



Training 2.5-year-olds to recognise their delayed self-image: Is this possible?

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The experiment to be described today was concerned with delayed self recognition (DSR).

Most 18-24 month old children recognise themselves in mirrors.



Representations of self that are fleeting and not stored in memory, such as mirror images, do not allow children to organise past states of self in relation to their present self.



The *present self* –
self-representations that are largely restricted to 'the here and now'

The *proper self* –
when one's sense of self is organised through time

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Povinelli et al. (1996) devised DSR test: a large sticker is placed covertly on a child's head during a game that is being videotaped or photographed.

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4- but not 3-year-old children reached up to remove the sticker when shown their image in a delayed representation

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Povinelli et al. (1996) concluded that:

2- and 3-year-olds differ from 4-year-olds in their understanding of self because they have a temporally restricted sense of self.

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Lazaridis (2002) – Prospective study

Children were tested on the DSR task at age 2.5 years and then again at age 3 years.

Children were tested for DSR both prior to *out-of-view* video familiarisation and after such familiarisation.

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Hypotheses:

If 2.5-year-old children fail because they have had insufficient exposure to their marked self-image, exposure to the test of DSR prior to video training might facilitate their performance in the second test of DSR.

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If on the other hand, 2.5-year-old children make inferences about objects in space before they make inferences about objects pertaining to self because of a restricted sense of self, pointing the sticker out to them and providing two DSR tests should not improve their DSR performance.

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In contrast, if the same children at the age of 3 years have developed an extended sense of self they should not reach for the sticker prior to video familiarisation but should reach reliably after this training has been provided.

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21 2.5-year-old children were tested

15 of these children were retested at age 3 years



Number of Children At Each Age Group Exhibiting Delayed Self-Recognition Before Training

| Age | DSR | |
|-----|-----|----|
| | Yes | No |
| 2.5 | 0 | 21 |
| 3.0 | 4 | 11 |



Number of Children At Each Age Group Exhibiting Delayed Self-Recognition After Training

| Age | DSR | |
|-----|-----|----|
| | Yes | No |
| 2.5 | 4 | 17 |
| 3.0 | 12 | 3 |



It appears from these findings that changes in performance on the test of DSR *may* indicate the emergence of an extended sense of self.



It is possible that retrieval tasks pertaining to self require a different form of training for children of this age; perhaps 2.5-year-olds needed delayed self-image experience to perform the task successfully.



Indeed, Troseth (2003) showed that giving 2-year-old children experience with their live self image facilitated their performance on a live object-retrieval task, a task that had traditionally only been passed by 2.5-year-olds



The overall aim of this study was to investigate whether 2.5-year-old children recognise themselves in delayed video representations when they are exposed to their delayed self video-image for a week prior to the test of DSR in addition to being trained to understand the correspondence between the delayed video image and current reality.



Participants

The participants were 20 children (7 girls and 13 boys) aged 2.5 years (M age = 31.5 months, SD = 1.9 months, range = 28-34 months).



Design

All children were tested for DSR twice, where the initial DSR test served as a control for the subsequent DSR test, one week later.

All children received video experience with their delayed self-image between the two testing sessions.

Immediately prior to the second DSR test, participants were randomly assigned to one of two groups: (1) children in the 'video training' condition received video-familiarisation training prior to the second DSR test, and (2) children in the 'no training' condition did not receive video-familiarisation training prior to the second DSR test.



Procedure

Test for DSR prior to video experience.

Video experience.

Video-familiarisation training.

Test for DSR after video experience.



Table 1

Children's Responses to the Initial and Final Test of DSR

| Condition | <i>n</i> | DSR Performance | | | |
|----------------|----------|-----------------|----|------------|----|
| | | Initial Test | | Final Test | |
| | | Yes | No | Yes | No |
| Exp Only | 10 | 2 | 8 | 2 | 8 |
| Exp & Training | 10 | 3 | 7 | 2 | 8 |
| Total | 20 | 5 | 15 | 4 | 16 |



Table 2
Children's Responses to Final DSR, LSR, and MSR tests.

| Tests | <i>n</i> | Removal of Sticker | |
|-------|----------|--------------------|----|
| | | Yes | No |
| DSR | 20 | 4 | 16 |
| LSR | 16 | 3 | 13 |
| MSR | 13 | 13 | 0 |



It appears that the 2.5-year-olds did not recognise the causal connection between the representation of their delayed self-image with the representation of their current self, and this was the case despite delayed video self-image experience.



In contrast to MSR and object retrieval from video footage, our findings suggest that successful performance on the task of DSR may reflect the transition from a temporally restricted to a temporally extended sense of self.

The finding that 2.5-year-old children also have difficulty with LSR replicates previous findings in our laboratory. Further research is needed to explore this finding. Current research in our laboratory is exploring linguistic, cognitive and social factors that contribute to the development of a TES.