### SERIOUS GAMES IN A SOCIAL CONTEXT

Anton Eliëns  $^{1,2}$ 

 $^1\,$  Creative Technology, University of Twente $^2$ multimedia @ VU University Amsterdam

#### **KEYWORDS**

serious gaming, education, game development

### ABSTRACT

This paper provides ...

# INTRODUCTION

... ever get the feeling that life's a game with changing rules and no clear sides, one you are compelled to play, but cannot win. Welcome to gamespace. Gamespace is where and how we live today.

#### serious issues

- $\bullet$  awareness world problems / social dilemma(s)
- education language / mathematics / history
- health & wellbeing skill(s) & remediation
- experience(s) playful application(s)

awareness – game(s) / arg(s) / dilemma(s) education – reference(s) / www.mijnnaamishaas.nl problem(s) – health / remediation(s)

### skill(s) & remediations

- team up www.girlsinc.org/gc/page.php?id=6.2
- dangerous situation(s) www.ditto.com.au
- communication method(s) www.webwisekids.org
- muscle rehabilitation on the move
- physical exercise(s) www.silverfit.nl
- fitness www.virtuagym.com
- $\bullet$  overcome fear(s) www.vrphobia.com

games that depict everyday activities such as communication, social negotiation, caring for elements or characters that are part of a game world, or stabilizing precarious situations have become extremely popular with female players.

## **BASIC CONSIDERATIONS**

#### serious games as social technology

- target(s) which (group of) people?
- sponsor(s) who initiates/pays?
- goal(s) what behavior(s)/pattern(s)?
- instrument(s) by what means/technology?

#### health games

- fitness www.virtuagym.com
- elderly care www.silverfit.nl/en
- diabetes www.gripsugarkids.nl
- learn to fall nos broadcast (nl)

#### awareness

- world hunger www.food-force.com
- carabella goes to college www.privacyactivism.org
- real lives www.educationalsimulations.com/products.html
- refugee(s) escape from woomera
- eye witness www.mic.polyu.edu.hk/nanjing
- university politics www.virtual-u.org
- sudan www.darfurisdying.com

## THEORY BACKGROUND

### (casual) game mechanics

complex adaptive systems

#### essential game theory

A/B	cooperate	deflect		
cooperate	R/R	S/T		
deflect	T/S	P/P		
T = temptation, R = reward, P = punishment, S = sucker				
A/B	cooperate	deflect		
cooperate	live/live	coward/girl		
deflect	girl/coward	dead/dead		
abiology $T > D > C > D$				

chicken: T > R > S > P

• prisoner(s) dilemma: T > R > P > S

- chicken: T > R > S > P
- leader: T > S > R > P
- free loader:R > T > S > P
- war(s) of the sexes: R > P > T > S?

### gamification dynamics

- appointment(s) in which you must succeed / in time
- influence & status achievement(s) / I want this!
- progression(s) towards completion(s) / monitor(s)
- $\bullet \ communal \ discovery cooperation(s) \ / \ reward(s)$

## STRUCTURE OF THE COURSE

- 1. introduction(s) the team & finding (y)our topic(s)
- 2. theoretical background(s) narrative(s) & human(s)
- 3. miscellaneous pitch / design(s) & gamification(s)
- 4. game design workshop(s) express (y)our idea(s)
- 5. student presentation(s) concept(s) & plan(s)
- 6. reflection(s) ethical aspects of serious games
- 7. final presentation(s) concept(s) & prototype(s)

#### basic exercise(s)

- project utopia brief description of ideal society and potential role of serious games
- mood space – exercise in visual rethorics, preferably in unity

### final project(s)

- prototype(s) with sufficient documention
- concept design with elaboration of narrative(s) and visual design
- $\bullet\,$  trailer promotion clip, with documentation and business plan
- reflection(s) on societal impact with sufficient motivation and depth

### deadline(s)

- [R/X]: session 2 online presence / portfolio(s)
- [U]: session 3 project utopia
- [M]: session 4 mood space(s)
- [C]: session 5 concept(s)
- [E]: session 6 essay(s)
- [P/T]: session 7 final project(s) & peer reviews

# PROJECT UTOPIA

- $\bullet \ environment(s) facilitator(s), \ infrastructure \ \dots$
- system(s) organization(s), incentive(s) ...
- rule(s) code(s) of law, civic order ...
- (moral) value(s) utility, behavior(s), ethic(s) ...

## WORKSHOP DESIGN

#### case study: civic order(s)

- (y)our player(s) ... ?
- $\bullet\,$  what super power(s) ... ?
- invitation(s) message(s) !
- (mini) game mechanic(s) ?
- $nudge(s) re-enforcement(s) \dots !?$

# LET'S BE SERIOUS!

In one of my first papers on this topic Serious, I observed that - ICT is not a (simple) game. When speaking about civic order(s), a similar phrase might be either taken as an understatement or even as a warning, given the need expressed all over the world to guide and control (or nudge) the behavior of citizens, in urban areas as well areas threatened by the effects of consumerism, with as a dramatic example the rural areas of the countries I recently visited, China, where pollution due to production and consumption is a number one threat. The China Dream workshop, in which I participated at the end of my stay in China, and in general the activity of  $JUCCCE^{1}$  is one of the many attempts to deal with such problems, due to, according to many, the rise of a larger and larger middle class as a consequence of the astounding economic growth. What ideals, dreams or aspirations should the people becoming part of this *middle class* have, and how can we bring about such ideals, or, put more plainly, what civic values should be emphasized and promoted to contain consumerism and te lead people to a better life, in which they still enjoy their well-deserved luxury, in good health, which is another latent threat underlying unconstrained consumption.

Our question, as addressed in this paper, is how can we deploy serious games to counteract problems of personal health, order in public spaces, and in general civic behavior that leads to a sustainable society.

- urban (un)safety in urban environment(s)
- climate climate change and energy consumption
- fitness- (social network) support for sport and fitness
- media prevent(ion) of media and information overload
- scenario(s) emergency / rescue in public area(s)
- communication exchange(s) in private/public space(s)

# CONCLUSIONS

In this paper we have reported on our

**ACKNOWLEDGEMENT(S)** Thanks to my collegues from the University of Amsterdam, Jacobijn Sandberg and Frank Nack, for their positive encoragements and support.

<sup>1</sup>www.jucce.org

### REFERENCES

- Eliens A. (1979), Creativity: reflection and involvement, Ninth Int Conf of Aesthetics, Dubrovnic, August 1979
- Eliens A. and S.V. Bhikharie (2006), Game @ VU developing a masterclass for high-school students using the Half-life 2 SDK, In: Proc. GAME'ON-NA'2006, Monterey, USA
- Eliens A. Feldberg F., Konijn E., Compter E. (2007a) , VU @ Second Life – creating a (virtual) community of learners, In *Proc. EUROMEDIA 2007*, Delft, Netherlands
- Eliens A., van de Watering M., Huurdeman H., Bhikharie S.V., Lemmers H., Vellinga P. (2007b), Clima Futura
  @ VU – communicating (unconvenient) science, In Proc. GAME-ON 07, Bologna, Italy
- Eliens A. and Ruttkay Z. (2008), Record, Replay & Reflect a framework for understanding (serious) game play, In Proc. Euromedia 09, Brugge, Belgium
- Eliens A. and Ruttkay Z. (2009), Math game(s) an alternative (approach) to teaching math?, In Proc. GAME-ON 2009, Dusseldorf, Germany
- Eliens A. (2010), Elements of a Chinese language game, In Proc. GAME-ON 2010, Shanghai, China
- Eliens A. (2010), creative technology the CTSG: game design in 7 steps, In Proc. GAME-ON 2010, Shanghai, China

Anton Eliens (PhD) is lecturer and coordinator of multimedia <sup>(a)</sup> VU University Amsterdam, and works at the University of Twente as professor creative technology / new media. He has experience in web-based interactive media, interactive video, game engines and the application of such technologies in serious games.