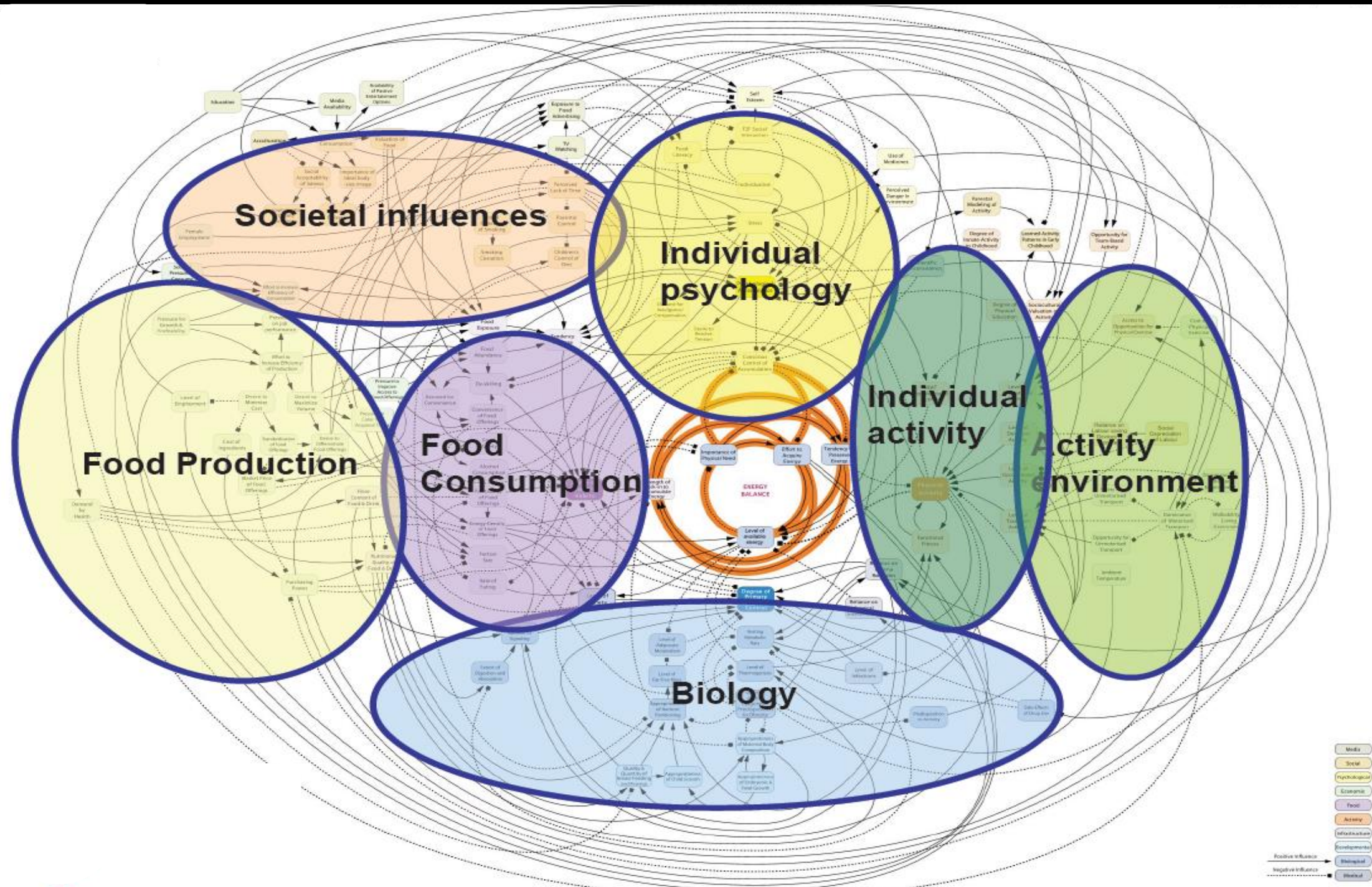


# Better Physical Activity

Prof. Jim McKenna  
Leeds Beckett University



# 5 words

Special responses *and* universal needs

# 6 words

When the adults change everything changes

# 7 words

How well do you promote physical activity?



# Build 'universal bulldozers' for PA!



# 5 words

Special responses *and* universal needs

Born stupid

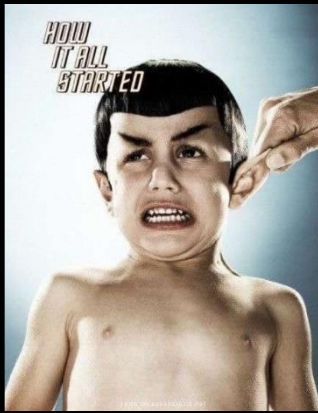
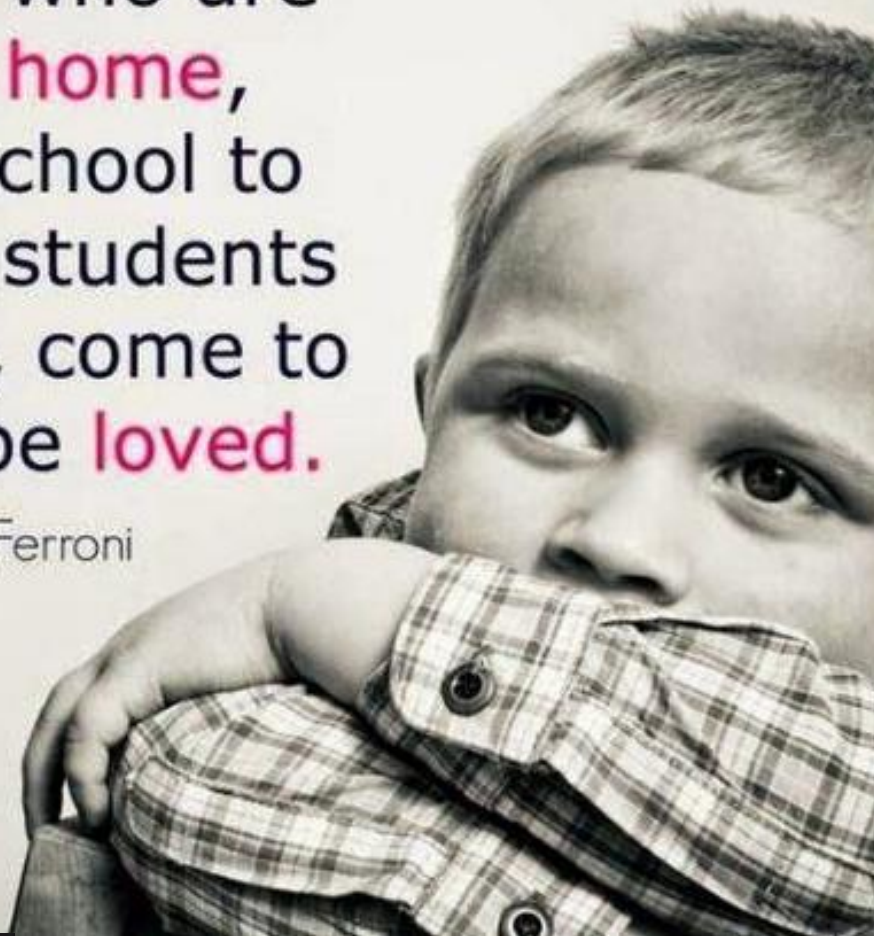
Controls its own development

Responds to personal history

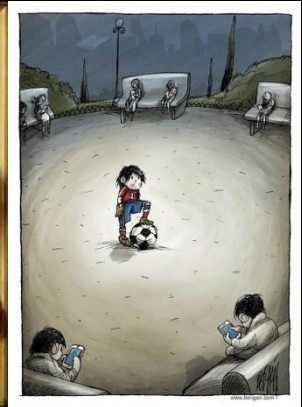


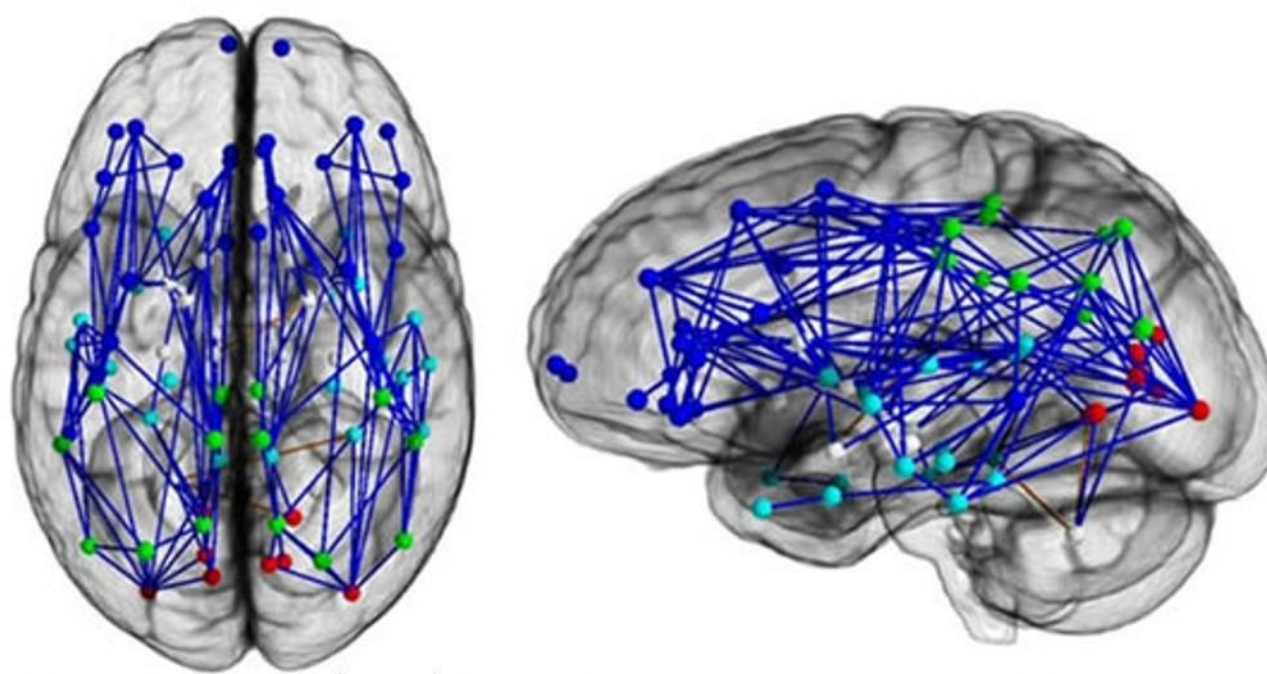
"Students who are  
**loved** at **home**,  
come to school to  
learn, and students  
who aren't, come to  
**school** to be **loved**."

~Nicholas A. Ferroni

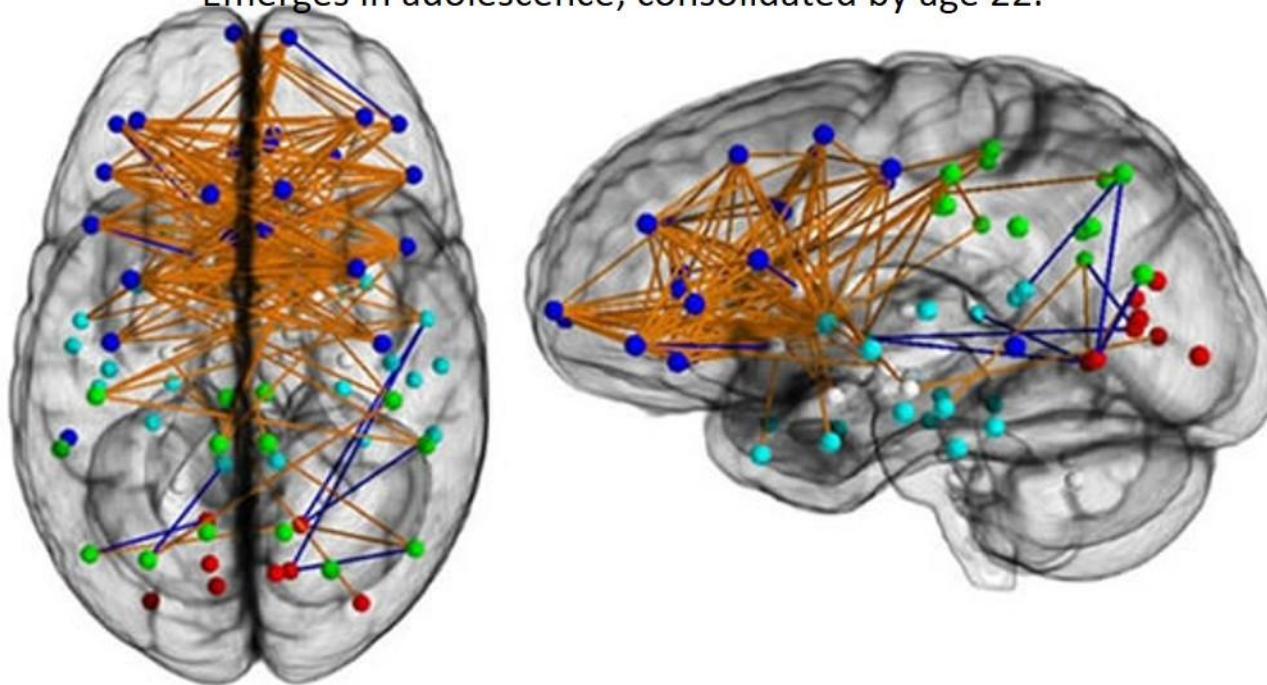


When I was six years old, I had to start wearing  
eyeglasses. The words I heard then can still haunt  
me today. Words like:

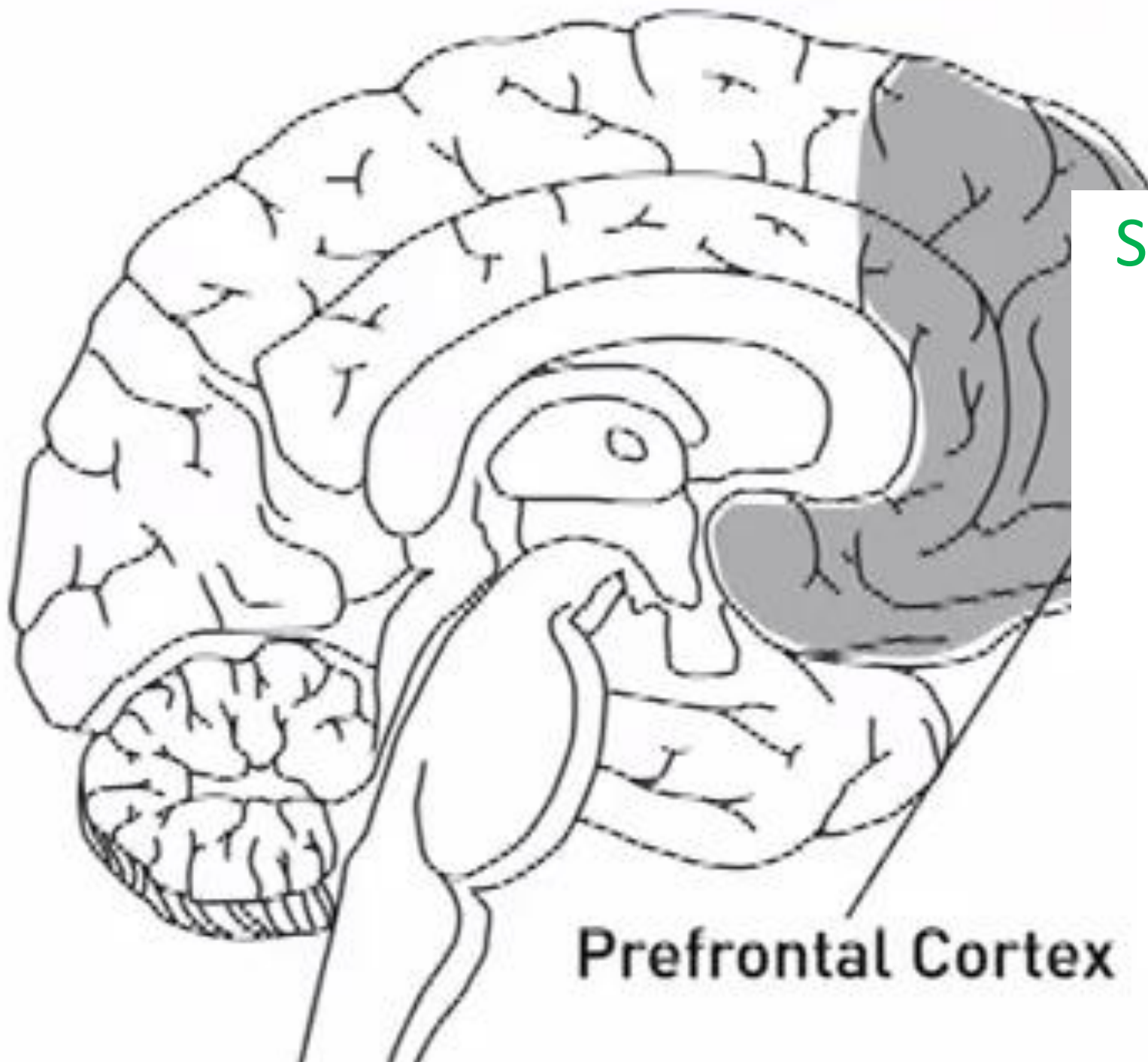




[Ingalhalikar](#) et al., (2013) Proceedings of National Academy of Sciences  
Emerges in adolescence; consolidated by age 22.







Understand

## Self management

Fear reduction  
Insight and vision  
Intuition  
Morality

Response flexibility  
Social responsiveness

*'...Executive function is the first to suffer when people are stressed, sad, lonely or physically unfit.'*

Prefrontal Cortex



# 2018 Physical Activity Guidelines Advisory Committee Scientific Report

To the Secretary of Health and Human  
Services

# Strong evidence

Higher PA reduces accumulating  
adiposity in  
3-17 year-olds

Improves bone health in  
3-5 year-olds

# Body weight/Adiposity

## Moderate strength evidence

- More PA, reduced weight status
- Unclear dose-response (favours *inverse* volume-adiposity)
- Strongest protective effect: pre-school and youth



# 6 words

When the adults change everything changes

Human brain  
A high resistance system

# Human-centred design

Build behaviour



**TRACK CHAIN,  
PADS & MOUNTING  
HARDWARE**



**SPROCKETS &  
MOUNTING  
HARDWARE**



**LIFETIME  
LUBRICATED  
IDLERS**



**IDLER & ROLLER  
MOUNTING CAPS &  
HARDWARE**



**SUSPENSION &  
BOGIE COMPONENTS**



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ROLLERS**







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## Why so many children's sports coaches are unqualified and underpaid

February 26, 2018 10.25am GMT



@Heidi Thomas

### Authors



**AJ Rankin-Wright**

Research Officer in Sport Coaching, Leeds Beckett University



**Sergio Lara-Bercial**

Senior Research Fellow, Leeds Beckett University

### Disclosure statement

AJ Rankin-Wright is a team member of the Leeds Beckett-led iCoachKids project, co-funded by the Erasmus+ programme of the European Union.

Sergio Lara-Bercial is Principal Investigator of the Leeds Beckett-led iCoachKids project, co-funded by the Erasmus+ programme of the European Union. He is also Manager for Strategy and Development for the International Council for Coaching Excellence, a not-for-profit organisation leading and supporting the development of coaching globally.

### Partners



## Research finds whistle being blown on secondary PE

Time on the curriculum for Physical Education is being squeezed, new research from the Youth Sport Trust shows

**Published:**

Friday, February 16, 2018



The alarming findings from research carried out by the Youth Sport Trust (YST) suggests that 38% of English [secondary schools](#) have cut timetabled Physical Education for 14-16-year-olds since 2012 while almost one in four (24%) have done so in the last academic year.

**PE PROVISION IN SECONDARY  
SCHOOLS 2018 - SURVEY  
RESEARCH REPORT**



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SPORT  
TRUST**

**2018 CONFERENCE**

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Chris Wright likes this



Lack of physical activity among girls leading to poor mental health an...

[uk.news.yahoo.com](http://uk.news.yahoo.com)

22 Likes · 3 Comments



Like



Comment

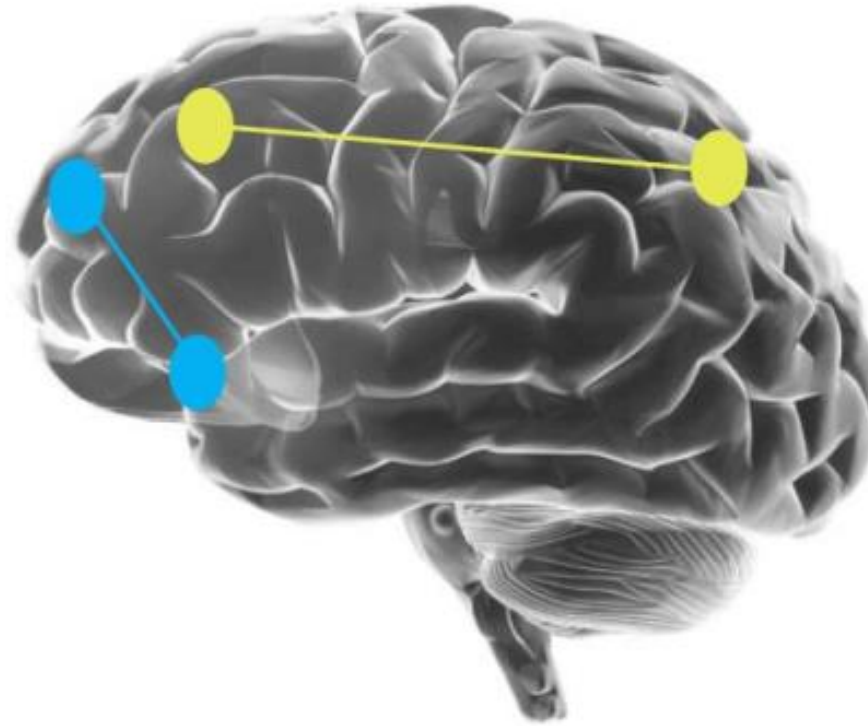


Share

# High-Impact Frontal Networks

● ADAPTABILITY  
(fronto-parietal network)

● STABILITY  
(cingulo-opercular network)



Chapman SB, Aslan S, et al, Frontiers in Human Neuroscience, 2016.

# 7 words

How well do you promote physical activity?



DH17



DH17F



DH17L



SD08-3



SD10YE



SD10YS



SD13S



SD13U



SD13YE



SD16



SD16YE



SD16C



SD16F



SD16



SD16Plus



SD16F



SD16F



SD16TF



SD16TL



SD22



SD22C



SD22D



SD22F



SD22Plus



SD22R



SD22S



SD22W



SD23



SD32



SD32D



SD32Plus



SD32W



SD42-3



SD52-5



SD90-5



DE17R

gtbulldozer.en.alibaba.com

# Psychological safety

Belonging

Physical safety

Fun/challenge and play

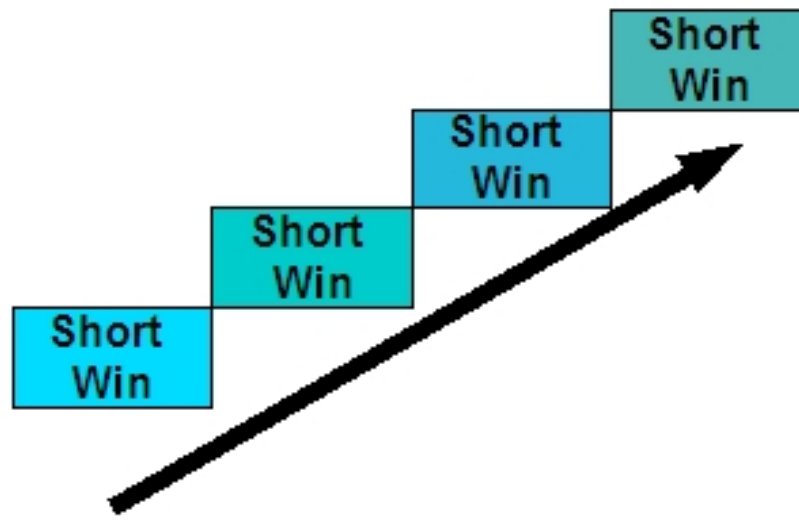
# Personal growth

Relatedness

Competence

Autonomy

Long 'short game'; reward





Friction  
+  
Personal progress

# Effectiveness of a childhood obesity programme delivered through schools, target cluster randomised controlled trial

Peymane Adab,<sup>1</sup> Miranda J Pallarés,<sup>1</sup> Tim Barrett,<sup>2</sup> Raj Bhopal,<sup>3</sup> Jonathan J Deeks,<sup>1</sup> Joan I Kiya Hurley,<sup>1</sup> James M

programme cluster

Jale, <sup>1</sup>  
McGee, <sup>9</sup>

EDITORIALS

programmes in schools

## Component 1: School day

The overall target for 150 minutes of moderate to vigorous physical activity (MVPA) per day. Teachers were encouraged to deliver the programme in a range of settings, including the classroom and playground, with minimal disruption to the regular school day.

**The failure of anti-obesity programmes in schools**  
Null results are important, and a strong signal to try something else

Melissa Wake professor and scientific director, Generation Victoria  
Murdoch Children's Research Institute, and The University of Melbourne, Parkville, VIC 3052, Australia




day

activities within the school day, with a target for 150 minutes of moderate to vigorous physical activity (MVPA) per day. Teachers were encouraged to deliver the programme in a range of settings, including the classroom and playground, with minimal disruption to the regular school day.

Table 4

Fidelity scores for all schools included in the WAVES study intervention

	Physical Activity						Cooking Workshops						Villa Vitality						School total
	Adherence	Exposure	Recruitment	Quality	Response and engagement	Total	Adherence	Exposure	Recruitment	Quality	Response and engagement	Total	Adherence	Exposure	Recruitment	Quality	Response and engagement	Total	
School 1	4	4	4	4	4	23	4	4	3	5	5	21	4	5	5	4	5	24	68
School 2	4	4	4	4	4	21	4	4	4	5	5	23	4	5	5	4	5	24	68
School 3	4	4	4	4	4	23	4	4	4	5	5	22	4	4	5	4	4	22	67
School 4	4	4	3	4	4	19	4	5	4	5	5	24	4	4	4	4	4	21	64
School 5	3	3	3	3	4	16	4	4	4	5	5	22	4	5	5	4	5	24	62
School 6	4	4	3	4	4	19	4	4	4	4	4	21	4	4	4	4	4	21	61
School 7	4	4	4	4	4	20	4	5	4	5	5	23	4	3	3	4	3	17	60
School 8	3	3	3	4	4	19	4	3	4	5	4	20	4	4	4	4	4	21	60
School 9	4	3	2	3	3	15	4	5	4	5	4	23	4	5	4	3	3	20	58
School 10	4	4	4	3	4	19	4	3	3	5	3	18	4	4	4	4	4	21	58
School 11	3	3	4	3	4	17	4	4	4	4	4	20	4	4	4	4	4	20	57
School 12	4	4	3	3	3	17	4	3	3	4	5	19	4	4	4	4	4	21	57
School 13	2	2	3	3	4	15	4	4	4	4	4	20	4	4	4	4	4	20	55
School 14	4	4	3	4	4	19	3	3	3	3	4	16	3	3	4	4	5	19	54
School 15	4	4	3	3	3	17	3	4	3	4	5	19	4	3	3	3	3	17	53
School 16	3	3	3	4	4	17	2	2	3	4	4	15	4	4	3	4	4	20	52
School 17	3	3	3	4	4	17	3	3	3	4	3	16	4	4	3	4	3	18	51
School 18	3	3	4	4	4	18	2	2	2	3	3	12	4	5	4	4	3	21	51
School 19	2	2	3	3	4	14	4	4	3	3	3	17	4	5	4	3	3	20	51
School 20	4	4	3	4	3	18	3	3	2	4	5	17	3	3	3	4	3	16	51
School 21	3	3	3	4	4	17	3	3	2	3	4	15	4	3	3	4	3	17	49
School 22	2	2	3	4	3	14	3	2	2	3	3	13	3	3	3	3	3	15	42
School 23	0	0	0	0	0	0	4	4	3	4	4	19	4	4	4	4	4	20	39
School 24	0	0	0	0	0	0	2	2	2	4	4	14	4	4	4	4	5	21	35

Scores: 1: very low. 2: low. 3: average. 4: high. 5: very high. Implementation rating:  low  medium  high

Adherence

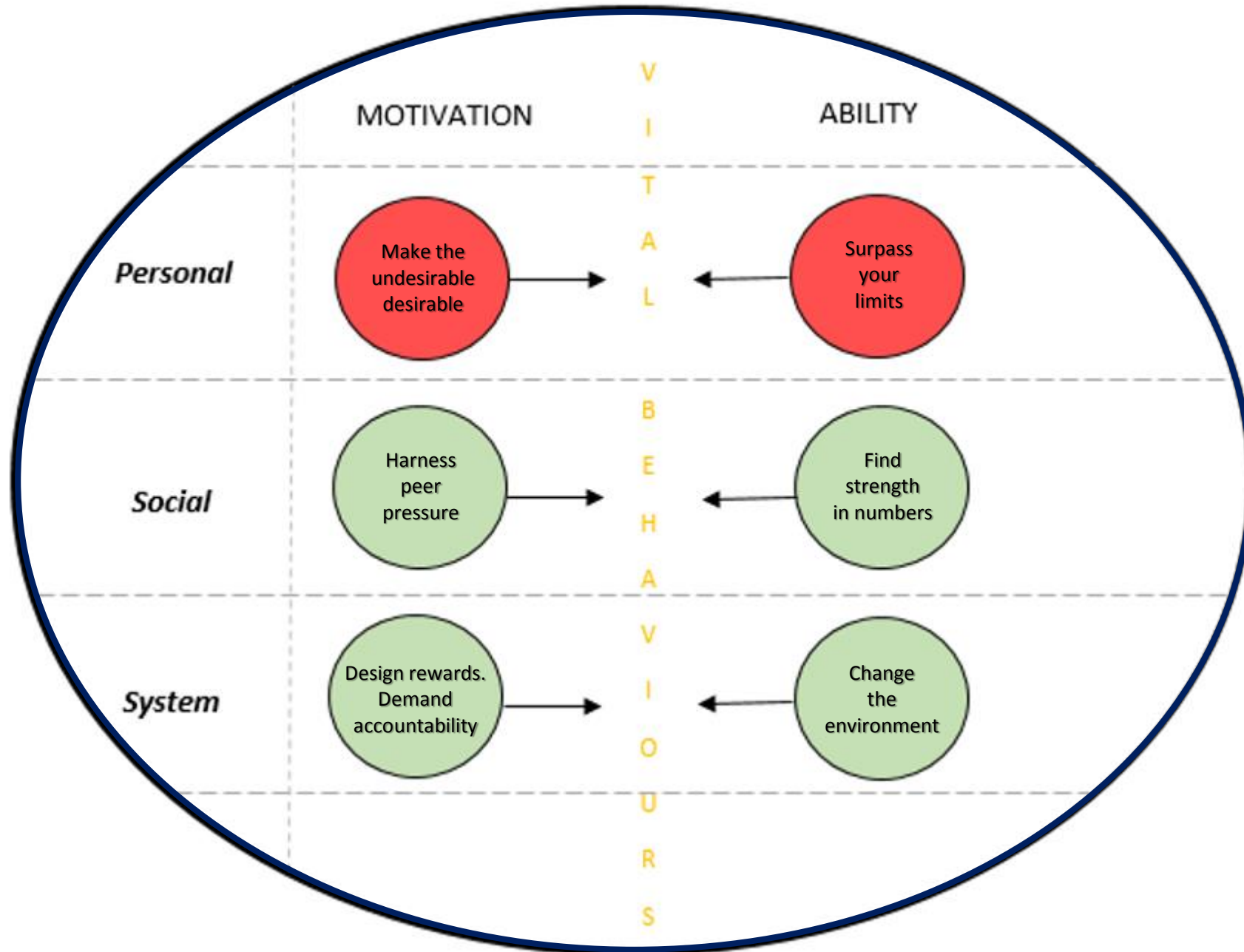
Exposure

Recruitment

Quality

Response and engagement

Total





Special  
responses *and*  
universal  
needs



When the  
adults change  
everything  
changes



How well do  
you promote  
physical  
activity?