

# GAMES FOR HEALTH EUROPE 2026



Are you depressed or  
understandably  
miserable?

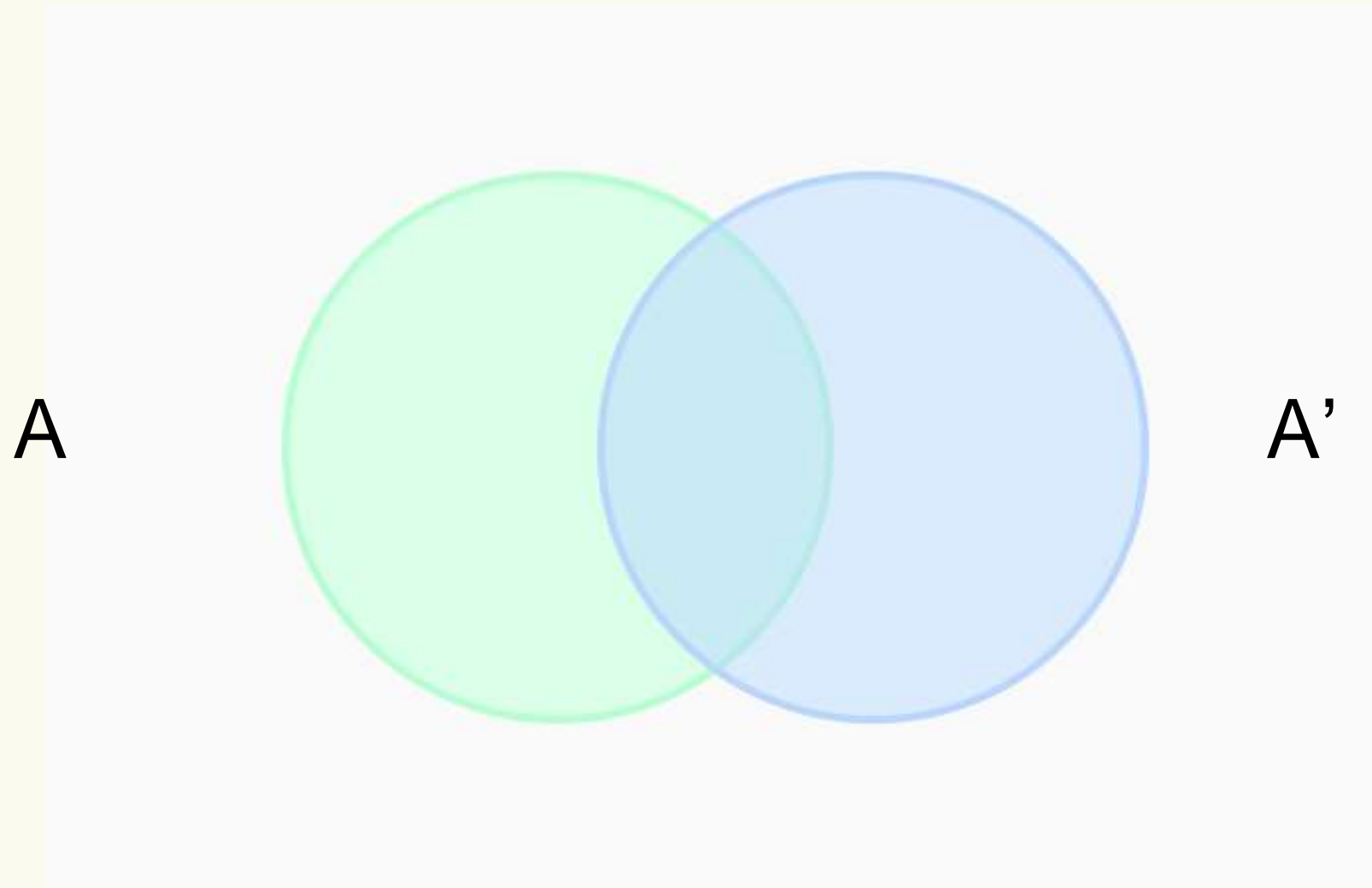
Emmanuel Streel

**DISCLOSURE SLIDE**  
for presentations at the

**GAMES FOR HEALTH EUROPE 2026** CONFERENCE

I herewith confirm that there is not any conflict of interest with the conference organization or any of its sponsors.

# Diagnostic: lines can be blurred



# The “evaluation” of Depression

**TABLE 3**  
**PHQ-9 Screening Instrument for Depression**

Over the past two weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Trouble falling or staying asleep, or sleeping too much	0	1	2	3
Feeling tired or having little energy	0	1	2	3
Bad appetite or overeating	0	1	2	3
Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
Moving or speaking so slowly that other people could have noticed, or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

**Scoring:** 1 to 4 points = minimal depression; 5 to 6 points = mild depression; 7 to 9 points = moderate depression; 10 to 14 points = moderate to severe depression; 15 to 19 points = severe depression.

PHQ-9 = Patient Health Questionnaire

Adapted from: Patient Health Questionnaire (PHQ-9) screening tool. <http://www.ahrq.gov/qual/depres09.pdf>. Accessed February 6, 2015.

**PHQ-2 Questions**

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3

• A cut-off score  $\geq 3$  is positive

- We reduce human suffering to a number (and sometimes a checkbox)



# Why it matters

Screen out ineffective drugs?  
Effective drug failed ?



- We may not be failing research & treatments. We may be failing to define WHO we are treating



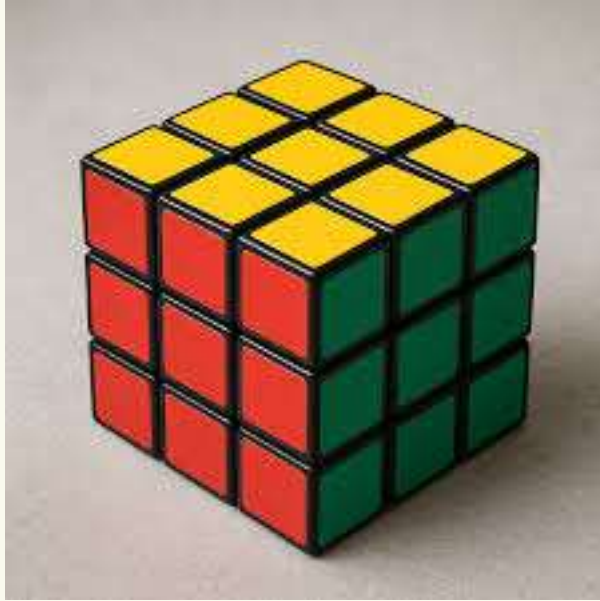
# The pivot: how we **process** information



- We are missing an entire dimension: How people think, process and adapt (e.g. cognition)



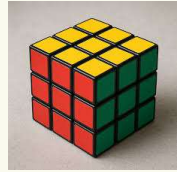
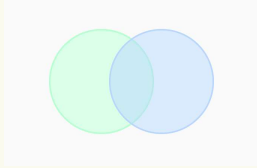
# From binary to multimodal



- Human suffering is multidimensional, but we force it into binary labels. We need to capture multiple signals in real time and repeatedly



# Game-base approach/ Digital biomarker



Depression needs **innovation, creativity & Fun !**

Depression research needs to enter into 21<sup>st</sup> (digital) Century

Detection – Stratification – Monitoring – Improvements



Thank You!

