposite was actually the case. It was during the study of the ages five to ten that we finally saw clearly the flow of stages (six, on present count) within each of the

⁹ Ibid p19

¹⁰ Ibid p19

¹¹ Bates Ames, Ilg and S M Baker *Your Ten to Fourteen Year Old* Dell Trade paperback, which city of publication? 1988 p8

¹² Gesell, Ilg and Ames in collaboration with Bullis *The Child from Five to Ten* Harper and Row New York, 1946, 1977 which publishing year is it? p xv -xvi

larger cycles. (We have defined the major cycles of growth that take place from two to five, five to ten, and ten to sixteen, and in each we see the same sequence of alternating stages of equilibrium and disequilibrium, inwardizing and outwardizing of behavior.)

All seem to fall so easily into place. There is the smoothness of five and finally once again of ten years of age, the outer limits of this cycle, when it all appears to be in good equilibrium. There is the breakup stage at five and a half to six. Six and a half is a moment of equilibrium between the breakup of five and a half and the inwardizing of seven. Seven in some ways represents the trough of the wave, when so many subtle and even dark forces are at work. But this, too, passes and the glory of the crest of the wave comes at eight, when all is released and the child is, as we describe it, expansive, speedy, and evaluative. Then comes the further period of inwardizing and anxiety at nine, followed by the beautiful equilibrium of ten.

This new awareness of orderliness and meaning of the stages made us want to look back at the earlier years of life to see if the same stages occurred. Sure enough, they were all there, but expressed at greater speed. The same six stages had been traversed in three years only from two to five....

We can report that when we carried out our study on the older ages, from ten to sixteen, we resisted the concept that the stages within a cycle would continue; it seemed almost too pat. But the more we doubted, the more clearly the stages manifested themselves. We now have no doubt that a similar patterning takes place throughout the entire life span.

Earlier in the 1974 preface they wrote:

There always comes a time for revision especially after thirty years, and even more so now when so much is happening so fast. But at the same time we are amazed that so much of this volume holds up as it was written in 1946. The child of five to ten still grows in the same way and acts in relatively the same way as he did thirty years¹³ ago, and did for many years before that.

In fact, it appears to be not so much the child as the culture that has changed. Five year olds seem still to be for the most part well adjusted, calm, and thoroughly delightful. Sevens are often withdrawn and thoughtful, somewhat unhappy. The eight-year-old is expansive, speedy, and evaluative. Ten is calm, collected and appreciative. And so for the ages in between. They remain very much as we saw them back in 1946.¹³

In *Your Nine Year Old* by Louise Bates Ames and Carol Chase Haber (from the Gesell Institute of human Behaviour) published in 1990 the authors write:¹⁴

We have long sought confirmation of our observation that a child's behaviour seems to swing alternately between stages of equilibrium and disequilibrium and between stages of inwardized and outwardized behaviour. This confirmation has been long in coming, but current research by Dr Herman T Epstein of Brandeis University¹⁵

¹³ Ibid p. i of the Preface

¹⁴ Bates Ames, Louise & Chase Haber, Carol, *Your Nine Year Old* Dell Trade Paperback, New York 1990 p11-14

¹⁵ Described in Healy, Jane M. *Your Child's Growing Mind* New York, Doubleday 1987 p.75 Epstein

suggests that the brain grows in a series of spurts during which it becomes more receptive to teaching and learning. (According to his research, about 85 percent of children follow a similar schedule.) When the brain, primarily the cortex, is in one of these stages of rapid growth, myelin and dendrite connections are increasing to form new channels for thought. The brain is most teachable at this time.

There is quite a correspondence between Dr Epstein's periods of little or no growth and our own ages or stages when behaviour seems somewhat inwardized and quiet. Nine years of age is one of his quiescent periods, and nine to us is an inwardized age.

The Gesell Institute completed another three year study on young children's development in 2010. This drew a nationwide (USA) sample of about 1300 3-6 year olds from 53 schools in 23 states from all demographics and economic backgrounds. The study gauged developmental abilities and found that the results are consistent with the first study of its type, done in the 1940s by Arnold Gesell himself. For example they found a remarkable stability in the ages at which they could perform tasks such as count four pennies (4 years old) or draw a triangle (5 ½), a skill necessary for learning to write letters.

Gesell Institute of Human Development Executive Director in 2010, Marcy Guddemi, said children are developing at the same rate neurologically as they did when Dr. Arnold Gesell did his pioneering work in the 1940s, yet today they are being pushed to do everything sooner. "Despite technology, media and the internet, the way a child develops has not changed over the last century. But kindergarten sure has changed."¹⁶

In addition, the Gesell Developmental Observation assessments (GDO) based on Gesell's work and published in 1940, (revised after recent study results as GDO-R) have been widely used for 70 years and have been validated over time. Gesell's maturational theory has also been shown to tie in with the work of other well-known theorists such as Piaget and Vygotsky.

More on the Gesell Institute of Child Development and their publications can be found on their website www.gesellinstitute.org. The Gesell Institute's publications reflect their deep understanding of, and compassion for children and as a result, their advice for parents and teachers is practical and wise. Their mission in 2014 is "to promote the principles of child development for all decision-making for young children" and they are determined and active advocates for children and their needs, such as the right to time for play.

Conclusion

Researchers like Arnold Gesell and his colleagues at the Gesell Institute, as well as people like Dr Benjamin Spock, laid the groundwork for more democratic, compassionate parenting. Over the last 50 years in English speaking countries and Europe at least, children have been given more respect and recognition for their individuality. Children's emotional development has been considered in new light and the 'self-esteem movement' consolidated a new emphasis on respect for the child. With increasing general affluence, many children have had materially 'easier' childhoods.

described these growth spurts as occurring every four years, from 2-4, from 6-8, from 10 to 12, and from 14-16 years.

¹⁶ Quoted in the *New Haven Advocate* October 20, 2010 in 'Hot topic. Does early education work?'

Yet every generation has its own stressors, and stress today takes a different form than in the time of the initial studies. The children in the initial studies were materially less well-off and lived in the time and aftermath of two world wars and a great depression, sometimes with parents traumatized by war. Today many children are still growing up in less than ideal environments; many families are more affluent but there is more hurrying, over-stimulation, less rhythm and routines, significantly less sleep, less natural and imaginative play, more screen time, more long child care hours, and new misunderstandings about children's needs (especially around the need for appropriate protection and boundaries, etc.). Children's developmental behaviours are still often obscured by stressed and often 'out of control' behaviours. Nevertheless, as Gesell researchers suggested in 1974¹⁷ and again in 2010, it is the culture which is changing, and changing the children, rather than a change in the archetypal patterns of development in children described in the Gesell Institute research. The archetypal behaviours identified in the Six Gesell Stages can still be clearly seen in children today.

Gesell's cycle of development in childhood with its six distinct stages reveal an archetypal pattern of behaviours and qualities which have been associated in tradition with the planets. This idea is explored in the six essays on particular planets in "Planetary Qualities in Child Development- an independent research project."

¹⁷ Previously quoted from Gesell et al *The Child from Five to Ten* op cit p ix