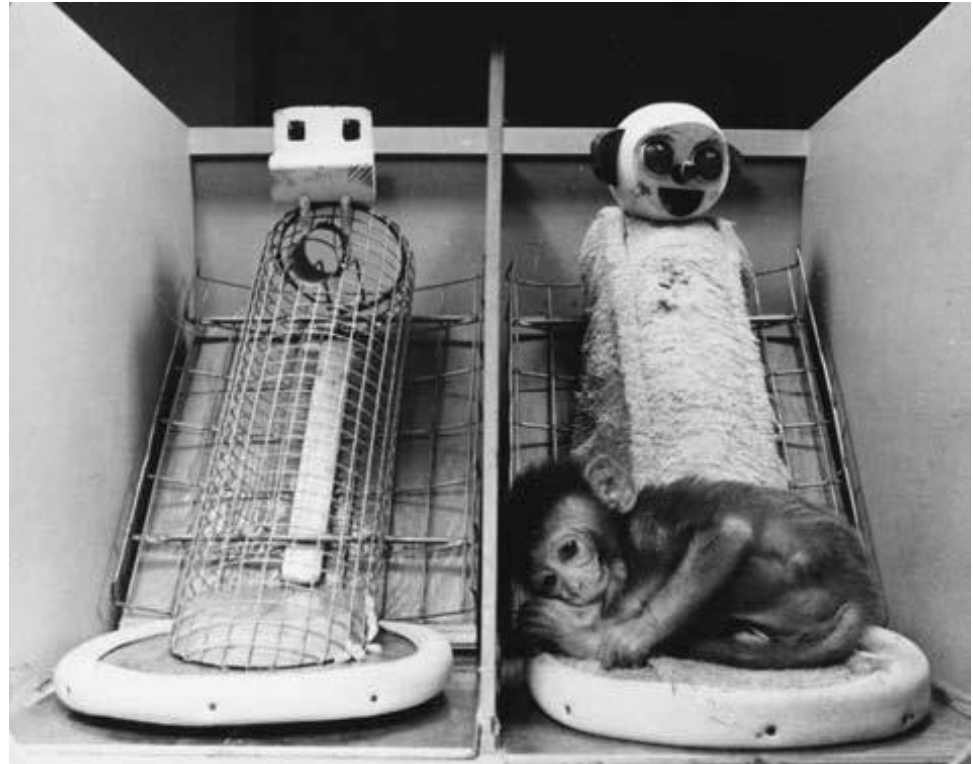


DESIGN PSYCHOLOGY

2016-2017



Op Zoek
naar de
Menselijke
Maat



“What Girls Think Guys Talk About”

BuzzFeed Videos



News Buzz Life Entertainment Quizzes Videos More ▾ [Get Our App!](#) 🔍 👤

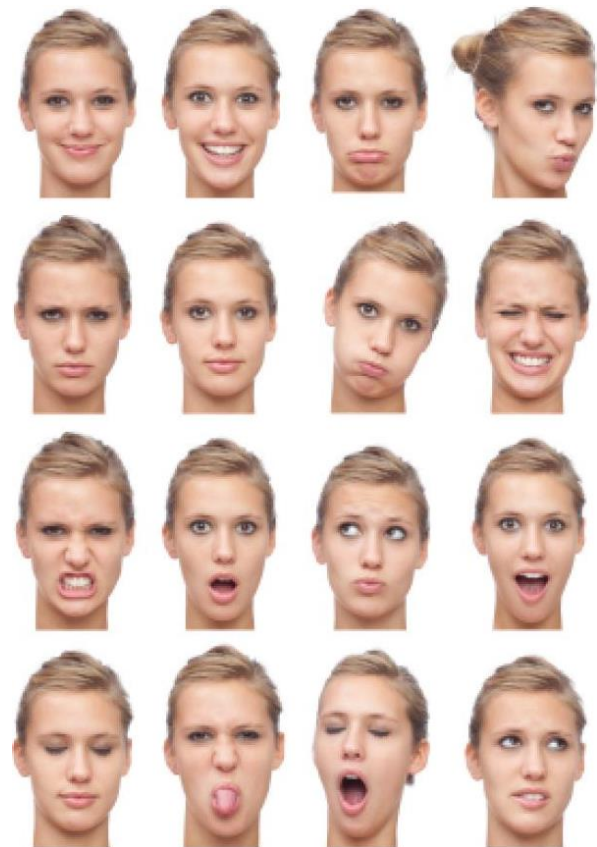


What Girls Think Guys Are Talking About



https://www.youtube.com/watch?v=cTv5fgkO_JE&feature=player_detailpage#t=0

<http://www.buzzfeed.com/andrewilnycyj/what-girls-think-guys-are-talking-about#.xeM883zRJ>



Test your social intelligence!

Test how well you can read emotions of others just by looking at their eyes.

The ability to read the emotions of others is linked to "social intelligence" which, in turn, is linked to performance on team-based problem solving tasks.

Try it!

This is an implementation of the Reading the Mind in the Eyes test developed by prof. Simon Baron-Cohen at the University of Cambridge.

Brought to you by the [Intelligent Interactive Systems Group](#) at Harvard University

Your score is 36 out of 36

How did others do on this test?
The average score is 25. But we found that not everyone does the same on this test:

- Women, on average, score half a point higher than men.
- Young people under 18 score substantially lower than adults.

Does this test work equally well for all people around the world?

This test was developed in Great Britain and the images you saw were taken from British magazines in 1980's. Unfortunately, the test doesn't work perfectly for people who are not native speakers of English or for people who come from cultures that are very different from Britain's.

Should you worry if you got a low score?

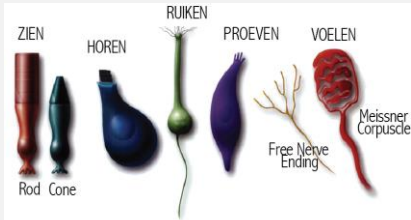
No. Your screen lighting, mood, fatigue and many other factors might have affected your score. The results of this test are useful when you average them across many people, but they are likely to be inaccurate for any individual person.

[Click here to find out what the results might mean and to learn how the test was developed in the first place](#)

THEMA's cursus DESIGN PSYCHOLOGY

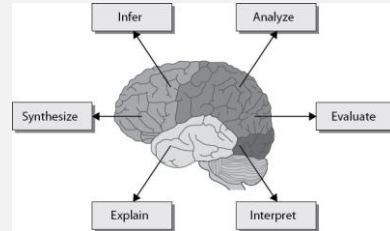
T
H
E
M
A

Gewaarwording & Perceptie



Biologie / neuro-
wetenschappen

Cognitie & Semiotiek



Biologie / Neuro-
wetenschappen

Gedrag & Communicatie



Biologie /
Psychologie

Theory of Mind (ToM)



Psychologie /
Sociologie

DOEL
Des. Psych.

Voegt een neuro-ethologisch perspectief toe aan
het design-theoretische denkkader van CMD professionals.

JULY 23, 2001

STEM CELLS: THE BATTLE HEATS UP

GARY
CONDIT'S
SECRET LIFE

TIME

HOW
APES
BECAME
HUMAN

*Andipithecus
ramidus
kadabba*

What a new discovery tells
scientists about how our oldest
ancestors stood on two legs
and made an evolutionary leap

www.time.com AOL Keyword: TIME

OCTOBER 9, 2006

ANDREW SULLIVAN ON BLIND FAITH ■ LEO & JACK & MATT & MARTY

TIME

HOW
WE
BECAME
HUMAN

Chimps and humans
share almost 99%
of their DNA. New
discoveries reveal how
we can be so alike—
and yet so different

MAY 15, 2006

POP! GOES SCHOOL SODA ■ EXCLUSIVE: NINTENDO'S NEW GAME

TIME

NEW INSIGHTS
INTO THE HIDDEN
WORLD OF
AUTISM

BY CLAUDIA WALLIS

Nick Furth, 8,
of Mine Hill, N.J.

Theory of Mind (ToM) “: een psychosociaal model voor “de Menselijke Maat”

Psychosociaal →

Het innerlijke leven betreffend voor zover dit door sociale factoren beïnvloed wordt

“Dagelijkse sociale interactie met andere mensen is essentieel voor ons mens-zijn

Bij kinderen die opgroeien zonder affectief contact met anderen neemt de gezondheid af.

Mensen leven in groepen en nemen gedragskenmerken van andere mensen over.

Door ons te identificeren met anderen neemt ons zelfbewustzijn toe.

Uiteenlopende aspecten van het leven als roken, eet- & drinkgewoonten, gewicht, en leesgewoonten zijn in hoge mate te voorspellen door te kijken naar iemands netwerk, naar iemands vrienden en kennissen.

Dit lijkt ook te gelden voor de mate waarin iemand zich gelukkig voelt.

Theory of Mind (ToM)

Premack, D. & Woodruff, G.
(1978). Does the chimpanzee
have a theory of mind?.
Behavioral and Brain Sciences, 1,
pp 515-526
doi:10.1017/S0140525X00076512

'Theory of mind'

is een term voor het eerst gebruikt door
neuro-ethologen Premack & Woodruff

Zij bestudeerde het gedrag van chimpansees.

Does the chimpanzee have a theory of mind?

Doel van het onderzoek was om na te gaan of aapachtige zich kunnen
inleven in de gedachten en intenties van mensen en/of andere apen.

Zie ook: Tomasello, M. and Call, J. (1997) Primate Cognition, Oxford University Press

PRIMATE
COGNITION

MICHAEL TOMASELLO
JOSEF CALL

Theory of Mind (ToM)



Little kids can do this. Chimps can't.

A chimpanzee named Billy helps determine whether or not animals are capable of empathy, or "theory of mind."

The result of this experiment, as featured on through the wormhole may be surprising.

<http://www.sciencechannel.com/video-topics/brain-intelligence/jane-goodall-chimpanzees/>

LITTLE KIDS CAN DO THIS. CHIMPS CAN'T.

A chimpanzee named Billy helps determine whether or not animals are capable of empathy, or "Theory of Mind."

Theory of Mind (ToM)

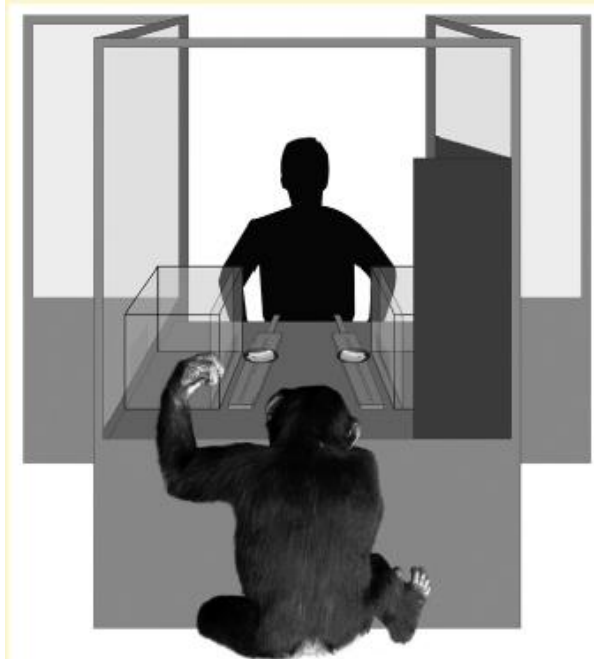
Does the chimpanzee have a theory of mind? 30 years later

Josep Call and Michael Tomasello

Max Planck Institute for Evolutionary Anthropology, Deutscher Platz 6, D-04103 Leipzig, Germany

When competing with others for food chimps **take into account** what the competitor can or cannot see/hear and even what he does/doesn't know.

false beliefs



Theory of Mind (ToM)

Theory of mind (ToM) is de menselijke behoefte om de “gedachten” van andere (mens of dier) te kunnen lezen.

Je maakt gebruik van ToM wanneer je je probeert voor te stellen wat een ander waarneemt, voelt of denkt.

Theory of Mind stelt je in staat om empathisch te handelen: “je verplaatsen in het gevoelsleven van een ander”.

The background of the slide is a collage of human eyes, arranged in a grid-like pattern. The eyes are of various colors (brown, blue, green) and are looking in different directions. The image is semi-transparent, allowing the text to be overlaid.

THEORY OF MIND

gaze & oogbewegingen

Theory of Mind (ToM) vereist
Kennis over oogbewegingen &
blikrichting / kijkrichting [Gaze]

https://www.youtube.com/watch?v=nBNNgeHsPxQ&feature=player_detailpage#t=0

Kijkrichting [Gaze]

Referential Gaze



Gaze toward participant



Gaze toward map

Affiliative Gaze



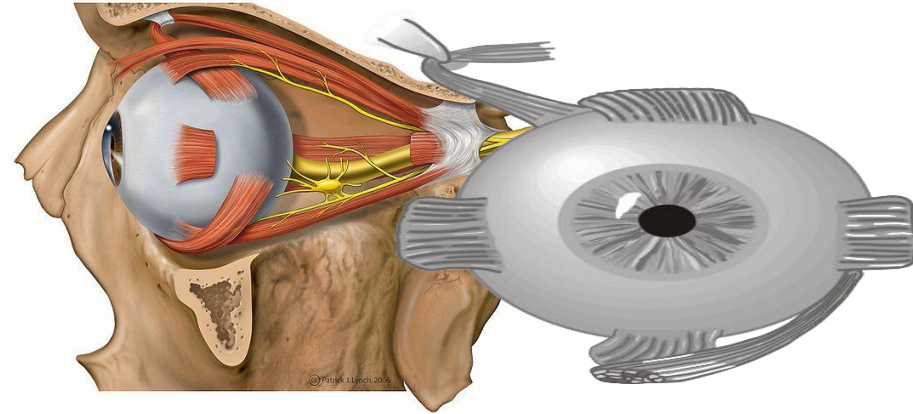
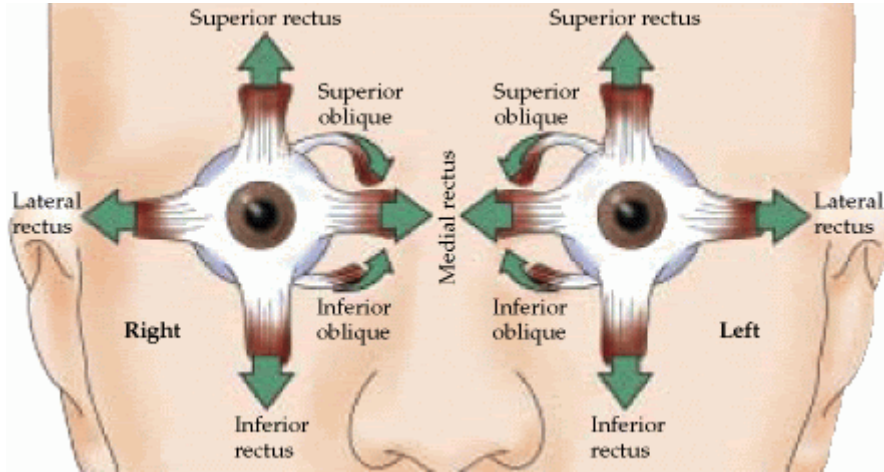
Gaze toward participant



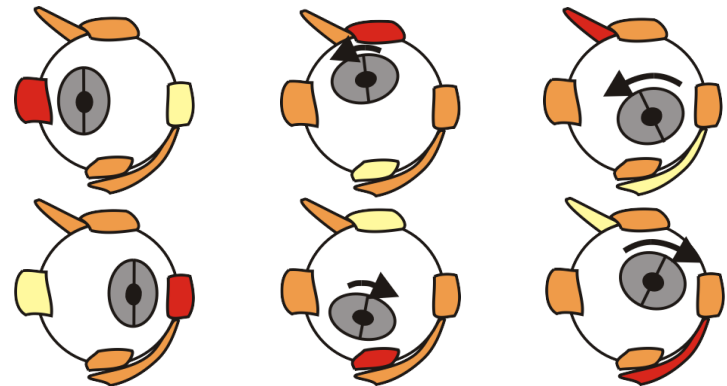
Gaze toward map



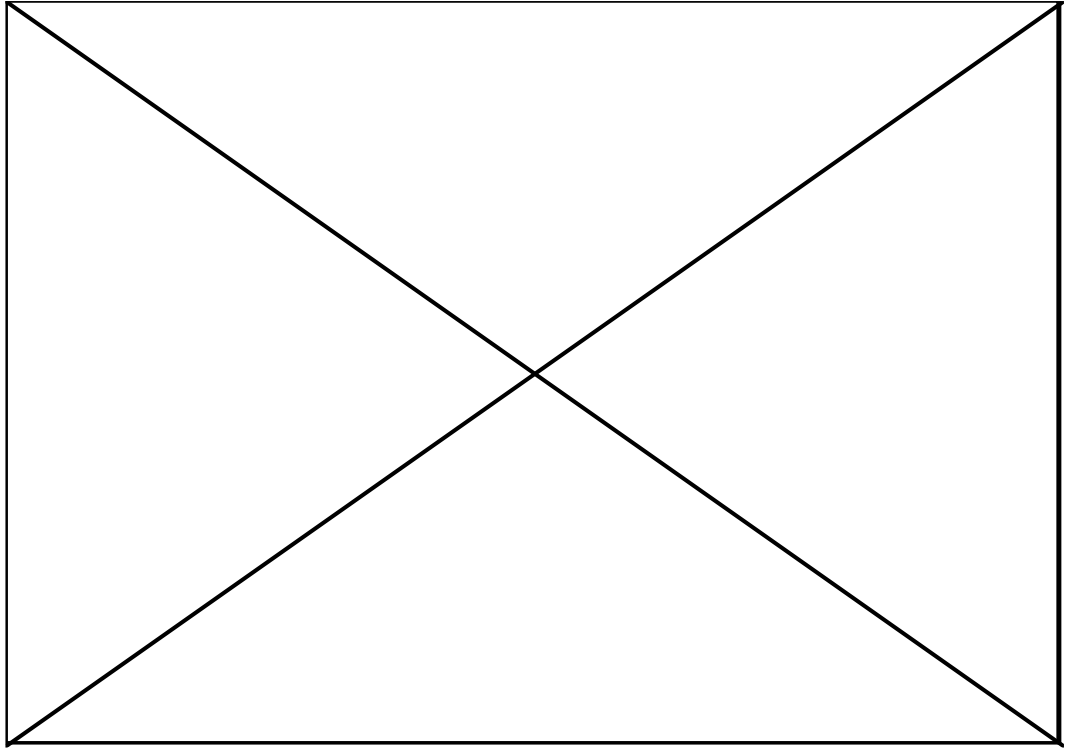
Oogbewegingen



Oogbewegingen zijn complex
en moeten worden aangeleerd



Kijkrichting [Gaze] versus oogbewegingen



https://www.youtube.com/watch?feature=player_detail_page&v=6GliSCGkpZ4#t=22

Oögbewegingen & Fixaties tijden het lezen van een tekst

CONVENTIONAL READING

DANS, RÖN OCH JAGPROJEKT

På jakt efter ungdomars kroppsspråk och den "synkretiska dansen", en sammansmältning av olika kulturers dans, har jag i mitt fältarbete under hösten rört mig på olika arenor inom skolans värld. Nordiska, afrikanska, syd- och östeuropeiska ungdomar gör sina röster hörda genom sång, musik, skrik, skraff och gestaltar känslor och uttryck med hjälp av kroppsspråk och dans.

Den individuella estetiken framträder i kläder, frisyrer och symboliska tecken som förstärker ungdomarnas "jagprojekt" där också den egna stilen i kroppsrörelserna spelar en betydande roll i identitetsprövningen. Upphållsrummet fungerar som offentlig arena där ungdomarna spelar upp sina performance-liknande kroppsspråk.

SPEED READING

theguardian
Winner of the Pulitzer prize

Can you read a novel in three hours?



Speed-reading a Man-Booker-shortlisted novel - with help from an app called Spritz - was a thrilling ride that left me in agony



<http://www.theguardian.com/books/booksblog/2014/sep/22/speed-reading-app-spritz-read-novel-three-hours>

Fast and furious ... speed-reading with no time to linger. Photograph: Rob Macdougall/Getty Images

<http://www.spritzinc.com/test/>

Oogbewegingen

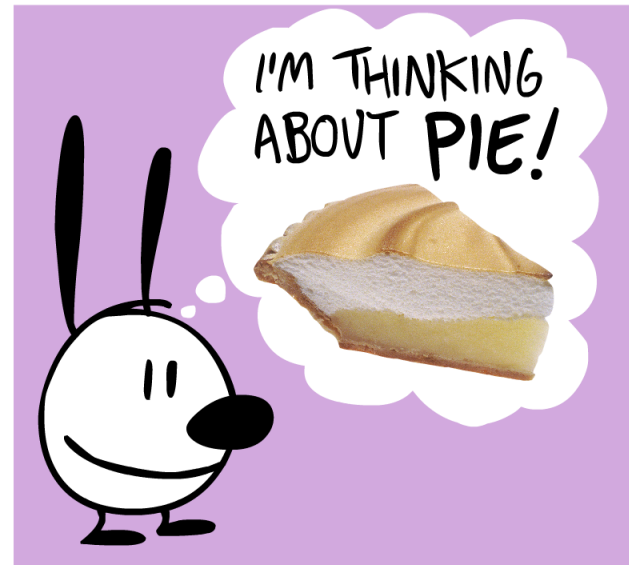
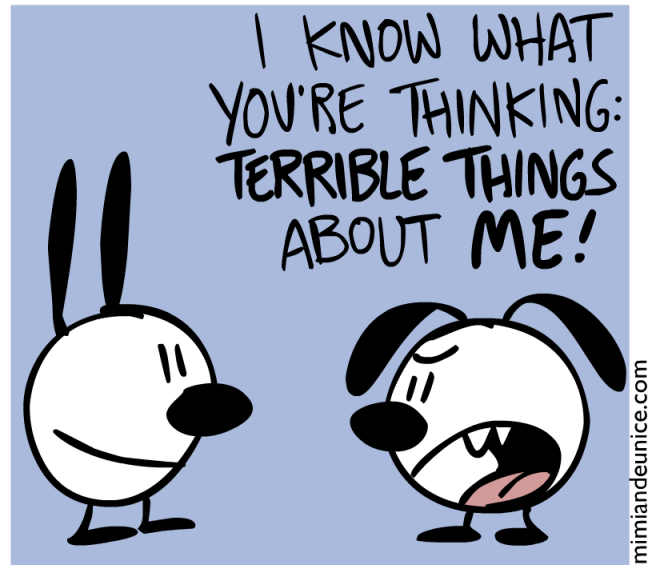


[H]uman eyes voluntarily and involuntarily fixate on those elements of a visual scene that carry essential and useful information. The more information is contained in an element, the longer the eyes stay on it. The distribution of fixations on the elements of a scene changes depends on the purpose of the observer, i.e., it is determined by information to be obtained and the thought process accompanying the analysis of this information. Hence people who think differently also, to some extent, see differently.

Yarbus (1967) *Eye Movements and Vision*. New York: Plenum Press.
Translated from the 1965 Russian edition by Haigh

THEORY OF MIND

methoden van onderzoek



ToM: methoden van onderzoek

False Belief Tasks

1st	Order
2nd	Order
3rd	Order

ToM Stories

Mind in Eye (Interpretation) Tasks

Heider-Simmel (like) animations

Faux pas

The Sally Anne Test

The Sally Anne Test has been used in psychological research to investigate Theory of Mind.

A **Theory of Mind** is the ability to understand your own and other people's beliefs, desires, intentions and emotions.



<http://www.educateautism.com/images/articles/sally-anne-test-educate-autism.png>

Theory of Mind is important because “the ability to make inferences about what other people believe to be the case in a given situation allows one to predict what they will do.”

(Baron-Cohen, Leslie, & Frith, 1985, p. 39)

It has been proposed that lacking a Theory of Mind may explain some of the social and communication difficulties experienced by individuals with autism. (Tager-Flusberg, 2007; Frith & Frith 2002)

Sally-Anne False-Belief-Task

To start the test, two dolls, one called Sally and the other called Anne, are presented to the child.

This is Sally



This is Anne



The child is then told that Sally has a basket and that Anne has a box.



Next the child is told that Sally puts a marble inside her basket...



...Sally then leaves and goes outside where she can no longer see her basket...

I'm Back!



Next come the

QUESTIONS

To make sure the child understands the basics s/he is asked:

- Q1. Which one is Sally?
- Q2. Which one is Anne?
- Q3. Where is the marble now?
- Q4. Where was the marble in the beginning?



The marble **WAS** in the basket



The marble is **NOW** in the BOX

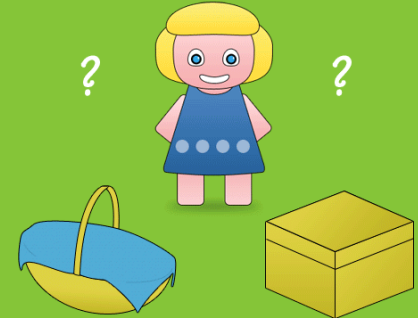


Then comes the BIG QUESTION

111 EducateAutism.com

The “Theory of Mind” question asks:

Where will Sally look for her marble?



If the child realises that Sally will look for the marble in her own basket and not in the box, then the child can understand Sally's perspective and you can say the child has a Theory of Mind.

If the child says that Sally will look for the marble in Anne's box then you might say the child **does not** have a Theory of Mind. In this case the child does not appear to understand Sally's perspective and that she did not see Anne take the marble and put it inside the box.

The Sally–Anne Test

The Sally–Anne test is taken by children between the ages of three and four. It involves staging a simple puppet show involving two characters, Sally and Anne (a). Sally places a marble in a basket, closes its lid and leaves the room (b). Shortly thereafter, the very naughty Anne flips open the lid of the basket, pulls out the marble (c) and places it in a box sitting in the corner (d). Now, the child who has witnessed all of this is asked a simple question: when Sally returns, where will she look for the marble (e)?

Almost every child under 4 years of age exclaims with confidence, “In the box!” This answer is baffling to adults for the obvious reason: there’s no way Sally could have known that the marble was mischievously displaced by Anne because Sally wasn’t around to witness that.

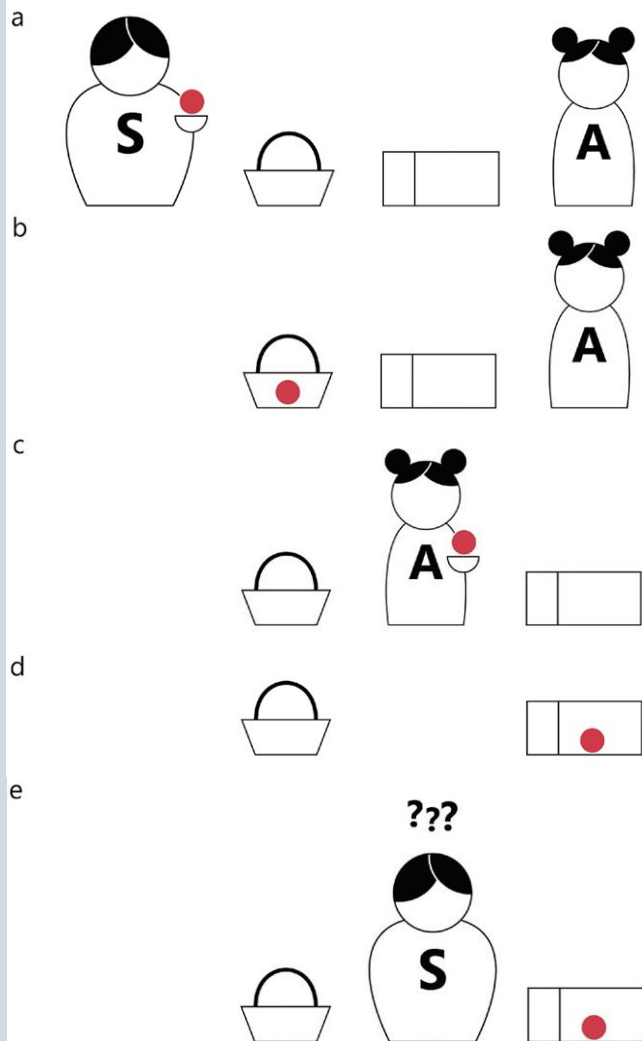
Young children provide an incorrect answer because they have yet to develop what is known as the *theory of mind (ToM)*, a differentiating feature of human beings when compared to most other mammals.

We develop ToM by the time we’re five years old. In fact, if you were to administer the test to five-year-olds, you would be greeted with sheer bewilderment for having wasted their time before they gave you the right answer.

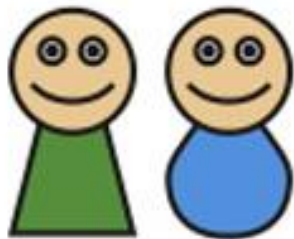
Theory of mind bestows on us two critical pieces of knowledge that, when wielded properly, have the ability to bring out the best in us: Our mind’s version of reality isn’t true reality: it’s just one interpretation of reality. Everybody has their own mind and, thus, their own interpretation of reality.

Theory of mind bestows on us two critical pieces of knowledge that, when wielded properly, have the ability to bring out the best in us: Our mind’s version of reality isn’t true reality: it’s just one interpretation of reality. Everybody has their own mind and, thus, their own interpretation of reality.

<http://www.graphics.com/article/web-design-design-people>



first-order



second-order



third-order



False-Belief-Task

What does the person with the blue shirt believe is in the bag?

(1st order false belief)

Gift, present, flower, (bug is incorrect)

What's in the bag? (reality)

Wasp, bee, insect, or bug

What does the person in blue shirt

believe the person in red intends to do?

(2nd order false belief)

Give him a gift or present

What does the person in red assume the person with the blue shirt believes, regarding his (the one in red) intentions?

(3rd order false belief)

Give him a gift or present



Theory of Mind Stories

Misunderstanding (Glove): A burglar who has just robbed a shop is making his getaway. As he is running home, a policeman on his beat sees him drop his glove.

He doesn't know the man is a burglar, he just wants to tell him he dropped his glove. But when the policeman shouts out to the burglar, “Hey you, Stop!”, the burglar turns round, sees the policeman and gives himself up. He puts his hands up and admits that he did the break-in at the local shop.

Control questions:

1. Was the policeman surprised by what the burglar did?
2. Why did the burglar do this, when the policeman just wanted to give him back his glove?

ToM Stories



A SAMENWERKING



B BEDROG



C SAMENWERKING + BEDROG



D

Verkeerde volgorde
ToM verhaal

Theory of Mind Interpretatie Taak

- Pure Theory of Mind Test
- Tests recognition of complex mental states
- Artificial constraints not present in real life
 - Limited Choice of options
 - Unlimited time to study faces
- Validation study sample size small

PLAYFUL

COMFORTING



IRRITATED

BORED

TERRIFIED

UPSET

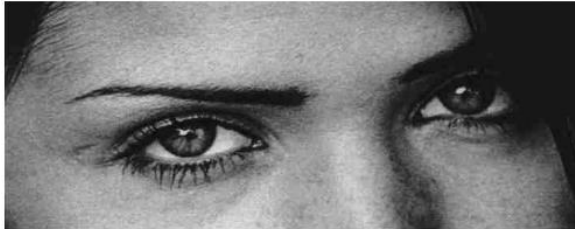


ARROGANT

ANNOYED

JOKING

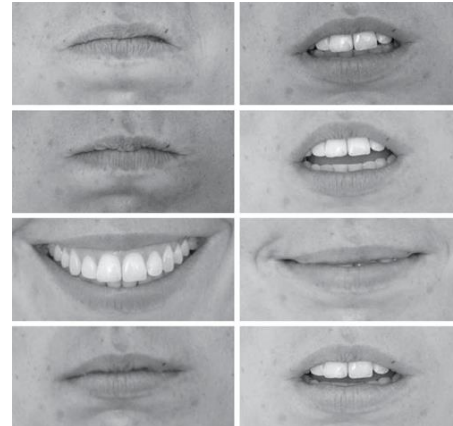
FLUSTERED



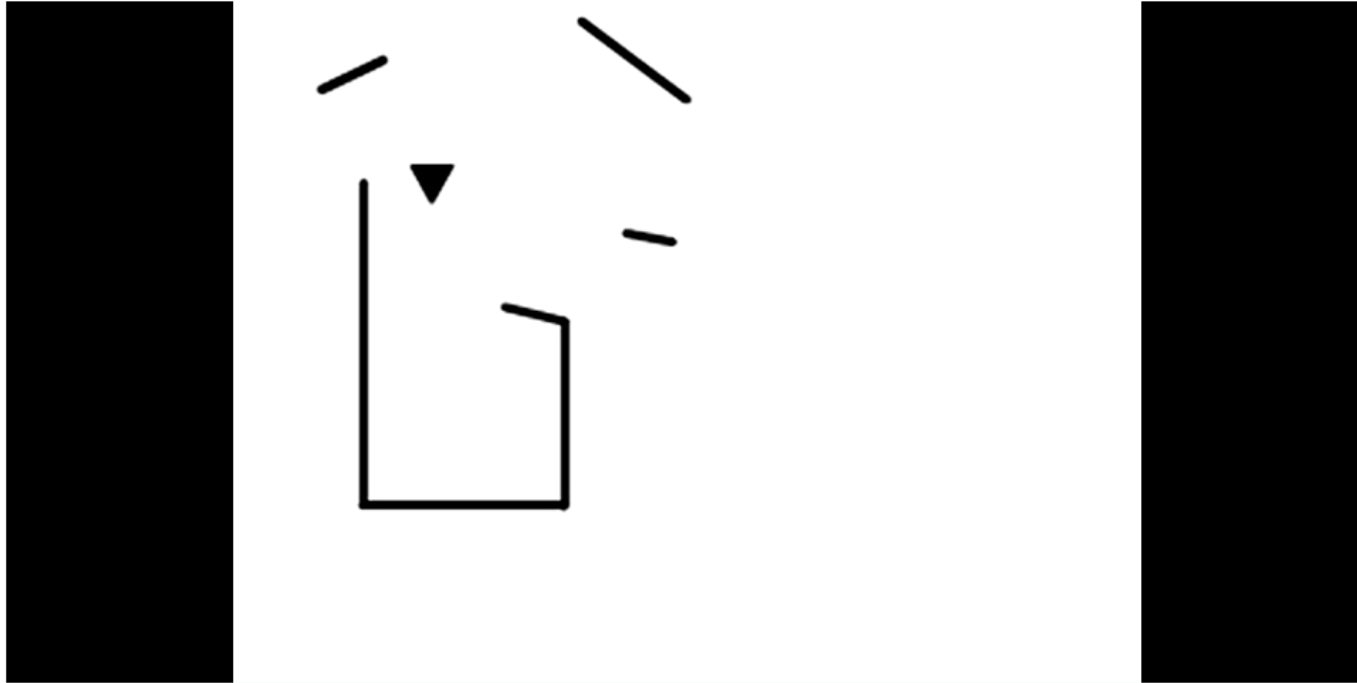
DESIRE

CONVINCED

Mind in EYE (interpretative) Taak



ToM test: Heider-Simmel (like) animations



Heider & Simmel animation (1944)

from **translating nature** PLUS 1 year ago / NOT YET RATED

Heider, Fritz and Simmel, Marianne (1944). An Experimental Study of Apparent Behavior. The American Journal of Psychology, 57(2), pp. 243-259.

<http://vimeo.com/48908599>

Faux Pas (interpretative) Taak

Faux pas = breach of etiquette / accepted social behaviour
stories containing incidents of faux pas:

someone mistakenly saying something they shouldn't have
are read to the individual, who is then asked questions to determine
whether or not they recognised the faux pas.

Example:

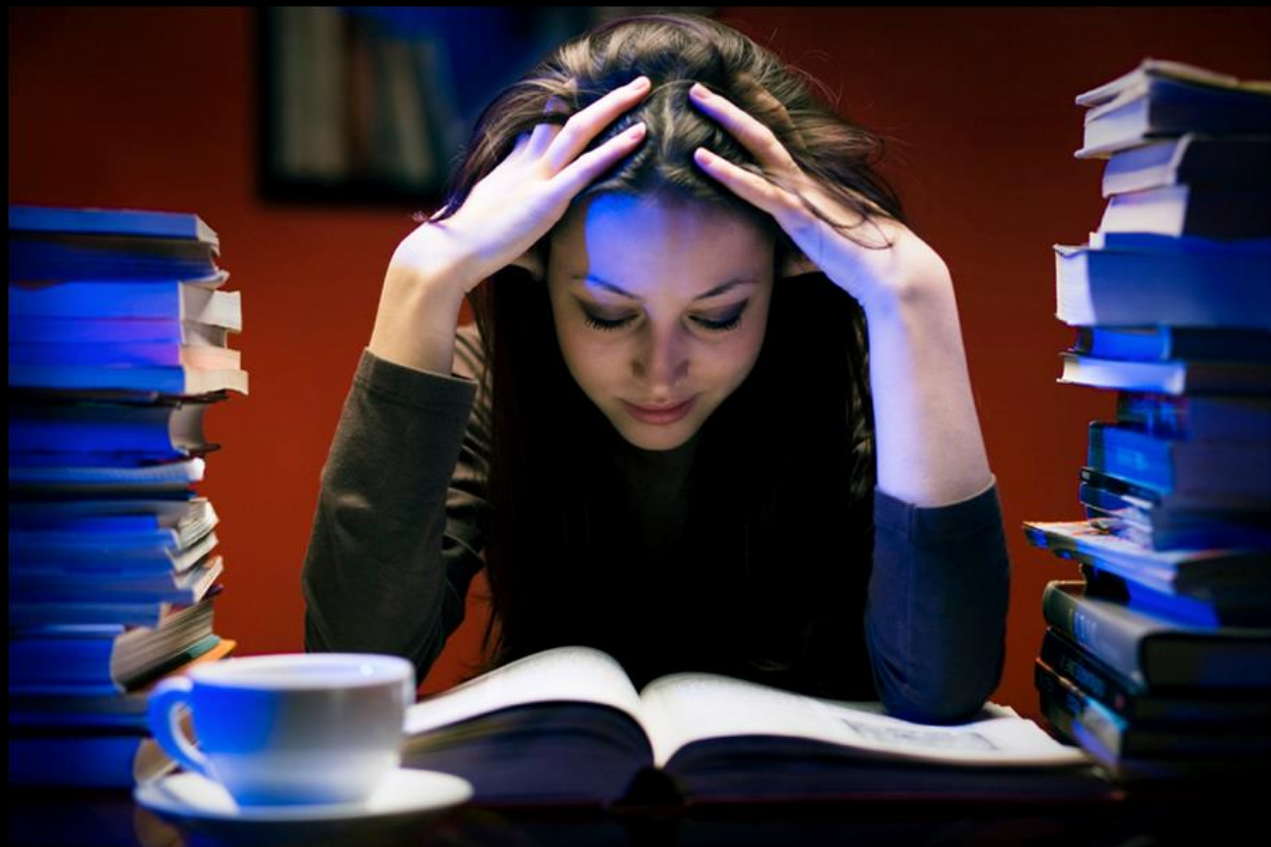
Jill had just moved into a new apartment. Jill went shopping and bought some new curtains for her bed room.

When she had just finished decorating the apartment, her best friend, Lisa, came over. Jill gave her a tour of the apartment and asked, "How do you like my bedroom?"

"Those curtains are horrible" Lisa said, "I hope you are going to get some new ones!"

Questions to test for ToM:

1. Did Lisa know the curtains were new?
2. Did some one say something she shouldn't have said?



Deze les:

Je leert hoe je inzichten over Theory of Mind (ToM)

praktisch benut kunnen worden bij het ontwerpen & testen van interactieve-multimedia.

Je documenteert hoe je dit onderzoek uitvoert.

Je zet het resultaat op video waarin je laat zien hoe het onderzoek is uitgevoerd.

Je bespreekt de uitkomsten ervan. Refereer aan de literatuur.

Opleveren als filmpje op het blog met korte toelichting.

Doel

Je bent in staat om proefondervindelijk onderzoek te doen naar de communicatieve eigenschappen van een state-of-the art mens-machine-interactie device. Bepaal waaruit de mens-machine-interactie uit bestaat. Denk daarbij aan begrippen als empathie / sociale intelligentie / Gaze / False Beliefs / Emotionele-ontwikkeling / Motivational-design / Persuasive-Design / Sociale Context / ToM. Is linguïstische(talige) interactie mogelijk?

Verslaglegging

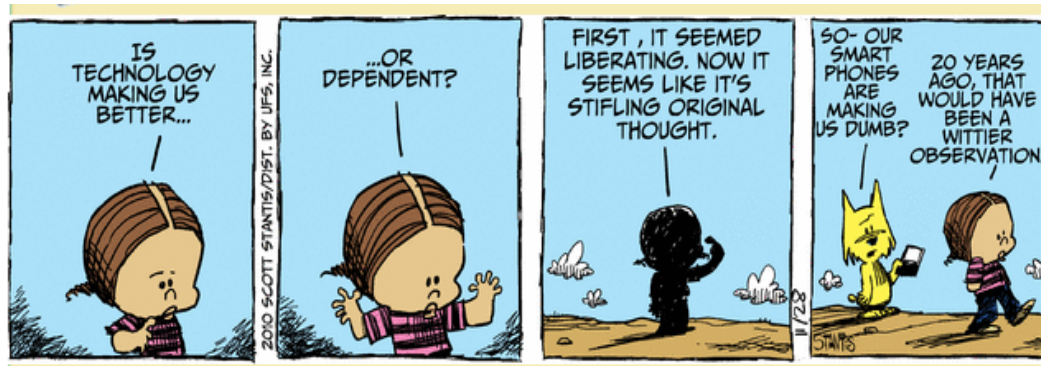
Publiceer/Beschrijf experiment via je blog/Labjournal

Geef aan wat je als CMDer van een dergelijk experiment kan leren/geleerd hebt.

Team Opdrachten
&
Individuele Taken

To DO's

- ❑ Test je sociale intelligentie (**Test how well you can read emotions of others just by looking at their eyes**) via <http://socialintelligence.labinthewild.org/mite/>
- ❑ Bespreek de BuzzFeed video "What Girls Think Guys Talk About"
https://www.youtube.com/watch?feature=player_detailpage&v=cTv5fgkO_JE
- ❑ Bespreek met je team het verschil tussen de begrippen Empathie en de Theorie of Mind (ToM). Is er in de BuzzFeed video sprake van ToM en/of Empathie?
- ❑ Bespreek met je team de validiteit voor het Testen Op ToM m.b.t. De ScienceChannel video: "test Little kids can do this. Chimps can't"
<http://www.sciencechannel.com/video-topics/brain-intelligence/jane-goodall-chimpanzees/> Baseer je argumentatie op inzichten afkomstig van de besproken methodieken om ToM bij kinderen en jongvolwassenen te testen: False Belief Tasks /ToM Stories /Mind in Eye (Interpretation) Tasks /Heider-Simmel (like) animations /Faux pas
- ❑ Bespreek welke rol Gaze (blik-richting) in relatie tot het ontwikkelen van ToM



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Attribution i	thumbs up	thumbs up
Share Alike i cc	thumbs up	Yup, AND they must license the new work under a Share Alike license.
No Derivatives i =	thumbs up	thumbs down
Non-Commercial i \$	thumbs down	Yup, AND the new work must be non-commercial, but it can be under any non-commercial license.
Non-Commercial Share Alike i \$ cc	thumbs down	Yup, AND they must license the new work under a Non-Commercial Share Alike license.
Non-Commercial No Derivatives i \$ =	thumbs down	thumbs down

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This lesson was developed by:

Robert Frans van der Willigen
 CMD, Hogeschool Rotterdam
 FEB 2016

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