

# **The Lidcombe Program of Early Stuttering Intervention: Practice and Research**

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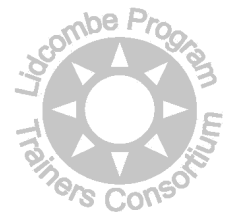
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# Some background...

- Used worldwide including Australia, New Zealand South Africa, Kuwait, Canada, USA and Israel
- Been used systematically in Europe since 1997. Training workshops given in the UK, Republic of Ireland, The Netherlands, Denmark, Sweden, Norway, Germany, Finland, Cyprus, Greece and Spain
- Training Consortium set up in 2003 to ensure standardisation of training.
- European Consortium Trainers now in UK, Denmark, The Netherlands and Germany



# Background cont'd..

LP now shown to work in diverse cultures  
and bi and multilingual populations

(Shenker 2002 ODC, Harrison, Lidcombe News 2002,  
Moffatt, Lidcombe News 2007)

Some findings:

- Trained co-workers rather than interpreters essential
- Treatment times generally longer with co-workers
- Treatment times not necessarily longer where therapist and parent speak same language
- Treatment often generalises from one language to another though not always

# The Lidcombe Program

What is the goal of the programme?

- No stuttering ( Stage 1 )
- No stuttering for a long time (Stage 2)

# Overview of the Lidcombe Program

- A behavioural treatment
- Measurement
- A direct approach: parents give feedback to their child on stutter free and stuttered speech
- Parent based: most of the treatment takes place outside the clinic in the child's everyday conversations

# Behavioural treatment :

- No causal theory
- Verbal response contingent stimulation (feedback) focused on speech
- Evidence based – laboratory evidence from around the world

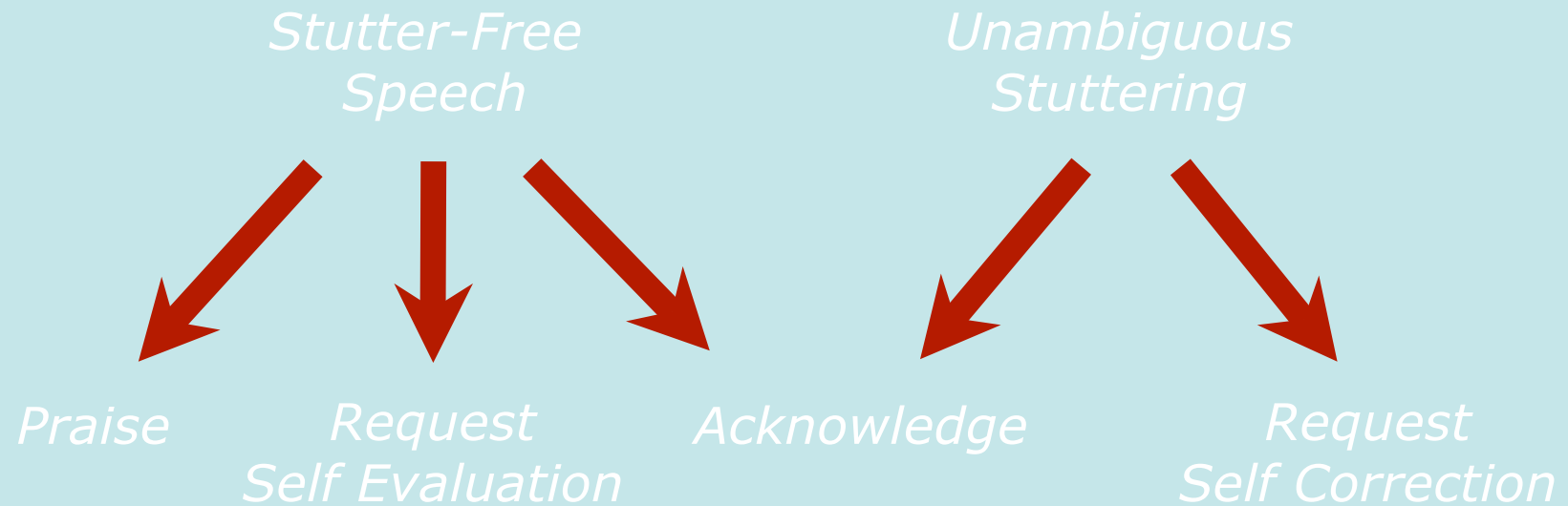
# Measurement

- Percent syllables stuttered : %SS. This is done weekly by the therapist in the clinic session.
- Severity Ratings : SRs. Parent and clinician need to monitor treatment effects outside the clinic.
  - 1= no stuttering
  - 2= extremely mild stuttering
  - 10= extremely severe stuttering

# Parental verbal contingencies: feedback

- Verbal contingencies are the primary treatment component
- Parents respond to stutter-free speech  
stuttered speech
- There must always be many more contingencies for stutter-free than  
stuttered speech

# *The Lidcombe Program*



# Making the contingencies safe & effective

- Start with *structured treatment*:  
Parents and child learn about the feedback in an environment which is controlled to ensure there is more stutter-free than stuttered speech
- Move to *unstructured treatment* when structure is no longer necessary:  
Parents give feedback for talking that happens naturally in every-day life

# Structured and unstructured conversations

- SRs high -> contingencies in structured conversations

Lots of stutter-free speaking in controlled treatment sessions

- SRs low -> contingencies in unstructured-talking= safe (lots of natural stutter-free speaking)
- Individualised for each child

# Structured and unstructured conversations

Clinician guides parents on:

- the conversations to use for treatment
- how to vary them according to SRs

Feedback must not be constant, intensive, or invasive

# Parent based treatment: What do they do during Stage 1?

- Weekly 1-hour clinic visits
- Rate stuttering severity
- Verbal contingencies
- Structured conversations
- Unstructured conversations

The treatment can not take place without the parents

## Putting it all together...

A typical early Stage I clinic visit consists of:

- Discussion about home treatment/any issues
- Measurement
- Parent does treatment
- Therapist gives feedback to parent on changes to treatment
- Therapist demonstrates treatment
- Parent does treatment again
- Therapist gives parent feedback
- Therapist outlines treatment for the next week

# Video of treatment..

Clinician gives feedback during a session which is being structured to maximise stutter-free speech

# Stage 2

## The maintenance stage.

To go to Stage 2 :

- Criterion speech < 1.0 %SS and SR 1-2
- Majority of weekly SR = 1
- Criteria achieved for 3 consecutive weeks

Purpose of Stage 2

- Prevent and detect relapse
- Empower parents – sessions no longer weekly but at increasing intervals
- Systematically withdraw the feedback

# Factors to consider when choosing the Lidcombe Program

# **Factors to consider..**

Risk for persistent rather than  
transient stuttering i.e.

Treatment vs Monitoring

# When to use the LP..

*Consider:*

Age of onset

Time since onset

Severity at onset

Pattern of stuttering since  
onset

Gender

# When to use the LP..

*Consider:*

Family History: persistent /  
transient

Other speech & language  
difficulties

Parent strategies and effects

# When to use the LP

*Consider:*

Child's distress

Parents' distress

Social penalties for child

Specific circumstances e.g.  
starting school, new sibling

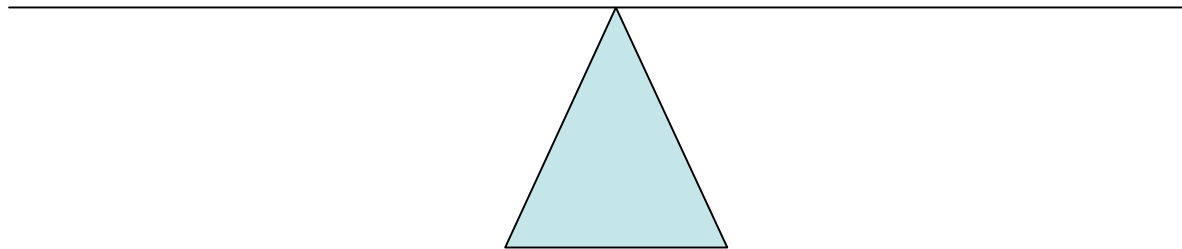
# When to use the LP

- Higher risk for persistence then LP is our treatment of choice and has an evidence base.
- Low risk- active monitoring and if natural recovery doesn't occur then LP

# When to use LP

allow natural  
recovery

penalties for  
stuttering



# Lidcombe Program Evidence Base

Mainly Quantitative studies  
A few Qualitative Studies

# LP Evidence

## Clinical Trials Framework

- Phase I: several early studies during this developmental stage of LP
  - Is it safe
  - Is it viable
- E.g. Safety: Woods et al 2002- no child anxiety no change in parent/child attachment
- Viable: LP with older children Koushik et al (2010)

# LP Evidence

## Clinical Trials Framework

- Phase II: not necessarily randomised
  - How many will respond?
  - How big a difference does it make?
  - Is this a treatment worth pursuing?

# LP Evidence

## Phase II

Two retrospective recovery plot/regression studies:

Jones et al. 2000 & Kingston et al. 2003, total N = 316

Benchmark:

50% reach end Stage 1\* in 13 clinic visits

90% reach end Stage 1\* in 24 clinic visits

Also OK to delay start of LP for a short while

\*<1%SS in clinic & SRs of mainly 1 occasional 2 for week before-maintained for 3 weeks.

# LP Evidence

Phase II cont'd..

Many other Phase II trials –

- Lewis et al (2008) LP telehealth, RCT- achieved outcome but took twice as long. Procedures developing with better technology.
- Franken et al (2005) RCT-LP vs DCM in The Netherlands- feasibility study: Similar outcomes but not full treatment- Bigger study underway

# LP Evidence

## Phase II cont'd

- Latterman et al (2008) Germany-16 weeks LP vs wait. LP showed greater reduction in stuttering than wait.
- Miller & Guitar (2009) USA- long-term comparable results to ASRC- slightly longer but newly trained SLPs.

# Getting ready for Phase III

Treatment seems to work

Treatment can be delayed  
(within short time frame)

No apparent harm

***Remember above only applies when  
LP carried out according to Manual***

# LP Evidence

## Clinical trials framework

Phase III- The 'Gold Standard'

Randomised controlled trial

Larger participant numbers

# LP Evidence

Phase III-Jones et al. 2005  
29 children randomised LP or  
current NZ treatment

# LP Evidence

Phase III-Jones et al. 2005

N = 29    Pre%SS    Post%SS

LP            7.8            2.2.

Control    7.1,            4.6

Odds ratio=7.7

# LP Evidence

Phase III-Lees (in preparation)

RCT

- 27(25) group LP vs 27(20) individual LP
- Promising results: saves clinician time though not parents' time but benefits for parents and children
- SLP needs experience with individual LP

# LP Evidence

Phase IV- Long-term surveillance & treatment effects away from development site

- Jones et al (2008)
- Study of LP in Australian & UK community clinics underway

# LP Evidence

Phase IV- Jones et al (2008), long-term outcomes for RCT children

- 5 years post-randomisation
- Average age 9 years
- 19 children
- Three above 1.0 %SS
- 84 %SS long term success rate

# LP Evidence

Qualitative research:

- Parents' experiences
- SLTs / SLPs experiences

# Parents' experiences of the L P

- Five studies
  - Hayhow et al 2000
  - Franken et al (2005)
  - Packman et al (2007) - questionnaire study
  - Hayhow (2009)- interviews 1 or 2 per parent
  - Goodhue (2010)- interviews throughout Stage 1
- Focus on last 3

# Packman, Hansen & Herland 2007

2 Norwegian SLPs sent  
Questionnaires to Australian parents-  
asked about:

- Experiences with LP
- Perceptions of child's experiences
- Perception of effectiveness of LP

# Packman, Hansen & Herland 2007

- Questionnaires had 5 point scales, yes / no, multiple choice or free text answers.
  - 37 sent and 35 returned

# Packman, Hansen & Herland 2007

- Findings: Similar to Hayhow et al.(2000)
  - LP mainly positive experience for parents & children-
  - Sometimes difficult to do program- especially finding time every day
  - Children responded positively to PVCs- some sensitive to PVCs for stuttering, a few sensitive to any comments

# Packman, Hansen & Herland 2007

## Findings cont'd:

- Children enjoyed treatment
- All parents reported stuttering reduced
- No reported unwanted side effects-  
many children more talkative and  
confident

# Aims of Hayhow 2008 Study

- To give a voice to the parents who are responsible for implementing the treatment
- To see if parents can offer any insights into the treatment processes or mechanisms.
- To make sense of what parents say with reference to the literature

# Methodology- Hayhow 2008

- Qualitative studies- exploratory, focused on experiences and how parents make sense of these
- Interviews were selected as providing the best context for learning about their experiences
- Purposive sampling to obtain a range of experiences (progress, gender, parental stammering)

# Analysis

- 14 children and 21 interviews
- General qualitative thematic analysis
- Major themes related to components of the LP
- Differences between 'routine' cases and more complex. Individual analysis of some cases

# Straightforward cases

- These parents found the LP relatively easy to implement with their children and their children made progress. Once treatment was underway they did not need to dwell too much on either the treatment or their children's stuttering.

# Parents' role in therapy

- 'it's a nice feeling you know'-  
Feelings of empowerment
- 'fix her for me'- a few were  
challenged by the importance of  
parents' role in therapy

# Parents' experiences of 'talk times'

- 'that very special time' - most were +ve
- When talk times are not 'special'- co-operation was an issue for a few
- 'I do guilt'- guilt when forgot home therapy or child didn't make progress

# Parental verbal contingencies

- 'smooth and the bumpy'- behaviour vs. the person
- 'it's just a background noise now'- children tuning out when progress is slow
- 'they do need more of that'- Praise generally helpful to their children.

# When additional problems impact on the LP

Two children started well but their additional speech & language problems, learning difficulties and family histories of stuttering seemed to leave them still vulnerable to stuttering and self-correction was often more difficult to achieve.

# Partial and inconsistent use of LP

- Two parents in this group whose experiences stood out as being very different to the other parents:
  - 1 had problems with parenting
  - Other had unresolved issues around her childhood stuttering
- Should have been addressed as soon as lack of progress evident?

# Goodhue et al. (2010)

- 14 mothers interviewed 10 times during 6 month treatment period
- 3 main topic areas:
  - Implementation of LP
  - Perceptions of LP
  - Mothers' emotions

# Goodhue et al. (2010)

## Implementation of LP

- **Obstacles:**
  - finding time to do home treatment
  - Forgetting to do home treatment
  - Siblings
- **Benefits**
  - Increase in quality times with child
  - Learning how to give effective praise

# Goodhue et al. (2010)

## Perception of LP

- Expectations:
  - Expected it to work faster
  - Didn't expect to be responsible for treatment
- General perception of LP
  - It's effective
  - Requires commitment & consistent focus
  - Easy to do - *in theory* - harder in practice

# Goodhue et al. (2010)

- Emotions- Most frequently referred to and by greatest number of parents:
  - Empowerment vs responsibility- for some OK part of parenting for others led to anxiety & pressure
  - Anxiety- are they doing it right?
  - Guilt-pre LP thought stuttering their fault, LP not doing home treatment enough
  - Distress- from watching their child stutter- not from LP
  - Cycle of confidence- related to children's progress

# Summary..

- Collecting qualitative and quantitative data on parents' experiences- an important perspective
- Provides some insight into day to day use of LP
- Consistency in findings from questionnaire studies and from qualitative interviews

# Clinicians' Experiences of the Lidcombe Program

## Sources

1. Rousseau et al 2002
2. Questionnaire study- Shenker, Hayhow, Kingston & Lawler (Oxford Dysfluency Conference 2005)
3. Hayhow (2005) interviews with 5 SLTs
4. Lidcombe News

Focus on 2 and 3

# Rousseau et al 2002

A study of Australian clinicians found:

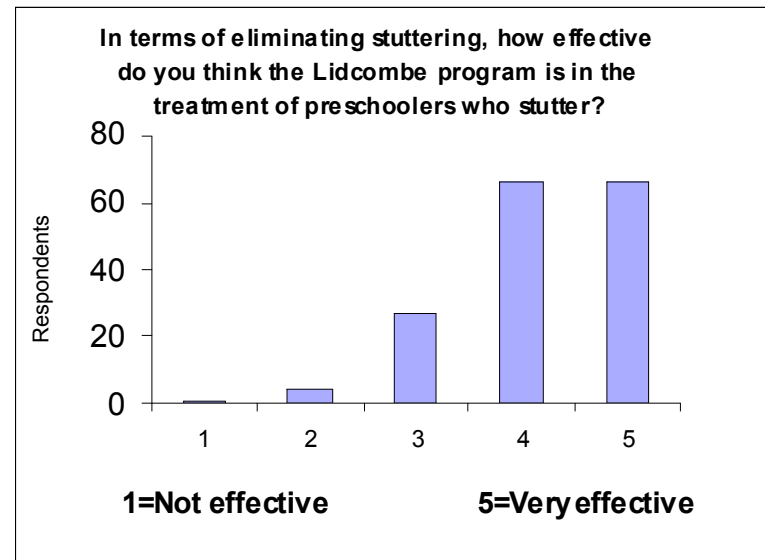
- 75% of clinicians were willing to respond to a questionnaire about their use of the LP
- 50% of clinicians were not using the program in its researched format
- Other treatments were being used in combination with the LP

# Questionnaire Study, Shenker et al 2005

- To examine LP use outside of Australia
- Web based, mostly multiple choice questionnaire but with space for comments
- 26% response rate (181 out of 695)
- Multinational with representation from the UK (60), Canada (56), the USA (31), the Netherlands (15), Denmark (14), Turkey (1), Germany (3), Finland (1) in a variety of clinical settings

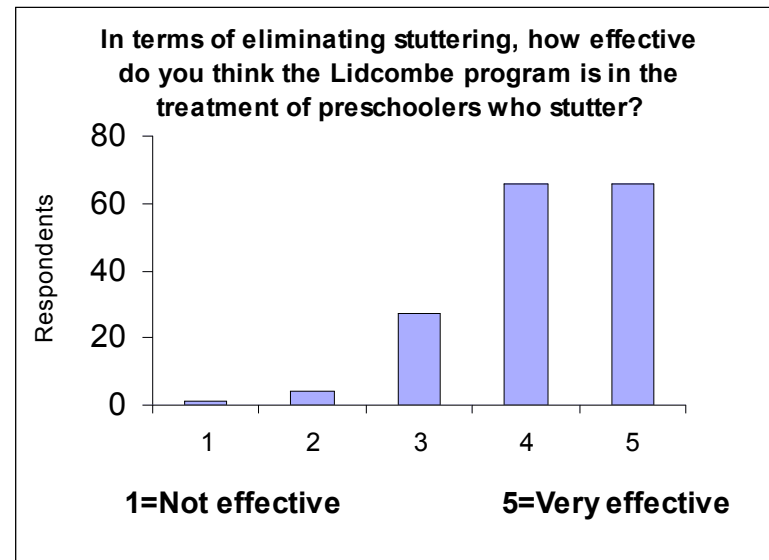
# Satisfaction with The Lidcombe Program

- 91% felt training in the LP increased their confidence in working with stuttering clients
- The majority of clinicians found the LP to be effective or very effective



# Perceived effectiveness

On a 5 point scale  
(1=not effective; 5=  
very effective),  
clinicians found the  
Lidcombe Program to  
be very effective  
(mean= 4.5)



# Some Comments..

## Most liked about the LP:

- Parents like it and can see progress.  
Empowering
- Focus on practising fluency. Nicely organised and easy to follow
- Fun, positive ,fast..it works!
- Natural: No need to teach a fluency strategy, you don't have to slow your speech
- Greatly improved generalisation beyond the clinic

## Least liked about the LP:

- Big time commitment: can take longer than 12 weeks
- Hard to sell to parents who don't want to be involved in treatment
- Relinquishing clinician control
- Not suited for all children-not reflected in written materials
- Lidcombe trainers seem to discourage combining clinical approaches

# Conclusions

## Use of the LP:

- Many clinicians were using the programme successfully after initial training in the workshops
- Confusion around meaning of 'average number of sessions to Stage 2'. Perceived as a problem if not achieved. Majority of respondents in fact within range reported in research.
- Possibly as a result of this 49.7% combined Lidcombe with other approaches, telling parents they were using a 'modified version of the LP'. Similar results to Rousseau et al (2002).

**Problem: principles of evidence base are being disregarded**

# Hayhow study 2005

Aim :to understand SLTs' experiences when using the Lidcombe Program

- 5 UK therapists
- Guided interviews
  - A group interview with four
  - Individual interviews with same four and one more
- Themes identified and analysed

# Some of the themes that emerged..

## 1. **Structure**

- Perceived by clinicians as a positive aspect of the programme for themselves and parents.

Helped therapists and, in their view, parents make sense of child's stuttering

"It's good for the parents having something so definite they've got that to look at and we've got something to talk about in the sessions."

- The structure also helps the children

"They get the feeling perhaps they've got a bit more control or power over how they are and so when Mum said that was a bit bumpy, it's not the end of the world because they can do it smoothly."

## 2. A sense of fit

- LP fitted with their understanding of early stuttering, young children and parents
- believing in what they are doing and in what they are asking others to do was important to these therapists

“A behavioural, hands on approach was a great relief .....I was lucky because I had three cases that just went straight through and the parents were so relieved to actually do something that they thought was positive about their child’s stammering. “

## **Sense of fit cont'd...**

- Also important that it 'fits' with or for the parent

".. it's such a relief when the second or third time the parent comes up with a folder and everything is in the folder and you think 'phew!' and also if they are already doing the behavioural type approach, They say 'Oh, that's good, you've cleared up all the toys' and 'Thank you for holding that door open for Mummy' and you think 'Oh good, this is going to be easy'."

### 3. Beliefs.. around success

- Therapists questioned whether all children can become stutter-free with the programme Experience was suggesting that not all can.
- However, they all said that all of the children they've worked with have improved with the LP suggesting, they believe, that there is an operant **component** to all early stuttering.

For one SLT success with LP implied

`.. if you see them early enough a child can have some sort of control over, a sort of motor control really over (speaking) before the other psychological stuff starts to get in the way.'

# **Beliefs... around factors affecting progress**

Agreement that:

- Home problems could impact on ability to do home treatment
  
- Additional speech & language problems seem to make it harder to speak without stuttering or child's stuttering seems more easily triggered

# **And finally... the children's own experiences..**

From Lidcombe News – a newsletter about the LP edited by Mary Kingston- chronicling some children's thoughts and feelings

Some of the main themes:

- Therapy is fun. Enjoyment in speaking smoothly
- Empowerment. Stuttering is something I do and can deal with/ openness / something we can talk about
- Unprompted images of stuttering

# Enjoyment of the treatment..

## **Stephen, age 7.6**

“ I like the therapy...a lot. It is good fun. I enjoy the games and I like the scores. I loved the rewards... People can understand me a lot better now. I feel much happier when I talk. It is quite hard work sometimes and other times it's quite easy!”

## **Andrew, age 6**

“ I was kind of excited when I went to see Claire for the first time...to make my speaking better. I wasn't worried at all. I enjoyed playing the games and getting the stickers ”

# Empowerment...

## **Jonathon, age 5**

“I’m going to talk smoothly, smooth like my hands” ( stroking his hands) and then pointing at the wall “and smooth like your walls!”

## **Rebecca, age 5**

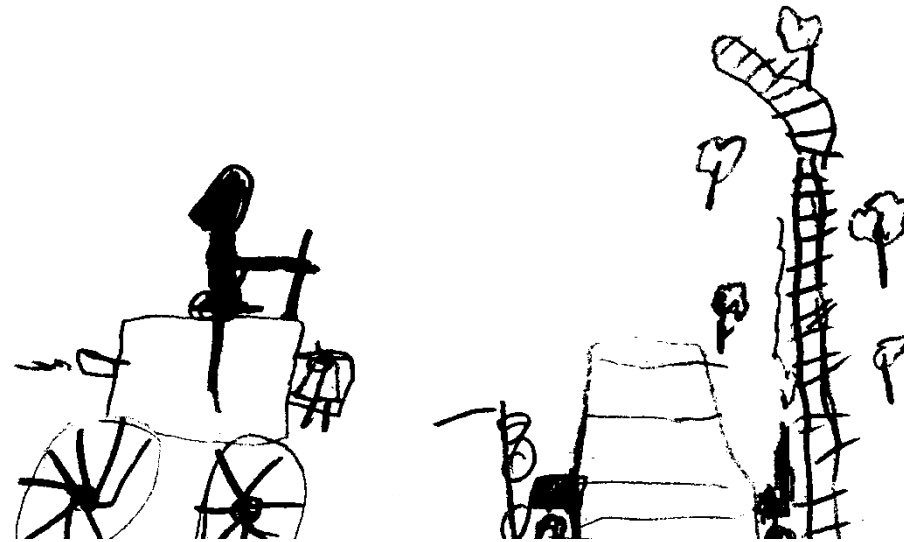
“ Mummy, I said that very smooth, you didn’t say!”

# Empowerment/openness

Thomas, age 5.3

“ When I think I am going to do a bump I put my brakes on, on my motorbike. A bridge goes up, a train goes under, and when the bridge goes down it’s smooth again, and I can go on again.”

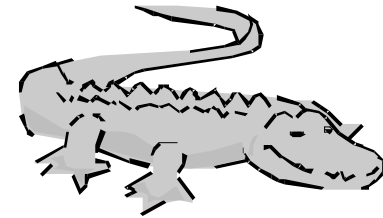
**Below.. the picture he drew of this:**



# Empowerment/openness

## Boy, age 4

“I’ve given my bumps to the crocodiles!”



## Girl, age 4

“I put my bumps in a bin. Then you put them in the boot of your car and took ‘em to the tip!”

