The Wonder Weeks Story Slide 1

Growing by leaps and bounds

Infant mental development is characterized by predictable, age-related regression periods that coincide with a new perceptual capability and are followed by a whole new set of skills.

This file: TheWonderWeeksStory.pdf

This file adapted by Dag Forssell from Dr. Plooij's original 2007 PPT prestentation, including the MS that accompanied each slide.

Page format, 8.5 x 15.1 inches designed for 16 x 9 ratio, typical of contemporany computer displays, such as 1920 x 1080 resolution.

In the U.S., this page can be printed on legal size paper, with a minor size adjustment to shrink from 15.1 inches to 14 inches.

No author's notes on this page

The Wonder Weeks Story Slide 2

The Wonder Weeks

(Original title: Oei, ik groei!)

In his first keynote address, Dr. Frans X. Plooij introduces *The Wonder Weeks*—the story, the research, and what the information means to parents and others working with infants.

In a second keynote address, Dr. Plooij introduces *Leaping Hurdles*—a parental support, education, and abuse prevention program based on *The Wonder Weeks.*

No author's notes on this page

The Wonder Weeks Story Slide 3

FOUR WINDS乳幼児精神保健学会
FOR INFANT MENTAL HEALTH
www.fourwinds.jp

The FOUR WINDS Association for Infant Mental Health is made up of professionals involved with infants, such as pediatricians, infant psychiatrists, psychologists, nurses, teachers, and daycare center leaders. The association held its annual conference on November 24-25 2007, in Tochigi, Japan, with 841 participants.

Dr. Plooij was invited foreign lecturer and keynote speaker, presenting talks about *The Wonder Weeks* and *Leaping Hurdles*.

See also About FOUR WINDS in the last slide.

No author's notes on this page

The Wonder Weeks Story Slide 4

Ladies and gentlemen,

Before starting this presentation I would like to express my gratitude to the organisation “The Four Winds” in general and to the president Dr. Kei Sawada and to Dr. Hisako Watanabe in particular for inviting me to Japan to present this lecture. It is a great honor for me.

The Wonder Weeks Story Slide 5

† Dr. Hetty van de Rijt-Plooij

- Wife
- Pal
- Colleague
- Co-author

The work I am going to present to you today is very much based on the life-long joint-venture with my late wife and she deserves as much credit, if not more, than I do.

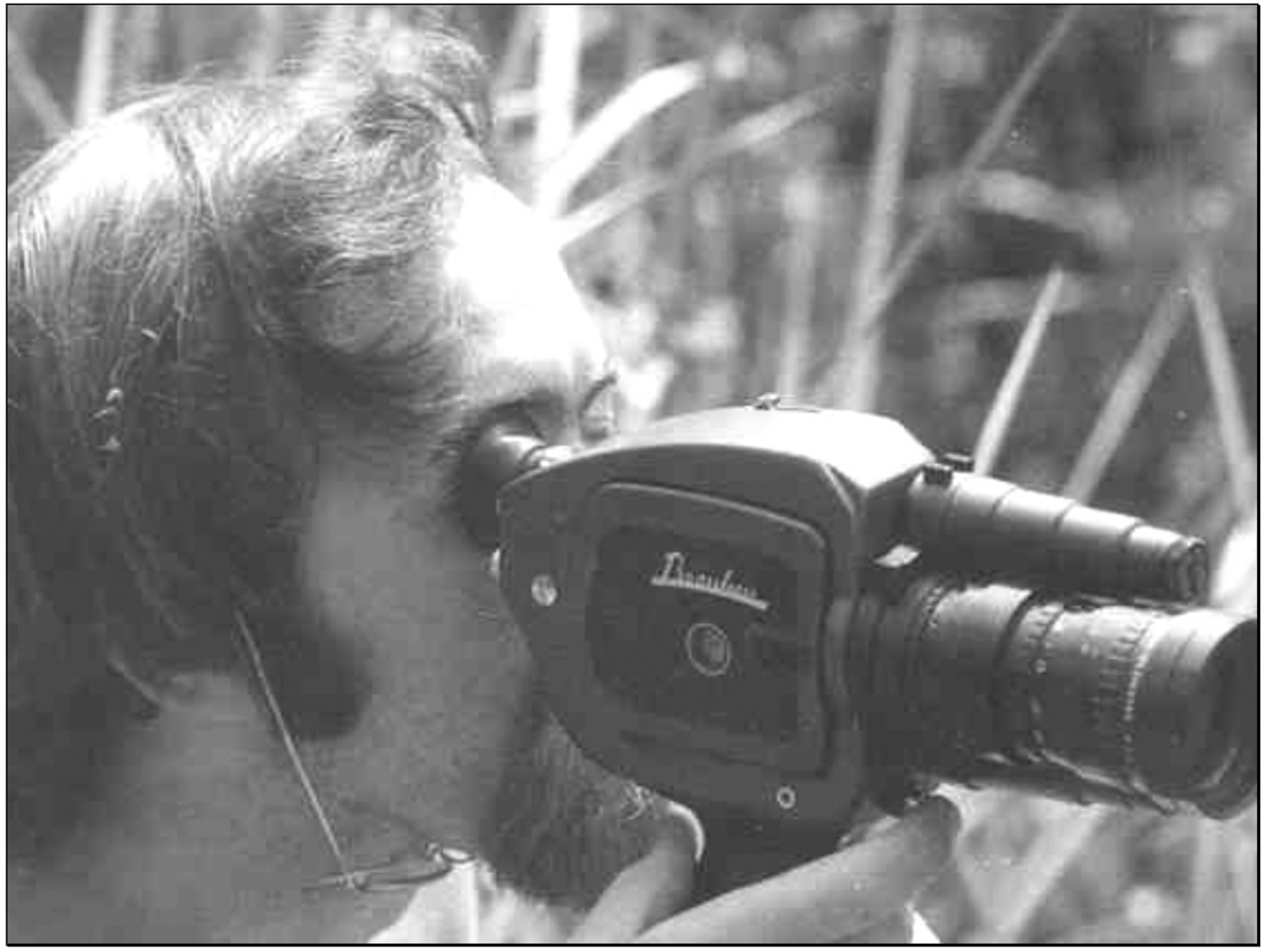
The Wonder Weeks Story Slide 6

It all began when my late wife and I landed on this beach in the Gombe National Park, Tanzania, East-Africa in 1971.

The Wonder Weeks Story Slide 7

We were part of a group of enthusiastic, young Ph.D. students who were so fortunate to work with Jane Goodall on the behavior of the free-living Gombe chimpanzees. Jane Goodall is the woman below the black arrow. On our way to the Gombe we met our Japanese colleague Dr. Itani who was on his way to the Japanese observation camp in the Kibale mountains south of Gombe.

The Wonder Weeks Story Slide 8



My wife studied educational psychology and physical anthropology and I had studied behavioral biology. We were trained in the direct observation of behavior and beside that we filmed the behavior and tape-recorded the vocalizations.

The Wonder Weeks Story Slide 9

Because of Jane Goodall's groundbreaking work, the chimpanzees were used to humans. They tolerated and ignored us. That enabled us to follow them everywhere and make our observations from day one onwards.

The Wonder Weeks Story Slide 10

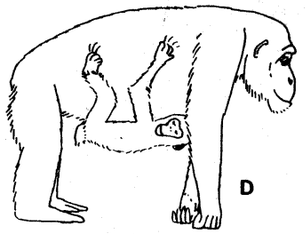
We focused our studies on the mother-infant interaction and the behavioral development and the growing independence of the infant. After half a year the behaviors of mothers and infants were well known to us and we had made a list of behaviors and events of which we recorded the frequency and duration and to whom or what they were directed. Each mother-infant couple was followed once a month for one or two days until we had 300 minutes of ‘good observation’.

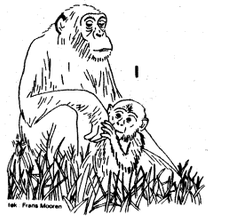
The Wonder Weeks Story Slide 11

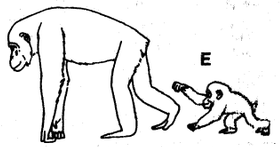
From: Behaviour, 101, 1/3

distance categories / month	ventral	not-ventral	in contact	within arm's reach	between 1.5-5m	between 5-15m	
1	1						
2	1						
3	1		2				
4	1	3	2				
5	1	4	3	2	5		
6	1	4	2	3	4		
7	1		2	2	4		A
8	2	4	1	3	4		
9	3		1	2	4		
10	1	5	3	2	4		
11	2	4	1	3	5		1
12	3	5	2	1	3	6	
13	2	5	3	1	3	6	
14	3	5	2	1	4		
15	2	5	4	1	3		
16	4	6	2	1	3	5	
17	1	5	4	2	3	6	
18	3	5	4	1	1	6	2
19	4	5	5	2	1	2	
20	4	5	3	2	1	6	

A=drop in ventro-ventral contact
1=first drop in contact
2=second drop in contact







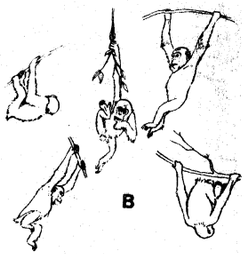


Fig. 24. Rankorder of the amount of time spent in each of the six distance-categories for FF and FD.

The growing independence of the infant appeared not to be a gradual process, but it occurs in leaps and bounds.

In this figure in the top row you find six distance categories of the infant to the mother, from ventral, to 'not ventral', to in contact, to in contact but not supported by the body of the mother, to off the mother within arm's reach, to out of arm's reach but within 5 meters, to out of 5 meters but within 15 meters.

In the left column you find the age in months. In the other columns the numbers 1-6 refer to the rank order of that particular distance category in the observed percentage of time spent in any distance category. The top rank orders number 1 are connected with the solid line. This line shows very well the change over age in the distance category in which the infant spent most time.

Here you can see a leap from staying mainly in ventro-ventral contact with the mother to staying mainly off the body of the mother, but still in contact. The second leap goes from mainly staying in contact to mainly staying out of contact, within arm's reach. And the third leap goes from mainly staying within arm's reach to mainly staying out of arm's reach, but within 5 meters. These top distance categories are symbolized with these drawings.

Before each 'leap' in independence, a regression period occurred. Regression was expressed, first, in a temporary shift back to mainly staying closer to mother, and, second, in a temporary increase in the amount of ventro-ventral contact.

The regression period was followed by a period of mother-infant conflict over body contact.

The Wonder Weeks Story Slide 12

As an example of such mother-infant conflict, here we see Passion trying to get her son Prof off the nipple and off her belly. She is pulling, pushing and bite-gnawing, trying to loosen his hands, feet, and mouth holding tight to her hair and the nipple.

The Wonder Weeks Story Slide 13

This time Passion failed and she continues her travel with Prof still ventral and sucking. It is this privilege that the conflict is about. The conflict is not directed at the infant as such.

The Wonder Weeks Story Slide 14

Another example where another mother Fifi is successful in scooping her baby Freud from the ventral into the dorsal position.

The mother-infant conflict was followed by the leap to greater independence.

The Wonder Weeks Story Slide 15

Evolution of regression periods

- Regression periods are an old phenomenon
- Regression periods in 12 primate species and 2 non-primate mammals

  (Horwich, 1974)
- Free-living chimpanzee infants

Evolutionarily speaking, the phenomenon of regression periods in early development is very old indeed, and has been observed in primates, and non-primate mammals.

For instance, Horwich (1974) reported peaks in nipple contact in 12 monkey species and two non-primate mammals. In addition, he indicated that these peaks occur at similar times in development. This only shows if a correction is made for the speed of development of a species. The peaks are supposed to rest on emotional states of insecurity.

Our observations in the Gombe National Park on the behavioral development and the growing independence in free-living chimpanzee infants basically expanded Horwich's findings.

The Wonder Weeks Story Slide 16

The next question was whether this phenomenon of regression periods survived during the evolution of our own species Homo sapiens? If it is present in non-primate mammals, monkeys and apes, one would expect it to be present in us as well, according to evolutionary theory, because we are so closely related.

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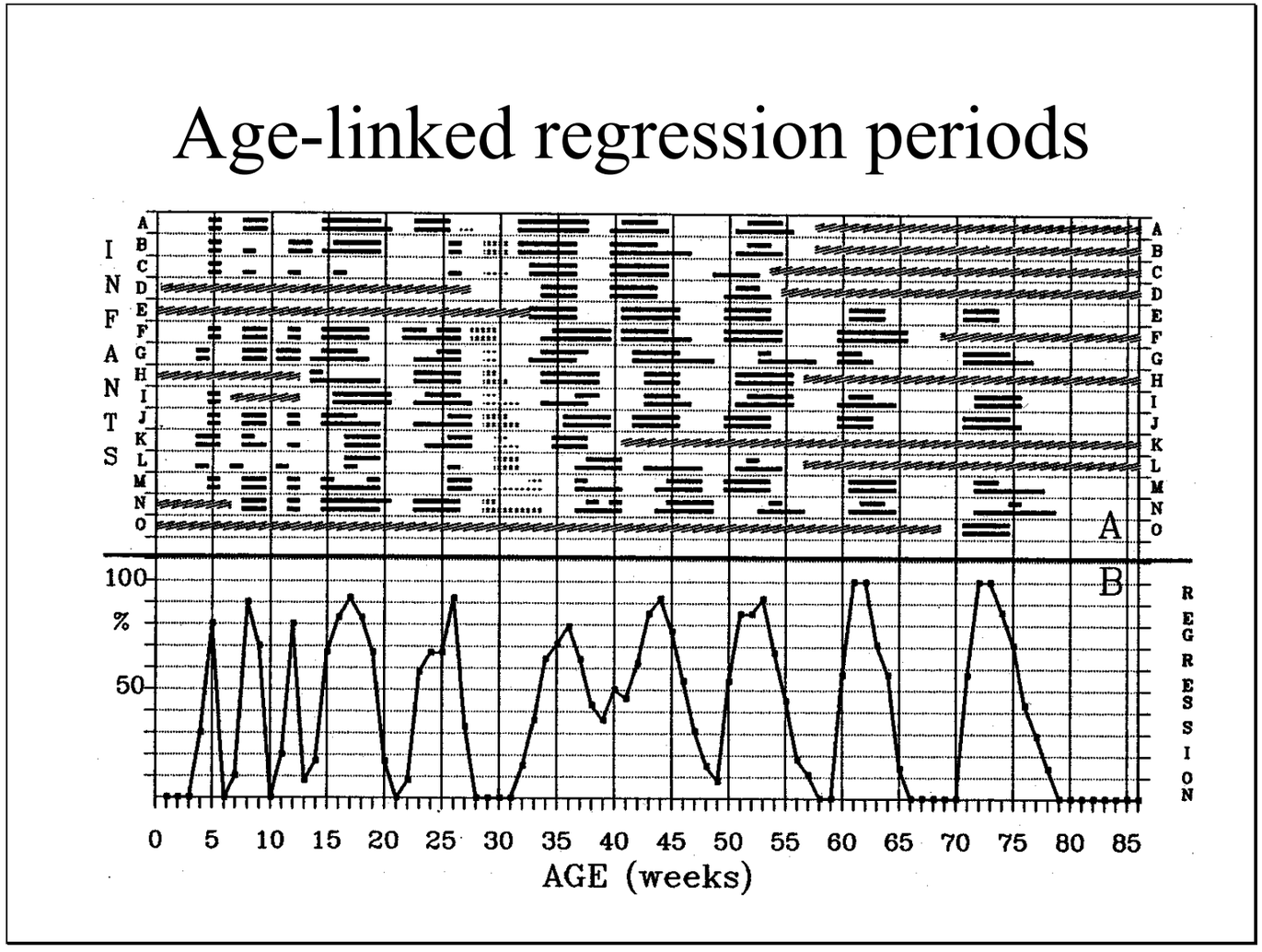
So, our next question was: “Can we find evidence of regression periods in our present day babies?” We started in our own country, the Netherlands, in Europe and this is what came out.

The Wonder Weeks Story Slide 18



This figure is from the original study my wife and I reported on in 1992. It presents the percentage of mothers reporting actual, regressive infant behaviors over age.

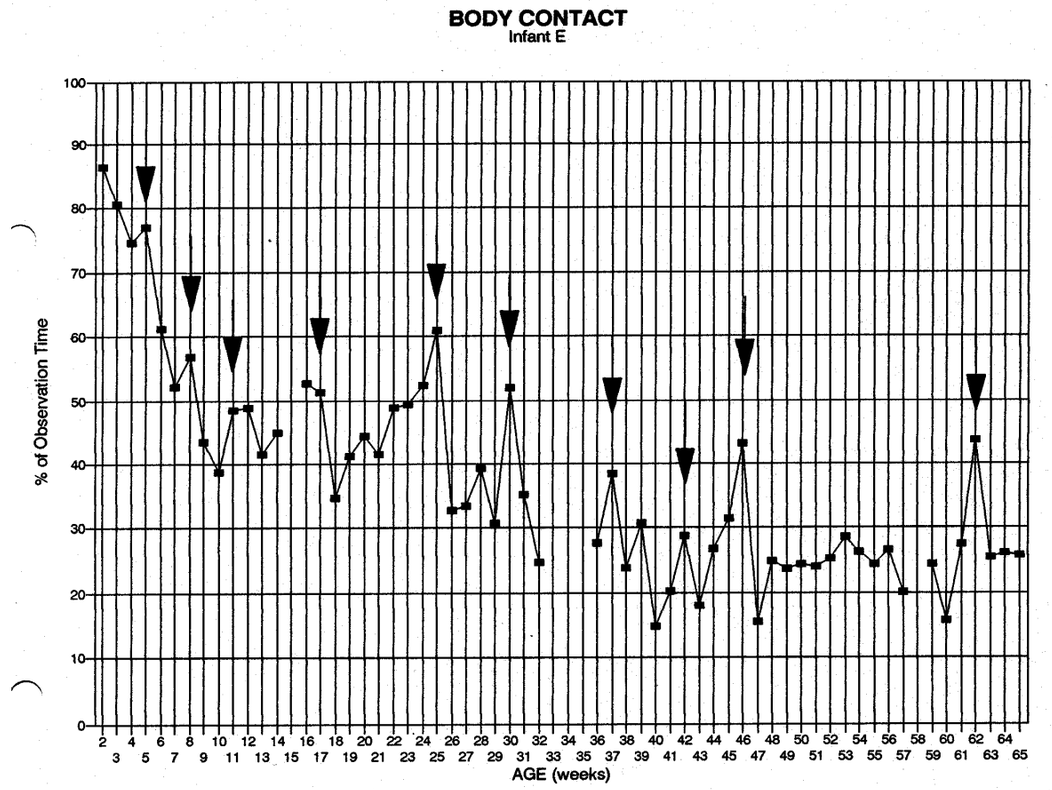
We found ten age-linked regression periods in the first 20 months, covering the sensorimotor period.

In the top half of this figure, each row represents one infant, and the horizontal, black, solid bars in each row represent a difficult period. These are periods during which the infant was more difficult than usual, according to the mother. In such a period the baby was crying more than usual, clinging to the mother more than usual and more cranky than usual. So these periods are characterized by the three C's: Crying, Clingy and Cranky.

The lower half of this figure summarizes the upper half by showing the percentage of mothers reporting their babies as being more difficult than usual.

The Wonder Weeks Story Slide 19

Direct observations of regression



Apart from asking the mothers we also observed the mother infant interactions directly in the homes and these direct observations confirmed what the mother reported to us.

This graph presents the percentage of direct observation time one baby spent in body contact with the mother over age. Just to give you an example of and a feel for the phenomenon. While the percentage of time spent in contact with the mother goes down over age, you can clearly see these temporary peaks in body contact superposed onto the downward trend. These temporary peaks in body contact represent the regression period in which the baby is more clingy than usual.

The Wonder Weeks Story Slide 20

Replication Studies

- Spain: Sadurni & Rostan (2003)
- England: Woolmore & Richer (2003)
- Sweden: Lindahl, Heimann, & Ullstadius (2003)
- The Netherlands: Plooij & Van de Rijt-Plooij (2003)

(From: M. Heimann (Ed.), *Regression Periods in Human Infancy*. Mahwah, NJ: Erlbaum)

Three independent research groups in Spain, England, and Sweden have replicated our findings on age-linked regression periods. These studies were published in 2003 in the book Regression Periods in Human Infancy.

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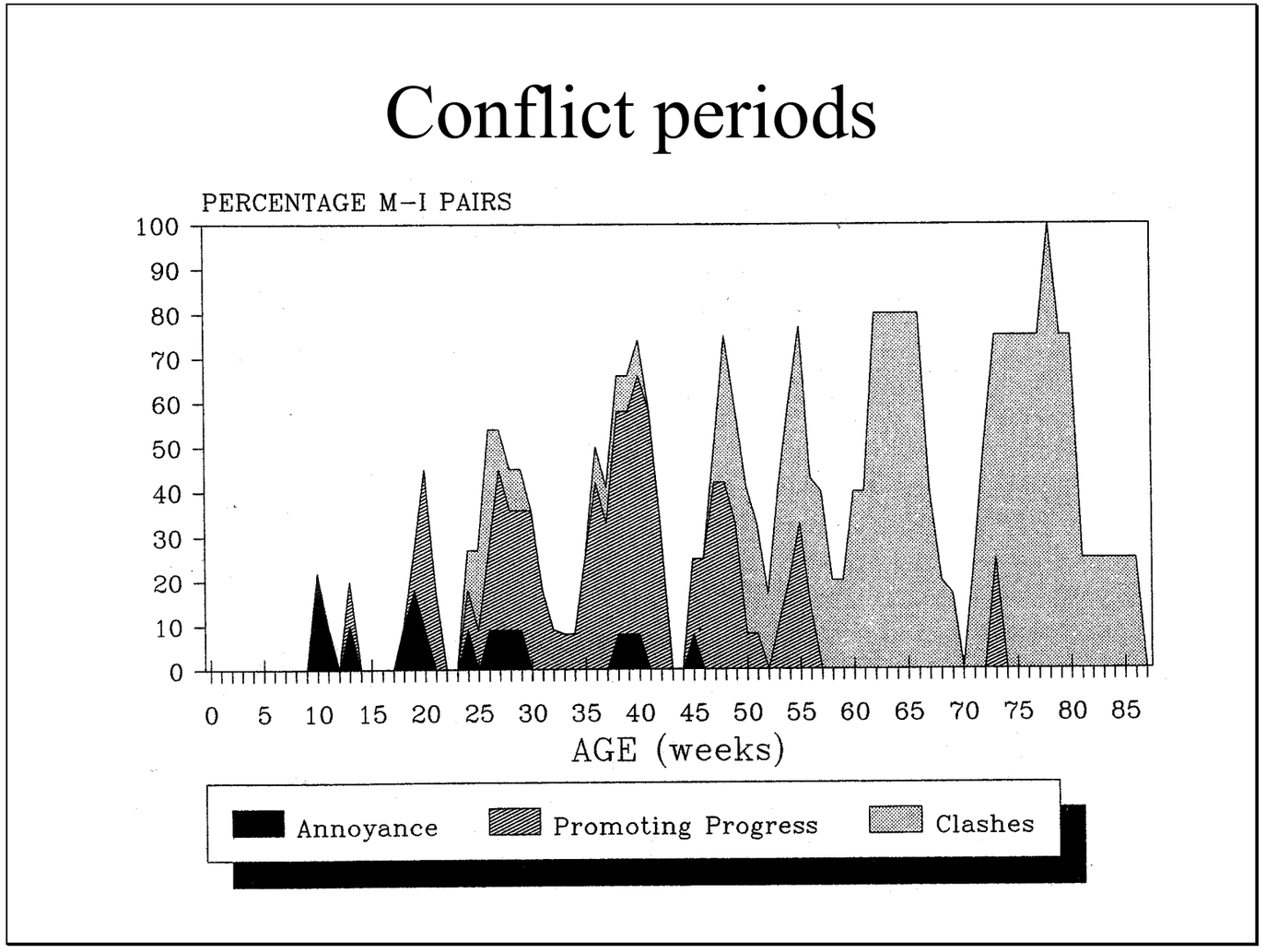


Just like in the chimps, there was mother-infant conflict in humans as well. These data are based on weekly questionnaires combined with in-depth interviews.

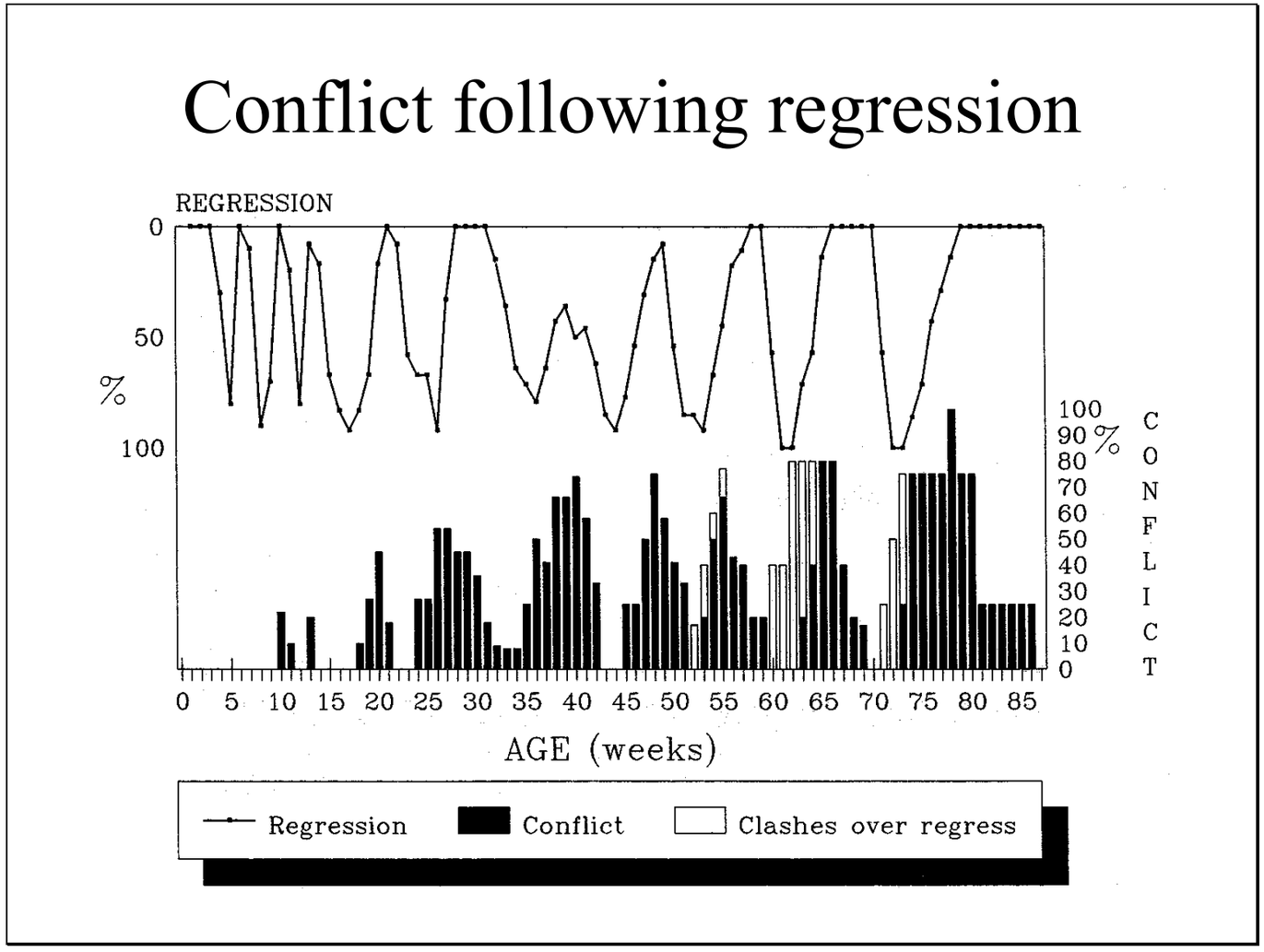
The mother-infant conflict was divided into three categories.

First of all, annoyance. This was typical for the younger ages of the baby. At first, mothers were worried that something was wrong with their baby during a regression period. Sometimes they would even pay a visit to the pediatrician, only to find out that nothing was wrong. Then their worry would change into annoyance. In the first few months, mothers would not act on their feelings of annoyance.

But at later ages, especially the second half of the first year, they would. We called it ‘promoting progress’, because the mothers sensed that their baby was able to do more and they would demand more of their baby. At this age they would still use mild strategies by diverting the attention of their baby. And the baby would go along with its mother.

But soon, and especially during the second year of life, the babies would not go along with their mothers anymore and straightforward ‘clashes’ would result. Around 18 months all the mothers reported clashes to occur.

The Wonder Weeks Story Slide 22



Just like in the chimps, the conflict periods followed the regression periods.

In the top of this figure the regression periods are depicted upside down with the peaks pointing downwards. You can see that the regression peaks shortly precede the conflict peaks. This was checked by doing statistics on the data of each individual baby separately, and it was shown that the onsets of regression periods preceded the onsets of conflict periods more frequently than expected by chance, using the sign test from Siegel (1956).

The Wonder Weeks Story Slide 23

The four why's of regression periods

- Evolution
- Development
- Causation
- Function

In Behavioral Biology we always ask four questions when we study a phenomenon. These four questions concern the evolution, the development, the immediate causation, and the function of behavior. The ethologist and Nobel prize winner Niko Tinbergen pointed out to us that it is a very fertile approach to try and find answers to all four questions in the study of behavior. We did that for the phenomenon of regression periods and after we had answered the first question concerning evolution, …...

The Wonder Weeks Story Slide 24

The four why's of regression periods

- Evolution
- Development
- Causation
- Function

We moved on to the second question concerning the development of regression periods in our own species.

The Wonder Weeks Story Slide 25

Age-linked vulnerability

- Peaks in illness
- Peaks in Sudden Infant Death (SID)

Our original findings having been replicated by independent research teams and validated by direct observation, we moved on to search for completely different evidence in support of the regression periods.

The line of argument was as follows:

The relation between regression (or disorganization) on the one hand and progression (or reorganization) on the other hand has been considered for almost a century by scientists from various backgrounds. The ethologist Kortlandt even invented the term ‘reprogression.’ Being disorganized, the whole organism is off balance. So, the disorganization should not only show in the behavior in the phenomenon of regression periods, but also in other aspects. The progress in the discipline psychoneuroimmunology over the last few decades has brought to light the complex interactions between behavior, the CNS, the endocrine system, and the immune system. If the organism is disorganized, this should also show in the immune system and the health of the organism, among other things. This notion is not new. As long ago as 1935, Walter Cannon suggested that the normal experiences of life – such as the onset of puberty, fatigue, and everyday worry – all make a physical impression on the body. He observed that “the whole gamut of human diseases might be studied from this point of view.”

This notion implies that we should find evidence of age-linked vulnerability.

We approached this question by studying the distribution of illnesses over early age and predicted we should find peaks in illness or even peaks in Sudden Infant Death (SID) around the ages at which we had found the regression periods.

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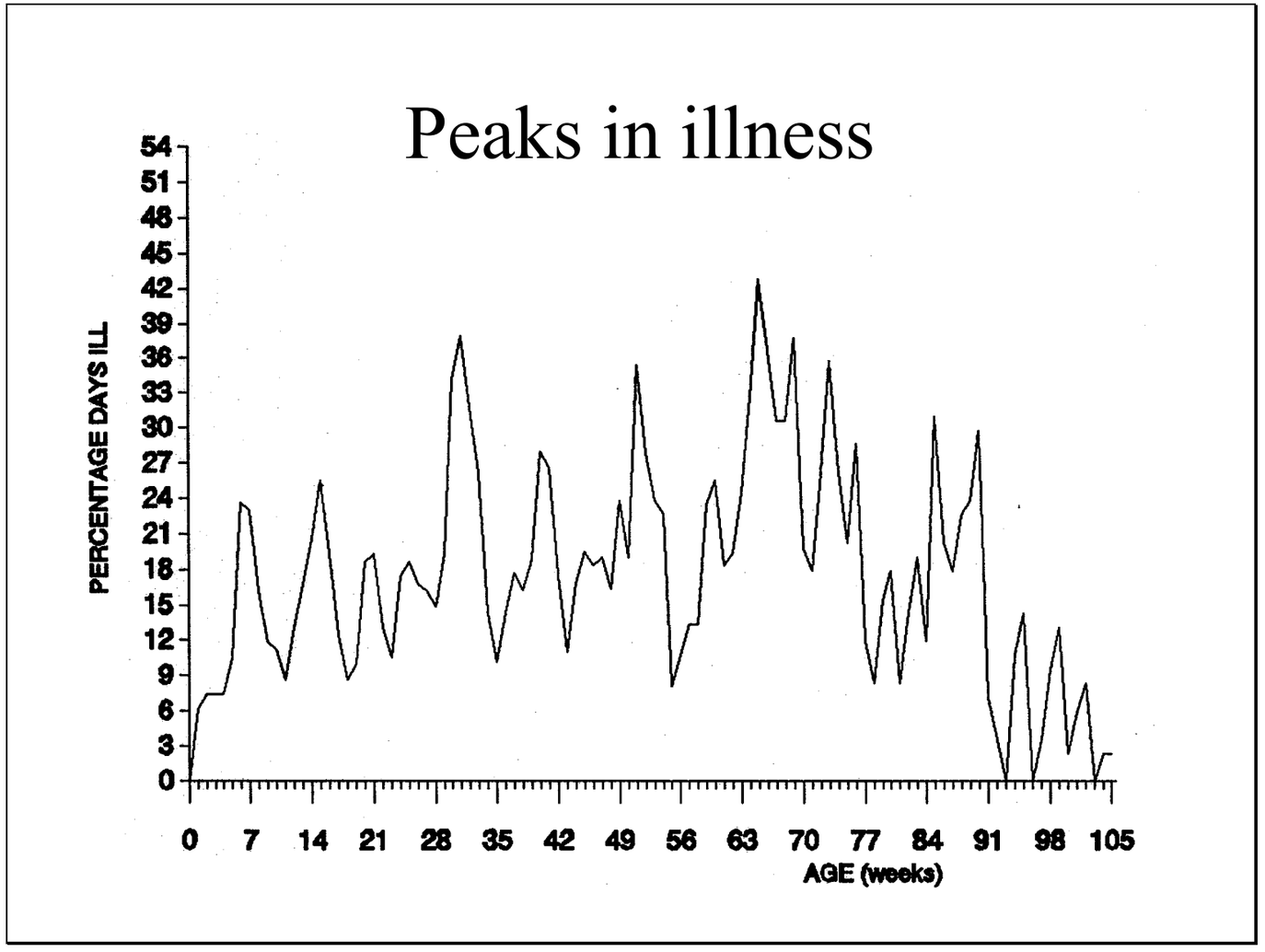


Longitudinal data on the onset and duration of diseases were obtained in 15 girls and 11 boys.

In this figure the percentage of the number of days per week the babies could maximally be reported to *be* ill (that is: 7 days times the number of babies participating in the study during that week) is plotted against age (in weeks).

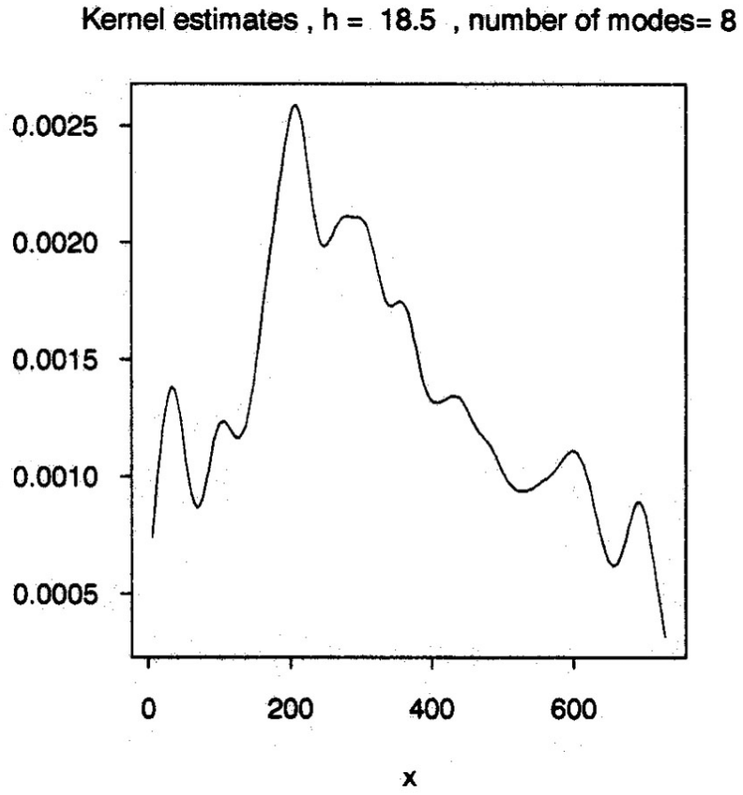
A number of peaks are superimposed on an inverted U-shaped curve. The question that arises is what peaks are to be considered real local maxima, and what peaks are merely noise in the data.

To make a long story short, to test statistically whether there exist a number of illness peaks during infancy, the days at which infants *become* ill had to be used instead of the durations of the illnesses. A statistical technique was used as proposed by Silverman (1981) using the kernel density estimator.

The result is shown in the next figure.

The Wonder Weeks Story Slide 27

Multimodal distribution in illness

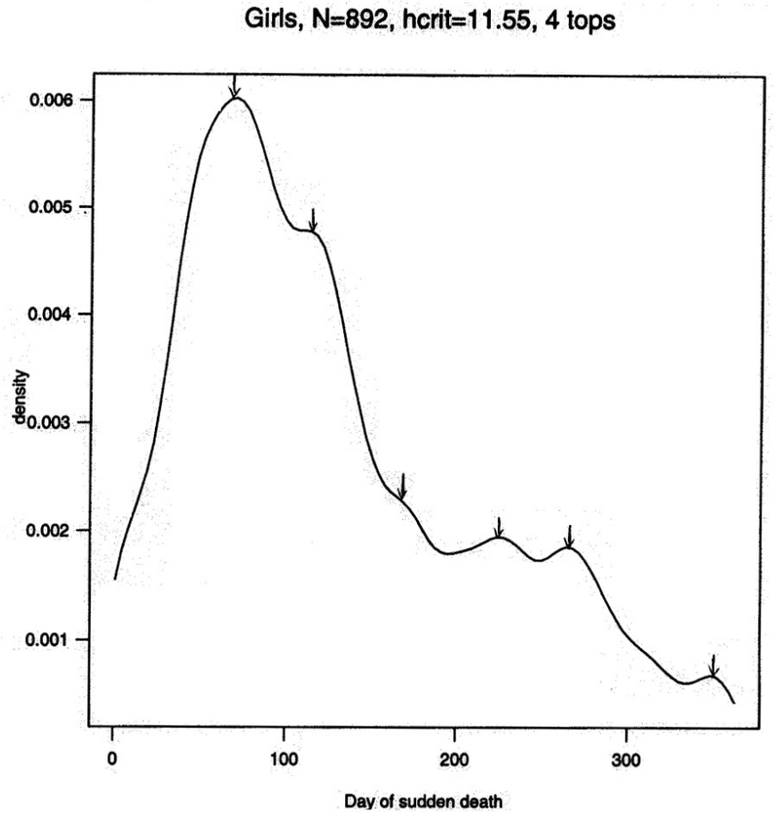


This figure presents the Kernel density estimator for bandwidth h=18.5. Eight tops can be seen at the ages of 6, 15, 30, 40, 51, 62, 86, and 99 weeks. The same ages were obtained for h= 18 or h=19.

Comparing the age ranges in which regression periods start and end with the ages around which the illnesses start, the temporal relation is striking.

The Wonder Weeks Story Slide 28

Multimodal distribution in SIDS



We did a similar study on peaks in SIDS. This time we obtained the data from the central institute for statistics in the Netherlands. All children in the Netherlands who died of SIDS in the first year of life during the years 1979-1993 participated in the study. They used the definition according the International Classification of Diseases version 9. The variables recorded were age (in days after birth) at which the baby died and sex. Unfortunately, it was not possible to link these data to the length of gestation or to correct the ages into ‘age since conception’. In total, the ages of 1,298 boys and 892 girls were studied.

The same statistical technique was used as proposed by Silverman (1981) using the kernel density estimator to show whether the graphs show a multimodal distribution, or not.

The graph for girls contains a multimodal distribution, with at least 4 peaks, probably 6.

The small peaks superimposed onto the large peak of SIDS for girls have never been reported so far, probably because nobody was looking for them. The ages at which these small peaks are found overlap with the ages of the regression periods. So, again this is independent evidence that something is going on deep down and that sudden brain changes might be a good candidate.

McKenna (1990) has suggested a connection between the first peak in SIDS and the shift from reflexive to speech breathing with its neurological control system errors. In a similar vein there might be more sudden changes in the brain that underly the other, superimposed peaks in SIDS.

The sex difference and the fact that the graph of the boys is not multimodal is interesting in itself, but does not concern us here in this line of argument. Time does not allow us to go into it. You can read more about it in the book on regression periods.

The Wonder Weeks Story Slide 29

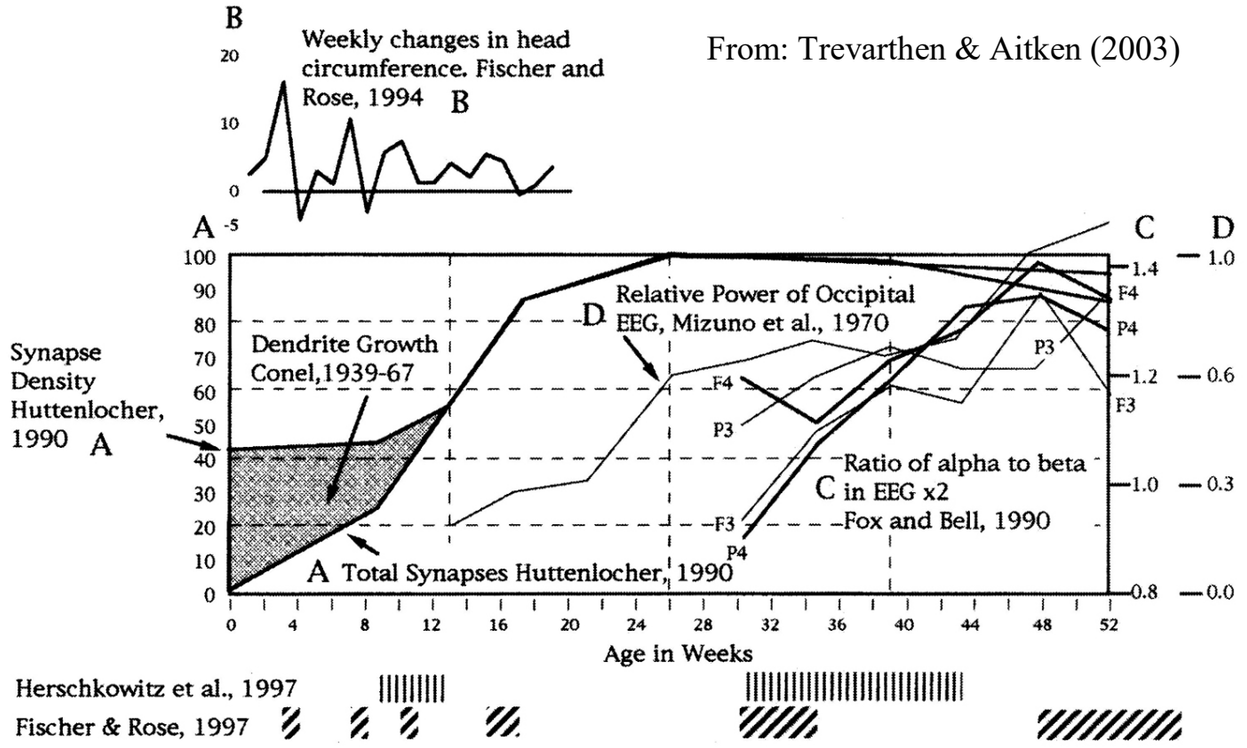
The four why’s

- Evolution
- Development
- Causation
- Function

These suggestions that sudden brain changes might underly the regression periods and the peaks in illnesses and SIDS bring us to the third of the 4 why’s: the question concerning immediate causation.

The Wonder Weeks Story Slide 30

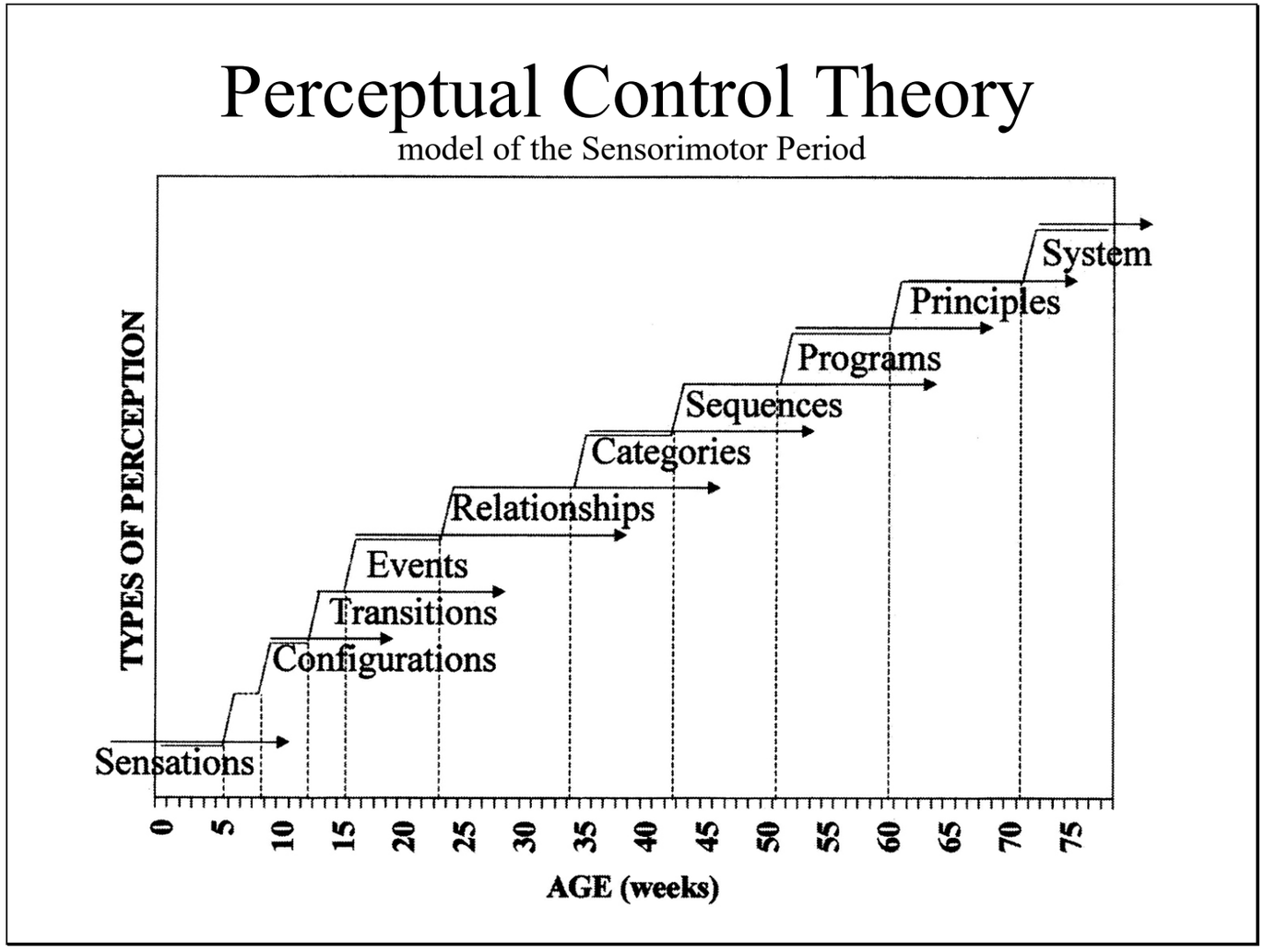
Sudden, age-linked brain changes



From: Trevarthen & Aitken (2003)

In the same book on regression periods in human infancy that was mentioned before, Trevarthen and Aitken did an extensive literature review on the pre- and postnatal development of the central nervous system. There is clear evidence for sudden, age-linked brain changes. For instance, sudden increases in the head circumference were found in the first few months shortly before or at the beginning of regression periods. It takes too much time to go into all the details, but sudden age-linked brain changes occur shortly before or at the beginning of most regression periods.

The Wonder Weeks Story Slide 31



Apart from collecting brain anatomical data, one might also approach the question of immediate causation of regression periods from another angle. This approach is based on Perceptual Control Theory. Time does not allow us to go into this theory here and now, but the bottom line is that this is a functional model of the human nervous system where behavior is the control of perception, and not the other way around. This negative feedback model is made up of a number of hierarchically ordered levels of 'search for' or 'control of' perception. One level or type of perception after the other emerges during the sensorimotor development, triggering the regression periods.

The beauty of the model is that it can be tested. If a living organism is able to search for or control a certain type of perception, so the theory goes, any disturbance to that perception should be met with resistance or counteraction. If the organism is not able to perceive that type of perception, the disturbance is met with indifference. It is not perceived, so it does not exist for the organism, it does not bother the organism.

The PCT model of the sensorimotor period specifies what type of perception is emerging at the beginning of or shortly before each regression period. This is shown in this figure. The types of perception that are supposed to emerge are the perception of:

Configurations, Smooth transitions, Events, Relationships, Categories, Sequences, Programs, Principles, and Systems

The Wonder Weeks Story Slide 32

Preliminary studies testing the Hierarchical PCT-model

- Events and Sequences
- The reasons for choosing them

We did some preliminary studies testing the Hierarchical PCT model. Here I will take the emergence of the perception of Events and Sequences as examples of these studies.

These two types of perception were chosen for two reasons.

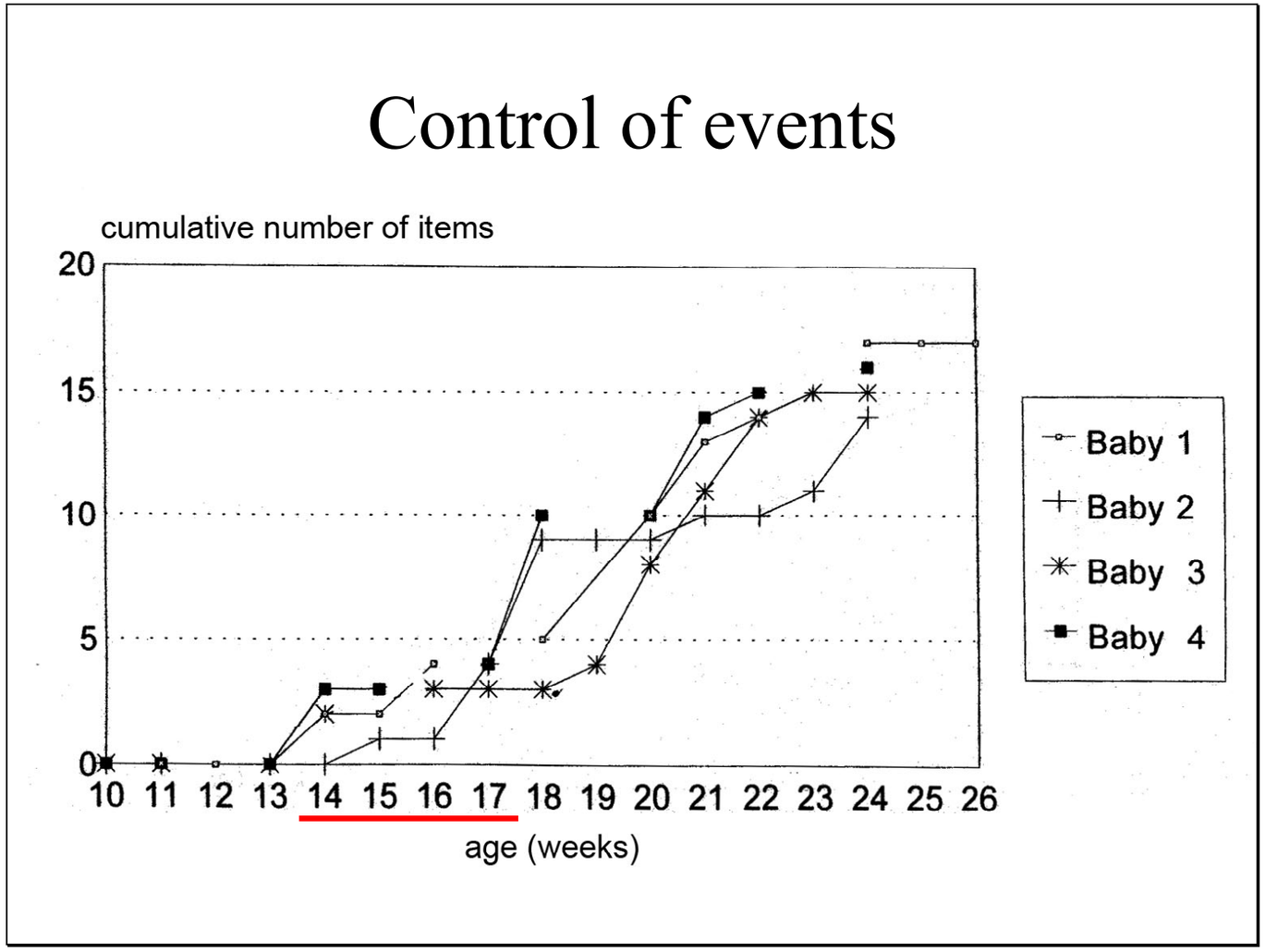
Beautifully combining ethological and experimental, neurophysiological techniques, Aldridge and coworkers (1993) have shown that the neostriatum is involved in the perception and control of sequences of behavior and determines the syntax of grooming in rats. Lesions in the neostriatum only affect the serial order of behavior but not the behavioral elements or events. This shows that the perception and control of events is ruled by another hierarchical level than the perception and control of sequences.

Diamond and coworkers (1994) have shown for human infants that the perception of or memory for temporal order is a general potential that underlies the development of a whole list of skills, behaviors or task performances.

We developed 22 tasks to test perception of events and 46 to test perception of sequences. We then followed individual babies weekly for 4 months, 2 months before and 2 months after the age of onset of a regression period, and the supposed emergence of a particular type of perception. Every week we presented the battery of task items to them. The prediction was that a baby should not do much with the battery of tasks before this age of onset, and should quickly master one after the other task thereafter.

The following graph concerns the perception and control of events.

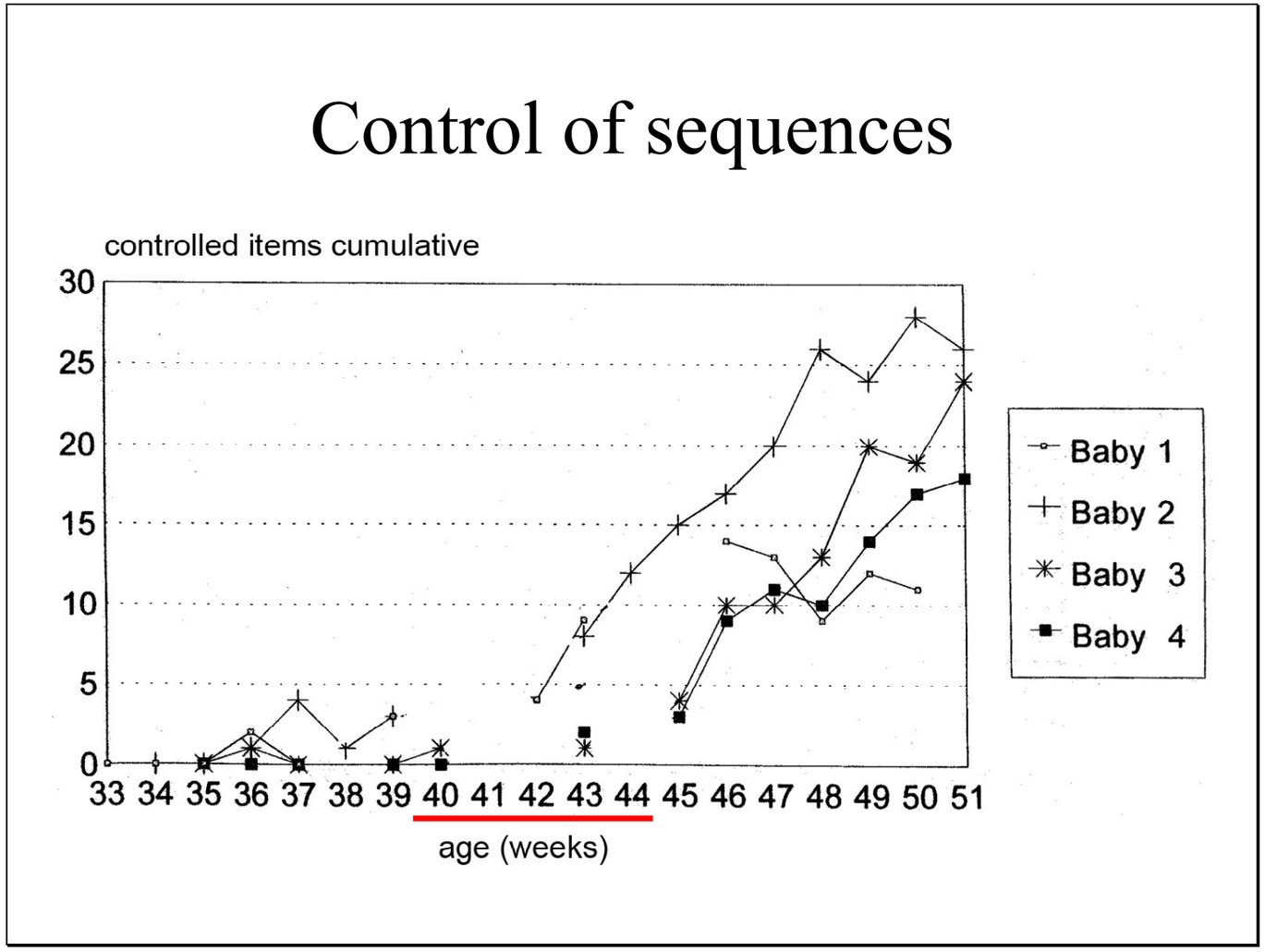
The Wonder Weeks Story Slide 33



In this graph the cumulative number of task items that are finished successfully is plotted against age (in weeks). Weeks 14-17 concern the regressive periods as reported by the mother. The individual graphs of four babies are depicted.

As you can see, before the regression period the babies did not master a single item, and thereafter the graphs shoot up.

The Wonder Weeks Story Slide 34



This figure concerns four other babies and the perception of sequences. The underlined weeks concern the regressive periods as reported by the mother. A similar picture is shown.

These kinds of studies were just preliminary. It is clear that a lot of work still needs to be done. For every single task item out of each battery experiments can be done, studying if and how any disturbances affect the counteractive behavior of the baby.

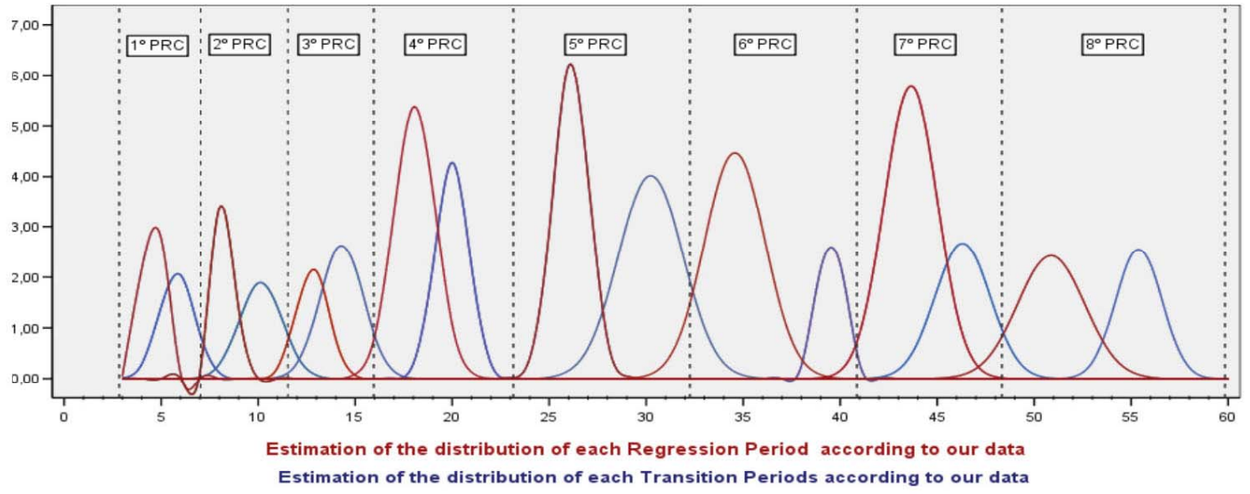
Both lines of research into the immediate causation of regression periods, that is age-linked changes in brain development and the test for new types of perception, may be interfertile. If certain brain parts suddenly increase their volume, it is nice to know what type of perception these are likely to control.

And the other way around, if the tests show that a new type of perception is emerging at a certain age, we may urge the neuroscientists to search for brain changes around that age.

The Wonder Weeks Story Slide 35

Clusters of new skills following regression periods

- Sadurni, Rostan, Perez Buriel, & Plooij (in press)



Following the emergence of a new type of perception, a whole new perceptual world to be explored opens up for the baby. In doing this the baby should develop new skills. There should be progression. In collaboration with my colleagues in Spain we tested the hypothesis that following each regression period, a cluster of new skills should emerge. We asked the mothers of the babies each week what new skills they had observed that week and the results are shown schematically in this figure. The blue line stands for the occurrence of new skills and the red line represents the regression periods and it is clear that the peaks in new skills follow the regression periods.

The Wonder Weeks Story Slide 36

The four why's

- Evolution
- Development
- Causation
- Function

This brings us to the fourth and last why: the question concerning the function of regression periods.

The Wonder Weeks Story Slide 37

Regression has a function

- Study De Vries (1984)
- Maziade et al. (1987)
- Van de Rijt-Plooij, Van der Stelt, & Plooij (1996): Leaping Hurdles

Regressive behavior and difficult periods do have a function.

For instance, Marten de Vries studied the survival of Masai children in East Africa with and without a difficult temperament in times of famine. The difficult children survived more. They were better able to trigger caring behavior of their mothers.

Using three temperamentally different subgroups from a large birth cohort, Maziade and coworkers undertook a longitudinal study of the association between temperament measured in children at 4 and 8 months and IQ assessed at 4.7 years. The data suggested a strong effect of extreme temperament traits on IQ development in middle and upper socioeconomic classes and in families with superior functioning in terms of communication. The temperamentally difficult group unexpectedly displayed higher Iqs, and the well-replicated effect of socioeconomic status on IQ development was observed mainly in this group. These data support the hypothesis that difficult infants activate special family resources, which stimulates intellectual development over the years.

Ourselves we developed a parental support and education program called ‘Leaping Hurdles’ for a risk group of single mothers who were at risk of abusing their infants. In it we made parents aware of the regression periods, showed them that their babies could not help being difficult and how they could comfort their babies in these difficult periods and facilitate the new type of perception and consequent learning.

In an evaluation study we compared an experimental group receiving the program ‘Leaping Hurdles’ with a control group following some other, current program. The results are shown in the next slide.

The Wonder Weeks Story Slide 38

Effects of Leaping Hurdles

Parents

- Change in judgment of temperament
- Change in judgment development from motoric to mental
- More ‘Locus of control’

Infants

- Higher mental Bayley
- Unisex in Bayley
- Socially more open
- No difference in type of attachment
- Better health, especially the girls

The effects of the program Leaping Hurdles on the parents were as follows:

1. The parental judgment of the temperament of their baby changed in the sense that it was based on different information, that is on the behavior of the infant instead of their own rules and restrictions.
2. Their judgment of the development of their baby was based more on information concerning the mental development instead of the motor development.
3. Finally, the program gave parents more ‘locus of control’.

The effects of the program Leaping Hurdles on the infants were as follows:

1. First, the infants scored much higher on the mental Bayley scales.
2. Second, the program resulted in unisex in the sense that it prevented the girls from getting lower scores on the Bayley.
3. Third, the program children were socially more accepting and open towards strangers and not fearful and reserved as the control children were.
4. No differences were found in the type of attachment.
5. The program had positive effects on the health of the infants, especially the girls.

So, it is clear that regression periods have the function of activating family resources and thus promoting intellectual and social development as well as physical health. It is clear that the latter might promote survival directly while the former two might do so

The Wonder Weeks Story Slide 39

My late wife and I wrote a book for parents telling this story of the regression periods and describing the new perceptual worlds their babies are exploring, one after the other. The purpose of the book is to explain to parents and caregivers in an easy and practical way when to expect the next difficult period, what the baby is experiencing, and how to best help to make the difficult time as short as possible so that the baby is free to play again and learn new skills. By doing so, the parents are empowered to deal with these difficult periods, the hurdles, more easily and all by themselves.

The Wonder Weeks Story Slide 40

The book became an immediate bestseller in The Netherlands and is now available in twelve languages from America to Japan.

The Wonder Weeks Story Slide 41

What's in this Book?

What's in this Book?

Chapter 1 *Growing Up: How Your Baby Does It* explains some of the research on which this book is based and how it applies to the reader's own baby. Parents will learn how their baby literally grows by making 'leaps' in his mental development and how these are preceded by stormy periods when they can expect their baby to be clingy, crying and cranky or temperamental.

The Wonder Weeks Story Slide 42

What's in this Book?

Chapter 2 *Newborn: Welcome to the world* explains what a newborn's world is like and how he perceives the myriad new sensations that surround him. Parents learn how nature has equipped their baby to deal with the challenges of life, and how important physical contact is to his future development.

The Wonder Weeks Story Slide 43

What's in this Book?

Subsequent chapters deal with the major developmental leaps that a baby will go through, when regression fades into progression and a 'new world' starts to be explored. Each chapter tells parents the signs that will let them know that a major leap is occurring. It explains the new perceptual changes their baby experiences at this time and how their baby will make use of them in his development. Parents can use the accompanying checklists in each chapter to keep track of the things their baby chooses to do as each new world opens up to him and his new skills take wing. There are age-appropriate games in each chapter which make use of baby's skills at each stage of his development.

The Wonder Weeks Story Slide 44

What does this book offer parents?

- Support in times of trouble
- Self-confidence
- Help in understanding their baby
- Hints on how to help your baby play and learn

What does this book offer parents?

* Support in Times of Trouble

It will support parents during the times they have to cope with crying problems. It helps to know they are not alone, that there is a reason for the crying, and that a clingy period never lasts more than a few weeks, and sometimes no longer than several days. This book tells the readers what other mothers have experienced when their babies were the same age as theirs. They will learn that all mothers struggle with feelings of anxiety, aggravation, joy, and a whole range of other emotions, too.

The Wonder Weeks Story Slide 45

What does this book offer parents?

- Support in times of trouble
- Self-confidence
- Help in understanding their baby
- Hints on how to help your baby play and learn

* Self-confidence

Parents will come to understand that feelings of anxiety, anger and joy are all part of the process, and that they will help set their baby's progress in motion. They will learn that they are capable of sensing their baby's needs at any given moment better than anyone else. They know their baby best.

The Wonder Weeks Story Slide 46

What does this book offer parents?

- Support in times of trouble
- Self-confidence
- Help in understanding their baby
- Hints on how to help your baby play and learn

* Help in Understanding their Baby

It tells parents what their baby endures during each clingy phase. It explains that he will be difficult when he's on the verge of learning new skills, as the changes to his nervous system start to upset him. When they are able to understand this, parents will be less worried about and less resentful of his behavior. It will also give them more 'peace of mind' and help them help him through each of these clingy periods.

The Wonder Weeks Story Slide 47

What does this book offer parents?

- Support in times of trouble
- Self-confidence
- Help in understanding their baby
- Hints on how to help your baby play and learn

* Hints on How to Help Your Baby Play and Learn

After each clingy period their baby will be able to learn new skills. He will learn faster, more easily and with more fun if they help him. The book helps parents to ‘read their baby’s mind’ and to gain insight into what is preoccupying him at what age. On top of that, the book supplies a range of ideas for different games, activities and toys so parents can choose those best suited to their own baby. Of course, babies show huge individual differences in the particular skills they develop after the new world opens itself. A baby cannot possibly develop a huge variety of skills at once. Therefore each baby chooses the skills that fit best with his personality. As a result the baby who is allowed to learn about his new world in the way that suits him best, will get to know the new world faster, easier and more extensively than a fellow baby who is pushed by his parents to do so their way. Parents are encouraged to be sensitive to their baby’s choices and follow that choice, scaffold it and facilitate it. Knowing the importance of facilitation prevents parents from being pushy.

The Wonder Weeks Story Slide 48 Video

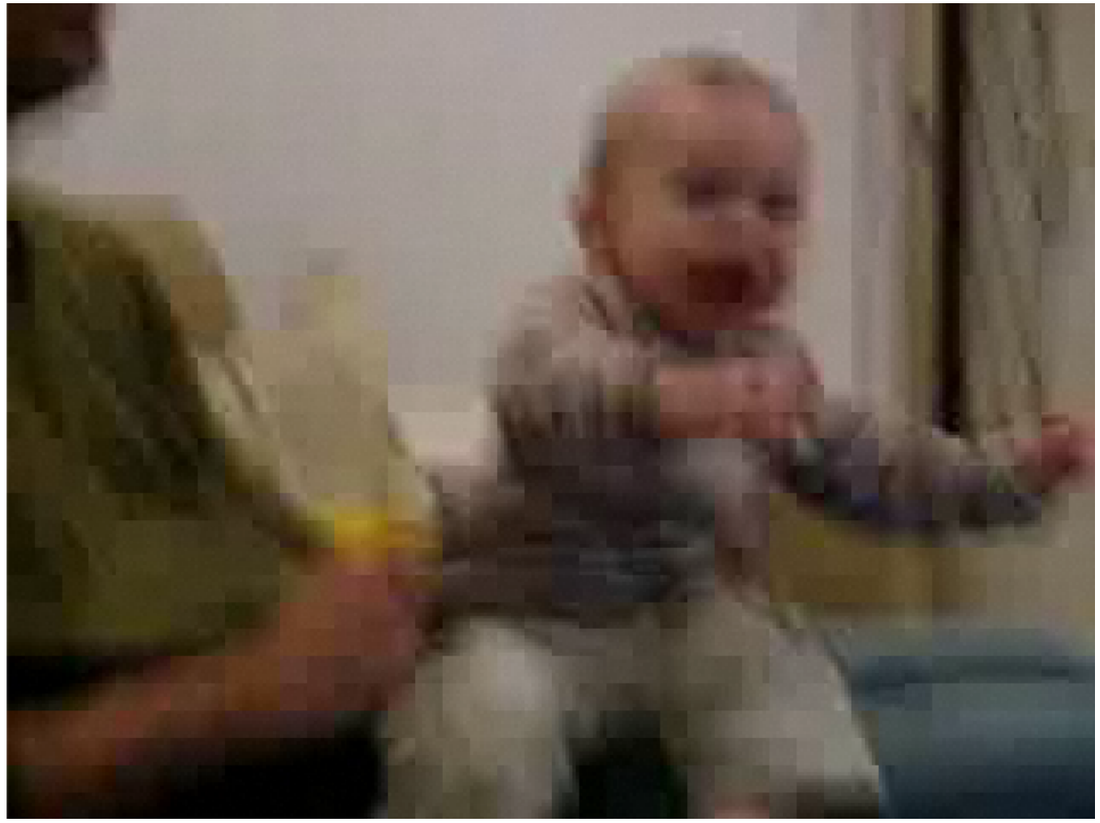
Swedish baby laughing (video)

Click on image to start video

One way to know their baby's choices is to find out what makes them laugh. Intuitively, parents do that all the time and it makes great fun as can be seen in the next movie.

The Wonder Weeks Story Slide 49 Video

Mother crawling (video)



Click on image to start video

Here the mother is crawling over the floor just like the baby is doing that at this age and the mother makes the same noises.

The Wonder Weeks Story Slide 50 Video

Shaking – an event (video)

Click on image to start video

Here an older child from the neighborhood has discovered what this baby is interested in. In fact, the boy is creating an ‘event’ by shaking the doll. And this baby has just entered the world of events. So the boy is scoring a bull’s eye.

Unfortunately, time does not allow us to go through all ten perceptual worlds that the baby is conquering and give examples of what is so exciting to a baby in each world and what makes them laugh. Fortunately, you can read all about it in the book if you want to know.

Maybe, one day, I will make a movie about it.

The Wonder Weeks Story Slide 51

Epilogue

- The 4 why's have triggered a wide variety of research projects and was productive in suggesting future research.
- The picture that emerged.

Having answered the fourth WHY of the age-linked regression periods, we have come to the end of this presentation.

Using the classical four why's from behavioral biology has triggered and still can trigger a wide variety of research projects on regression periods and is productive in suggesting further research. In doing so, the following picture emerged.

At gene-regulated ages, intrinsic processes in the core of the brain generate a new motive, directing the baby's attention to a new type of perception. Consequently, disruption in behavioral organization occurs. The baby withdraws from the world, and gets closer to the parent. The baby touches base, so to speak. A regression period has started. A more intensive caretaking spell and social interaction follows, culminating in parent-infant conflict. In the process, the parents have become acquainted with their baby's new motive and his or her new perceptual abilities. The baby starts to explore the new perceptual world, resulting in a new type of learning and, consequently, a progression toward a higher level of independence. The baby works out a set of new skills, behaviors and task performances typical of that perceptual world. Each baby 'selects' the set of skills he or she likes most. That is the reason why there may be weeks or even months between one or the other baby learning a particular skill, depending on the personal preferences of the baby and the prevailing conditions in the physical and social environment.

When the next motive comes along, the baby enters the next perceptual world, which is one level higher in the representational hierarchy. Then the whole process starts all over again.

This alternation between regression and exploration, or difficult periods and fun periods, is like good jokes and good humor: a laugh and a tear.

The Wonder Weeks Story Slide 52 Video

Happy laughter (video)

Click on image to start video

All the hardship of the regression periods notwithstanding, life can be wonderful if parents play the game well. We all know that laughter is good for your health. A study published this month in the journal Brain, Behavior and Immunity by Matsunaga and coworkers from Nagoya University in Aichi has proven this beyond doubt. The baby can use this health promoting laughter very well, after the illness peaks following the regression periods.

Thank you

The Wonder Weeks Story Slide 53

About The FOUR WINDS

FOUR WINDS乳幼児精神保健学会
FOR INFANT MENTAL HEALTH www.fourwinds.jp

FOUR WINDS President Hisako Watanabe provided background information in August 2009 for this pdf slide show conversion of Dr. Plooij' s original, November 2007, PowerPoint presentations.

The *FOUR WINDS* stands for the
F orum ***O*** f ***U*** niversal ***R*** esearch for the
W orkings of ***I*** nfant and ***N*** eonatal ***D*** evelopmental ***S*** upport.

The *FOUR WINDS* is a nationwide open forum for Japanese professionals working with infants and their families. It currently has about 370 members, including pediatricians, neonatologists, child psychiatrists, psychiatrists, obstetricians, day-nursery teachers, midwives, nurses, health visitors, infant researchers, child rearing supporters, pediatric dentists, physiotherapists, anthropologists, sociologists, clinical psychologists, local government administrators etc.

Founded in 1997 by clinicians of infant mental health who attended the 6th World Congress of the World Association for Infant Mental Health (WAIMH, http://www.waimh.org) held in 1996 in Tampere, Finland, the *FOUR WINDS* truthfully takes after the WAIMH, especially in its spirit of "infants and families first" and of volunteership.

Over the past 12 years the *FOUR WINDS* has cultivated a barrier-free non-hierarchical forum for exchange of ideas and experiences among infant clinicians of multidisciplinary backgrounds in Japan, which is culturally quite unusual.

In each annual meeting, a leading foreign expert has been invited to present original work and Dr. Plooij's lectures were very well received.

The *FOUR WINDS* was the largest and strongest group in Japan which supported the 11th World Congress of the WAIMH to be successfully organized in Yokohama, Japan in 2008. http://www.waimh.org/Files/Congress/2008/WAIMH2008CongressProgram.pdf

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