

Jacobs Center – CCWD 2018 Workshop
Technologies linked to Child and Youth Development

COGNITIVE FUNCTION

SESSION II: MEASUREMENT

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Technologies for assessing cognitive function

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graph TD; Root[Technologies for assessing cognitive function] --> A[Smartphone app for adults]; Root --> B[Smartphone app for infants]; Root --> C[3D Online Game]; A --> D[Short-term memory]; A --> E[Processing speed]; A --> F[Working memory]; B --> G[Early learning]; C --> H[Spatial ability];
```

Smartphone
app for adults

Smartphone
app for infants

3D Online
Game

Short-term
memory

Early learning

Spatial ability

Processing
speed

Working
memory

Remote
access

Extremely
large
samples

Gamified

Precise
measure

iTunes Preview

moo-Q

By PSYT

Open iTunes to buy and download apps.



View in iTunes

Free

Category: [Health & Fitness](#)

Updated: 09 September 2015

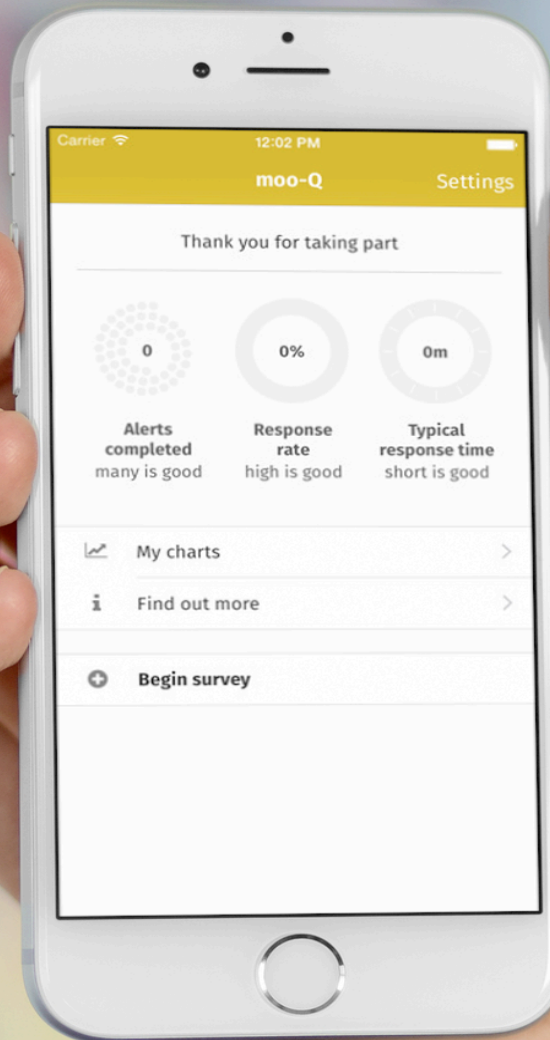
Description

moo-Q allows you to track your memory ability and mood and brainpower.

[moo-Q Support](#)

What's New in moo-Q

Fixed a problem with the screen time



PSYT
Psychological Technologies



Do you feel ... ?

Awake

Not at all E

Nervous

Not at all E

Happy

Not at all E

Next



Memorize the following numbers ...

2620

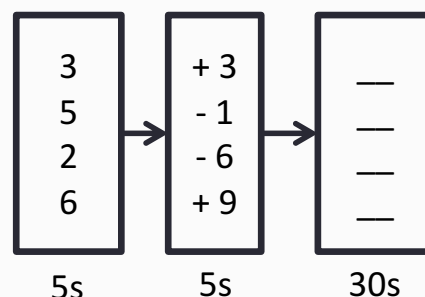
8646

1090

8267

4508

Working Memory



Indicate all pairs that are equal

856592153494	856592153494
QMA3FV2UMPAX	QMA3FV2UMPAX
AE97QUUTC19J	JE97QUUTC19J
P3820KLWGWIK	P3820KLWGWIK
238520682562	238520682562
885951737386	885951737286
MZX5EE01DGIJ	MZX5EE01DGIJ
LC2N1AZQ1GRR	LC2N1AZQ1GR4
280000520610	280000520610
ZIISENDZKV10	ZI1S N 7KV10



NewScientist

The Daily Telegraph

DIE ZEITUNG



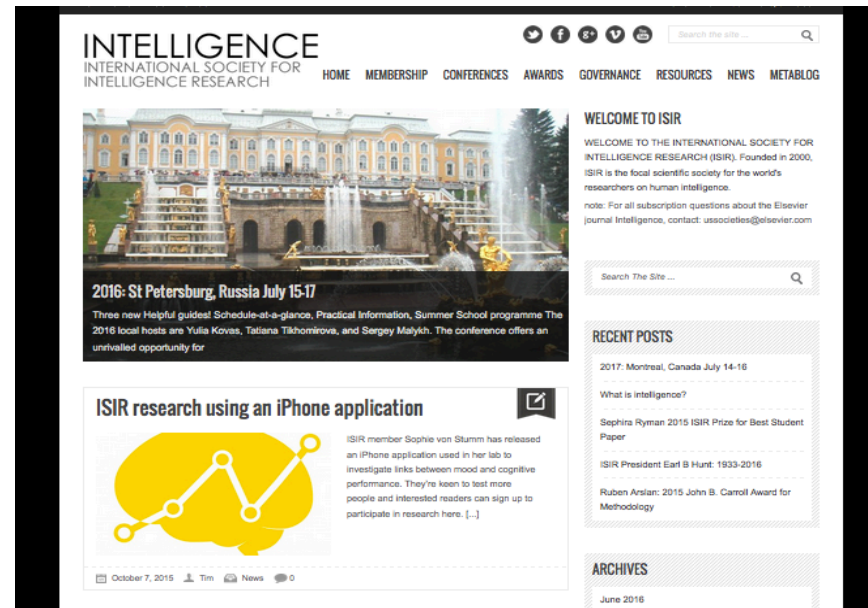
FAST COMPANY

CITY A.M.

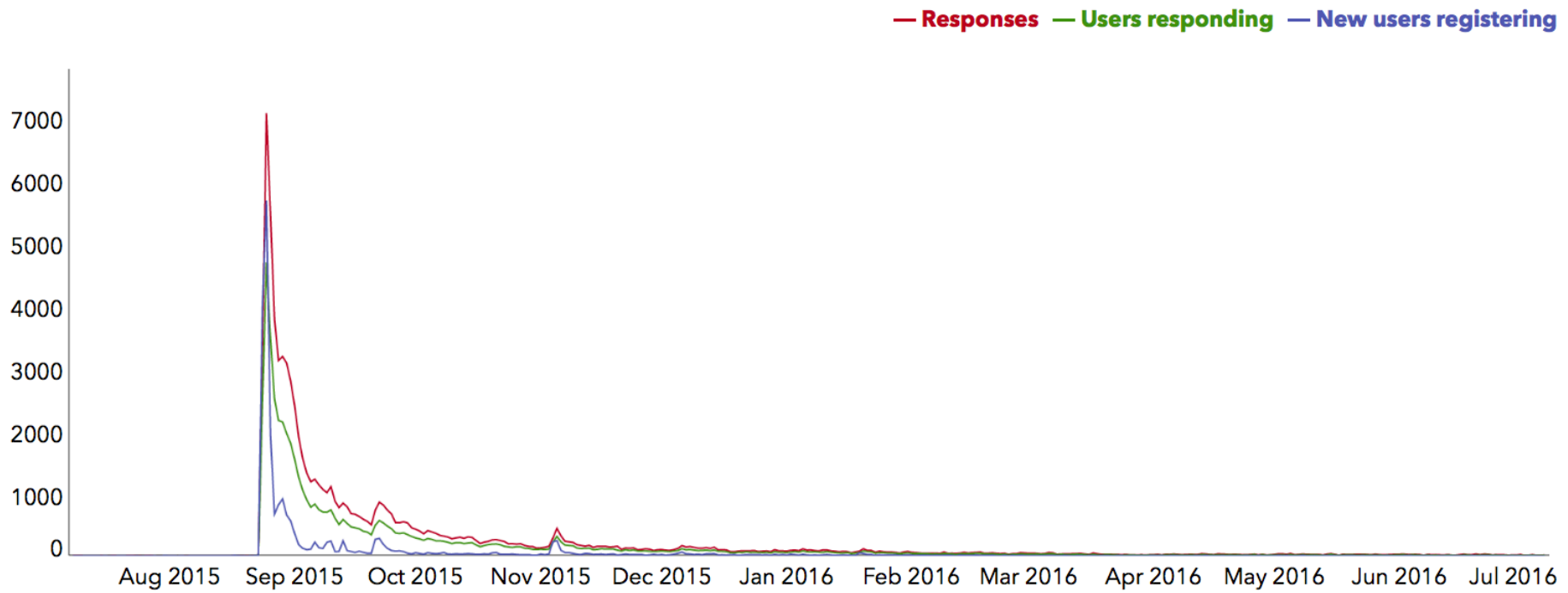


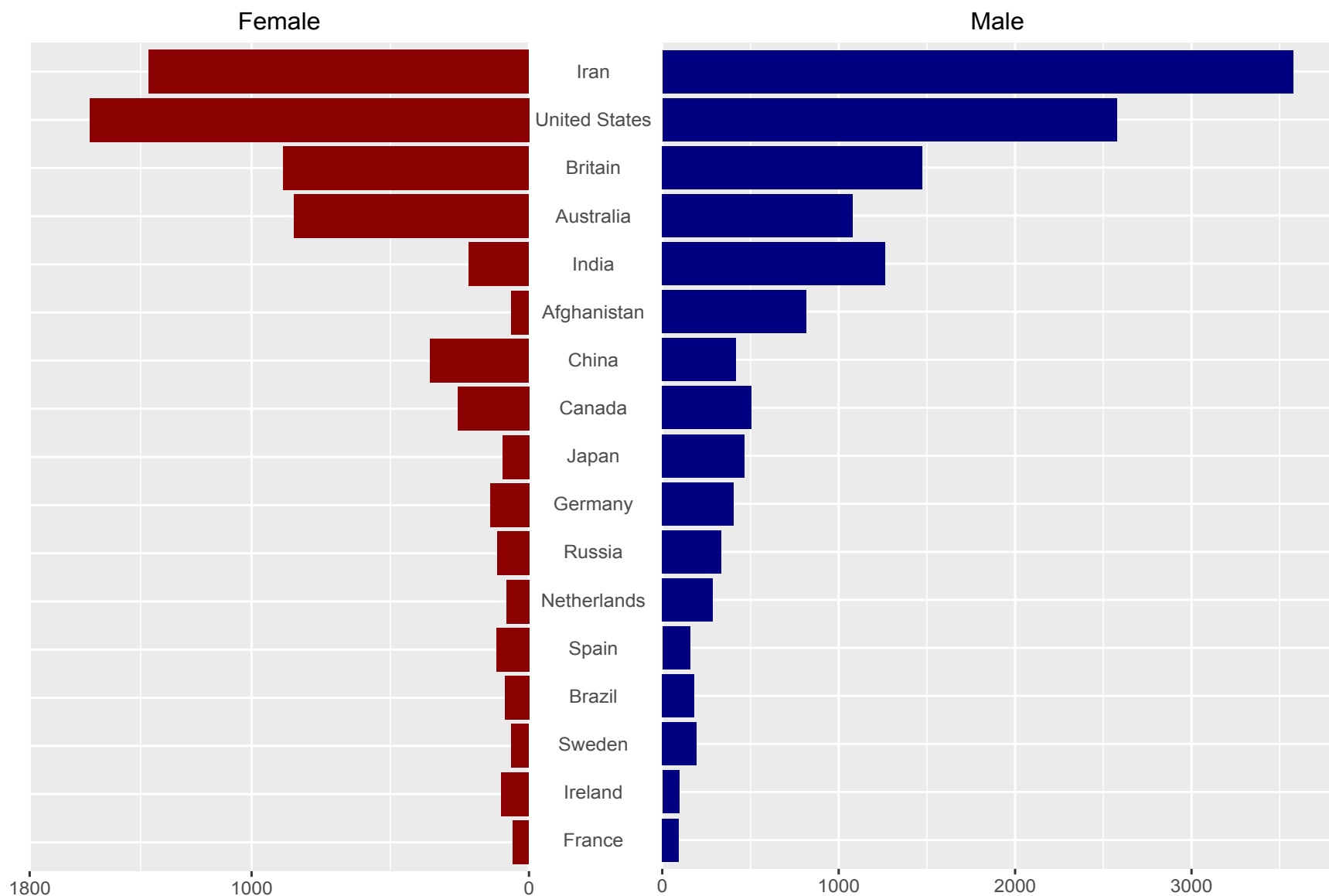
Contact the moo-Q team

NewStatesman



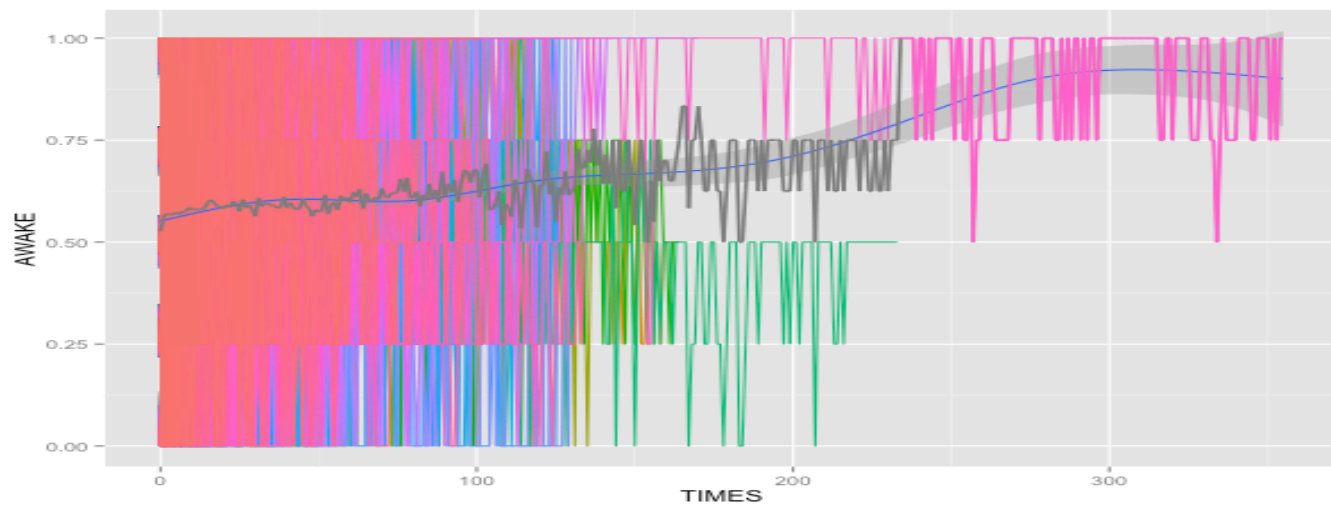
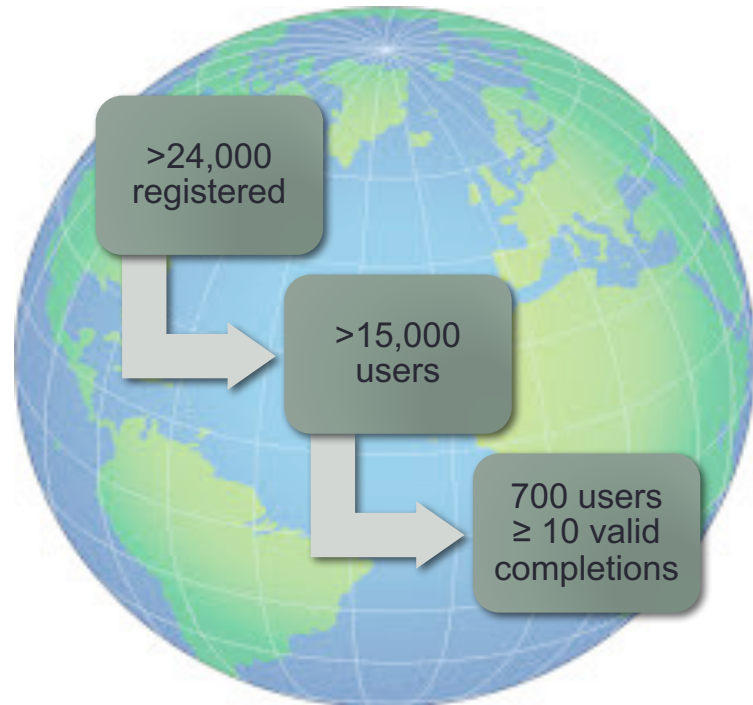
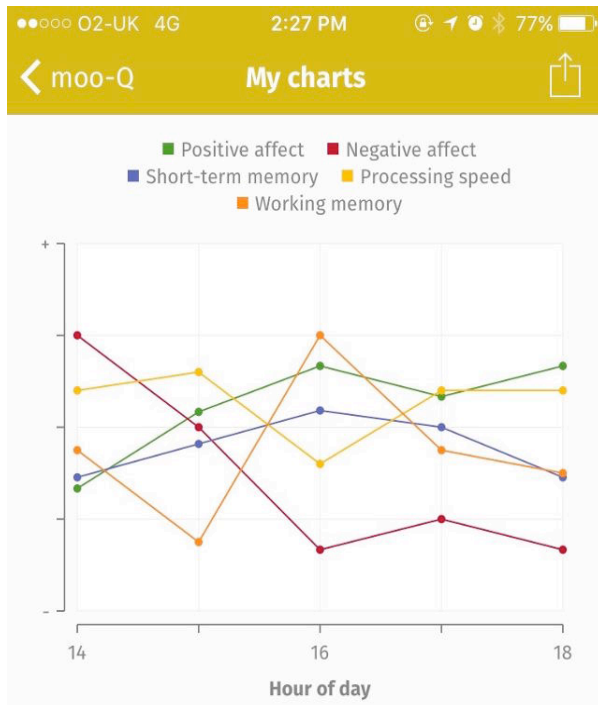
von Stumm, 2018, *Cognition & Emotion*



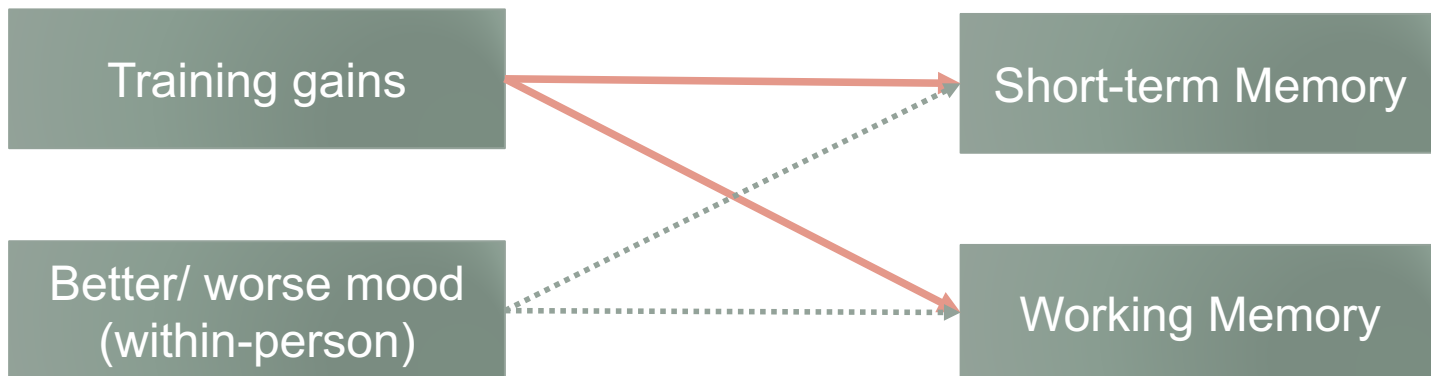
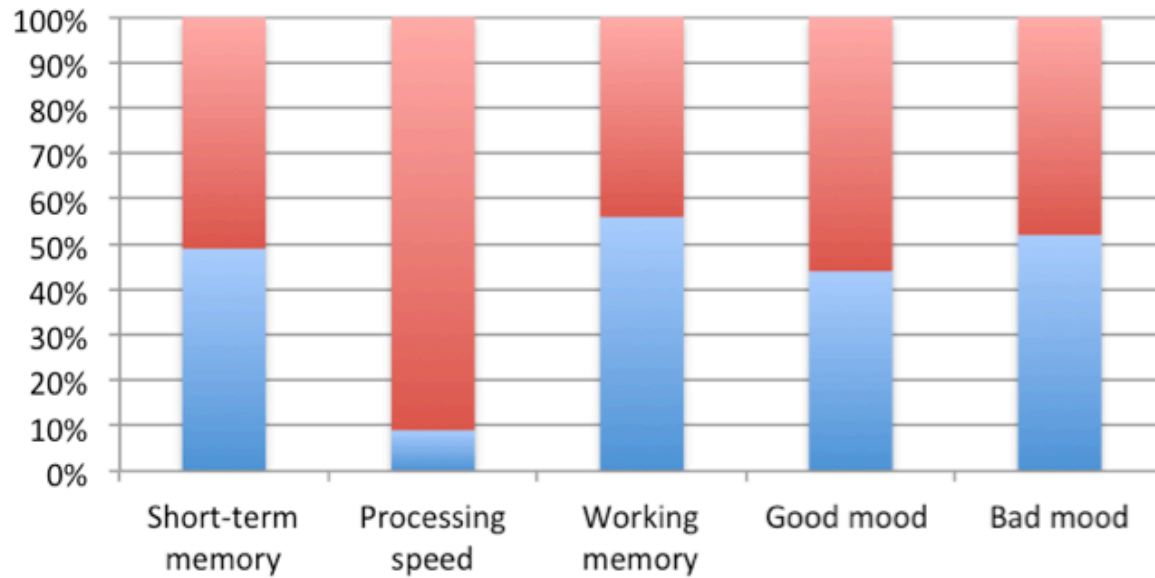


Registrations: 24,375 from 158 countries: 16,639 men, 7,519 women, 217 no gender stated

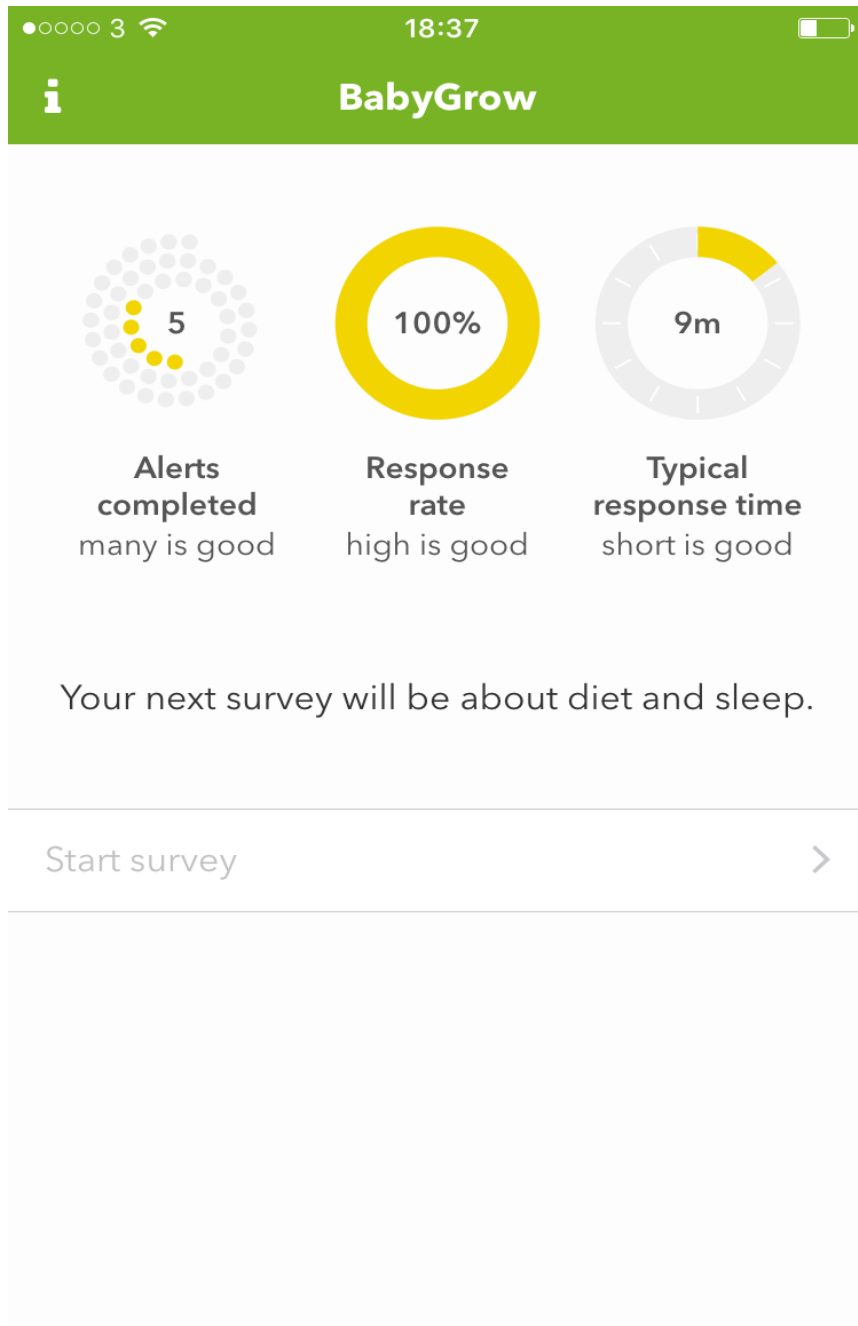
von Stumm, 2018, *Cognition & Emotion*



■ within-person ■ between-person



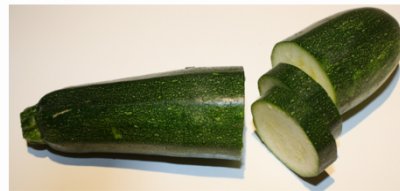




- 53 mothers of infants aged 2-15 week
- Use app for 3 weeks
(maximum $n_{\text{assessments}} = 15$)
- Complete 3 surveys
 - well-being & support (x3)
 - sleep & diets (x9)
 - milestones (x3)



O



Examples for typical portions of vegetables are 3 heaped table spoons of carrots or half a large courgette.



A unit alcohol is equivalent to a half pint of beer (250ml) or a very small glass of wine (76 ml).

Sleep, feeding practices, child development and outcomes...

		M	SD	ICC
Mother wellbeing		3.25	0.50	0.52
Mother support		2.61	0.48	0.68
Mother diet	Fish ^a	0.60	0.65	0.19
	Fruit ^b	2.27	0.28	0.55
	Vegetables ^b	2.95	1.02	0.49
	Alcohol ^c	0.81	0.81	0.29
	Total dietary supplements ^d	1.71	0.69	0.79
Mother sleep	Mother time in bed	8.65	4.85	0.18
	Mother hours asleep	6.28	3.17	0.55
	Frequency attending to baby	2.80	3.46	0.30
	Mother overall sleep quality	3.00	0.66	0.30
Mother on baby	Baby feeds ^e	6.48	1.40	0.47
	Baby hours asleep	14.85	4.42	0.55

[Instruction] We now ask you to try a few different tasks with your baby. Please read the instructions for each task carefully and put the phone in a safe place before trying with your baby. Please make sure you focus on your baby until you have completed the task and only then return to your phone. Please make sure that your baby is awake and comfortable when you attempt the tasks. If your baby becomes upset or irritable, please don't persist in completing the tasks but comfort your baby.

[Task] Please place your baby on the tummy on a comfortable and suitable surface, for example a changing table. How does your baby react?



How did your baby react? Tick all that apply.

My baby did not react in any noticeable way.

My baby became upset or cried.

My baby turned the head to the left or right side.

My baby flapped with the arms.

My baby lifted the head from the surface.

My baby lifted the upper body placing weight on both arms.

My baby rolled over onto the back.

I did not try the task with my baby.

Next



3D Online Game: SPATIAL SPY



(a)

map
reading
with
memory



(c)

navigation
based on
cardinal
points



(e)

scanning



(b)

map
reading no
memory

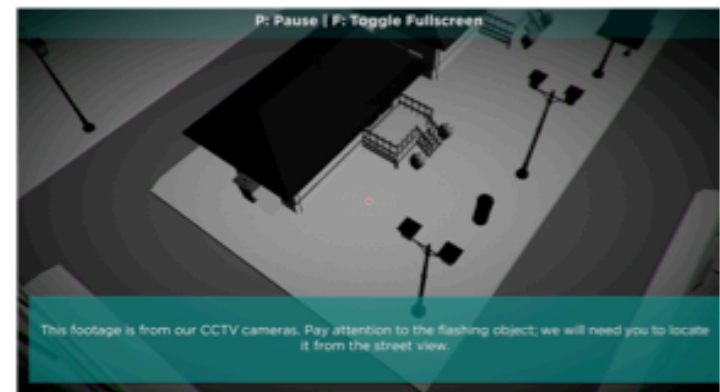


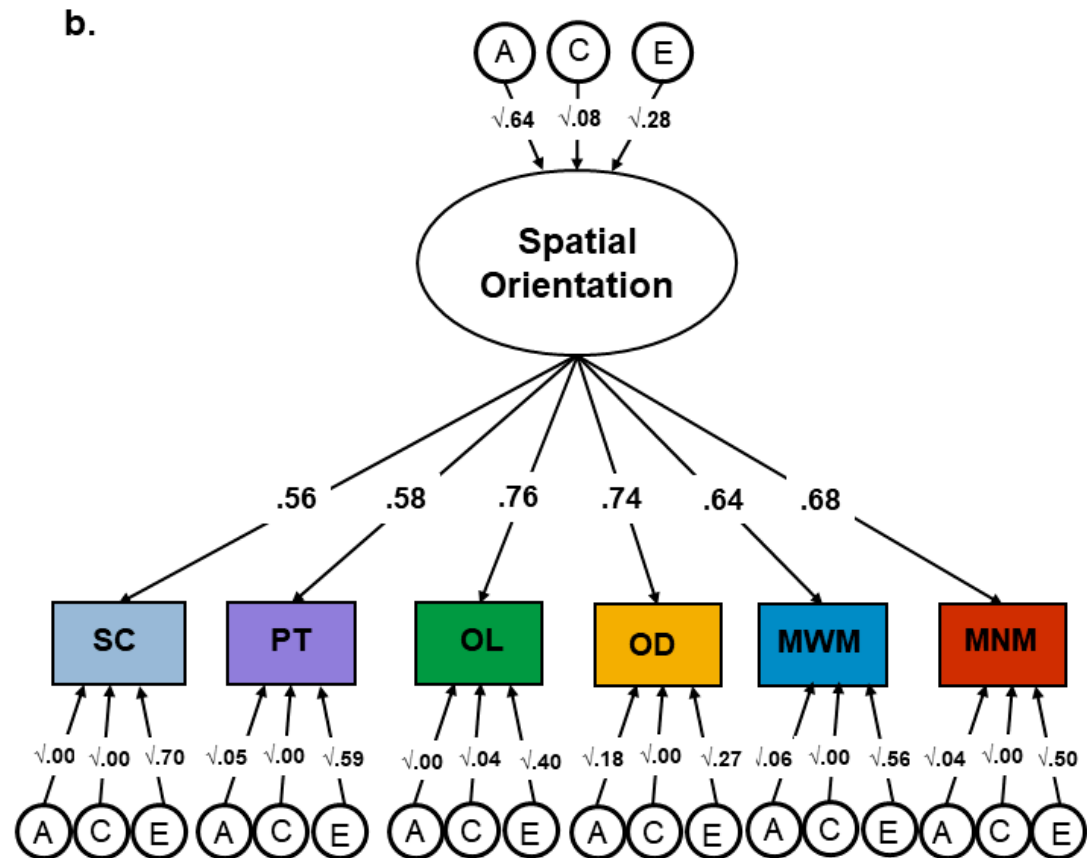
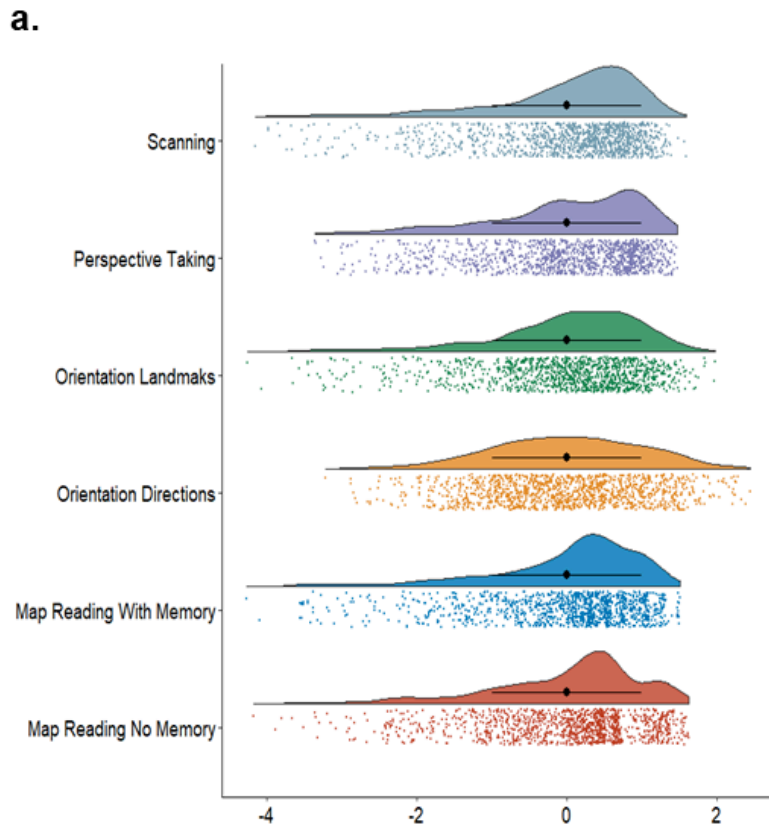
navigation
based on
reference
landmarks



(f)

perspective
taking





Thank you!

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Scientific meeting

Starts:

February 04 2019 09:00 [Add to calendar](#)

Ends:

February 05 2019 17:00 [Add to calendar](#)

Register for this event
[Register now](#)


Location
The Royal Society, London, 6-9 Carlton House Terrace, London, SW1Y 5AG
[View map](#) | [Venue information](#)

Overview
Science+ meeting organised by Dr Sophie von Stumm

This meeting will give behavioural scientists the chance to learn about the latest research technologies for collecting 'big' high-quality data. Data scientists and technology experts will explain the latest latest developments, challenges and benefits of research technology in a series of cutting-edge talks. Attendees will also have the opportunity to gain hands-on experience with various research technology tools during interactive showcase sessions.

More information on the schedule of talks will be available soon. Recorded audio of the presentations will be available on this page after the meeting has taken place.

Attending this event
▪ Free to attend



The Royal Society

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