What can we learn from play?
\[ \frac{3x}{7} = 13 \]

\[ x = \frac{13 \times 7}{3} \]

\[ x = \frac{91}{3} \]

\[ x = 30.333... \]
Take tedium away from repetition
Celebrate achievement
Monitoring and feedback on performance
Personalised goal setting
Enriching social interaction
Learning by making
Understanding people through play
Supporting therapy for children with cerebral palsy

3. Play the Drum

Blue and yellow tags are attached to the palm and to the back of patient's hand.

Blue and yellow cells randomly appear on the board and the patient should hit them with a tag of corresponding color.

Trains: wrist pronation and supination, elbow and shoulder extension


www.SeriousToys.com
“Interactivated Rehabilitation”, Bert Bongers, UTS, featured on ABC 23.5.2015
Pervasive Health 2015.
Posture correction during rehabilitation training

TagTrainer

Gamify your own training exercise

Tetteroo, Timmermans, Seelen, Markopoulos (2014) TagTrainer: supporting exercise variability and tailoring in technology supported upper limb training. JNER 11, 1: 140.
CONTRAST: Adapting challenge in arm-hand training for stroke Survivors

CONTRAST: Gamification of Arm-Hand Training for Stroke

Head Up Games: the games of the future will be more like
the games of the past!

Soute, Markopoulos, Magielse, (2010). Head Up Games: combining the best of both worlds by merging traditional and
digital play. Personal and Ubiquitous Computing, 14(5).
Dutch Design
and produced in the Netherlands

LEDs
for all the nice colours

Light sensor
to measure ambient light conditions for correctly adjusting the LEDs

Accelerometer
to measure movement

Radio network
for Picoos to communicate - no WiFi required!

Button
on/off

Memory chip
to store the games

Battery
to power the Picoo

3 processors
where the magic happens

Smartphone connection
to make a connection with the Picoo app

Speaker
sound support

RFID scanner
to scan game cards

Vibration motor
to make the Picoo buzz

picoo.nl
Interaction patterns in HUGs

The role of fun in learning

Com n’ Play Science project

Nanobots: Inferring Need for Cognition from Hints
http://imi.nhtv.nl/nanobots/

Measuring Self-Esteem with Games

Moral Philosophy & Ethical Norms

- Moral Equity (justice)
- Contractualism (deontology)
- Relativism
- Utilitarianism
- Egoism

Pereira Santos, Khan, Markopoulos. 2018. Profiling ethics orientation through play, Behaviour and Information Technology, 37(9)
Moral Philosophy & Ethical Norms

Now that I brought you here, our work just started.

You stated, “We need to”
- Establish a energy link between the between the aircraft and Dr. Wilson base.
- Inform Earth about the mission status and Dr. Wilson’s findings.
- Give Dr. Wilson some of the best meals we have, he deserves it.

Our first priority should be:

**Decision:**

- ‘Dr. Wilson base is running on fumes and we might lose crucial information’
- ‘The mission is crucial, let's report back to the command center.’
- ‘It is only fair that Dr. Wilson regains some strength’

Choose

Pereira Santos, Khan, Markopoulos. 2018. Profiling ethics orientation through play, Behaviour and Information Technology, 37(9)
Challenges

Are these games for good?

  Efficacy and effectiveness

  Ethics of player modelling

Are these games good?

  Gap in relation to pure entertainment games

  Gap to market
Take tedium away from repetition
Celebrate achievement
Monitoring and feedback on performance
Personalised goal setting
Enriching social interaction
Learn by making
Understanding people through play
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