```
game-answer(s)
```

game(s) - answer(s) / workshop(s)

instinct(s) / world(s) / quest(s) / science(s) / place(s)

sometimes attaining the deepest familiarity with a question is our best substitute for actually having the answer \dots

from Brian Green - The Elegant Universe (p. 365) math(s) / question(s) / cycle(s)

game-arg(s)

game(s) - alternate reality / it's all in the game / C4(X) /

$$\begin{split} & \operatorname{common}(s) \ / \ \operatorname{display}(s) \ / \ \operatorname{create} \ / \ \operatorname{art}(s) \ / \ _ \ / \ . \\ & \operatorname{serious} \ / \ \operatorname{scenario}(s) \ / \ \operatorname{storytelling} \ \operatorname{in} \ \operatorname{the} \ \operatorname{digital} \ \operatorname{age} \end{split}$$

- changing the world www.urgentevoke.com
- change the future worldwithoutoil.org/metaabout.htm
- ullet invent the future archive.superstructgame.net
- you / here & now let's be serious!

game(s) / guide(s) / place(s) / story / time(s) / sign(s) play(s) / math(s) / sensor(s) / map(s) / screen(s) / cycle(s)

game-aware(s)

game(s) – awareness game(s) / it's all in the game / C4(X) /

 $common(s) / display(s) / create / art(s) / _ / .$

- 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

play(s) / sensor(s) / map(s) / screen(s) / cycle(s)

game-chance(s)

```
world(s) / experience(s) / mechanics(s) / pattern(s)
```

chance is tricky stuff, because it intertwines hard math, human psychology, and all of the basic game mechanic(s).

... but this trickiness is what gives games their richness, complexity and depth.

Jesse Schell – The Art of Game Design – A Book of Lenses / play / tribe(s) / network(s) / identity / flow(s) / chart(s) / cycle(s)

```
game-colors(s)

eyebook / game(s) / source / cycle(s) / color(s)

jiframe width=550 height=400 src=../media/sample-js-color.htm; no iframe supported j/iframe;

game-common(s)

game(s) - question(s) / it's all in the game / C4(X) /

common(s) / display(s) / create / art(s) / _ / .

serious / scenario(s) / storytelling in the digital age

serious game(s)

/

guide(s) / place(s) / story / time(s) / sign(s)

play(s) / flower(s) / sensor(s) / map(s) / screen(s) / cycle(s)

game-communication(s)

idea(s) / innovation(s) / dream(s) / rule(s) / change(s)
```

our commitment to the technological civilization has accelerated, but unfortunately we have not as yet fully understood, much less accepted, the psychological and social change(s) associated with the new source(s) of energy, the exploration of space(s), and the computer revolution(s). 1973: Jurgen Ruesch: therapeutic communication

game-ctsg(s)

```
\mathbf{game(s)} - \mathbf{CTSG} \ / \ \mathbf{creative} \ \mathbf{technology} \ \mathbf{superpower} \ \mathbf{game(s)} \qquad \qquad \mathrm{idea(s)} \ / \ ... \ / \ \mathrm{dynamic(s)} \ / \ \mathrm{space(s)}
```

Creative Technology Superpower Game(s), where the main focus is to investigate playful applications of technology to emulate or support players' superpowers, such as invisibility, telekinesis, etcetera, in (for example) interactive space(s).

Our investigations involve workshop(s) in game design as well as application development as part of the creative technology curriculum, using all available resource(s).

game-design(s)

```
 \begin{aligned} \mathbf{game}(\mathbf{s}) - \mathbf{design}(\mathbf{s}) \ / \ \mathbf{it's} \ \mathbf{all} \ \mathbf{in} \ \mathbf{the} \ \mathbf{game} \ / \ \mathbf{C4}(\mathbf{X}) \ / \\ \mathbf{common}(\mathbf{s}) \ / \ \mathbf{display}(\mathbf{s}) \ / \ \mathbf{create} \ / \ \mathbf{art}(\mathbf{s}) \ / \ \_ \ / \ . \end{aligned}
```

situation world curiosity/... reality/context

user/action experience involvement/control feedback/challenge

phenomenology of game design / sign(s) / scenario(s) play / sensor(s) / map(s) screen(s) / place(s) / dream(s) / cycle(s)

game-dilemma(s)

game(s) - prisoner's dilemma(s) / it's all in the game / C4(X) /

 $common(s) \ / \ display(s) \ / \ create \ / \ art(s) \ / \ _ \ / \ .$

scenario(s) / storytelling in the digital age

- economic(s) individual vs group / tit-for-tat
- read philosophy / cybernetica / pattern(s)
- \bullet try playground(s) / zero sum payoff(s) / score(s)
- look at meta game(s) / ... / show case(s)
- consider tragedy of the common(s) / [pedia]

resource(s) / guide(s) / place(s) / story / time(s) / sign(s) play(s) / dynamic(s) / math / sensor(s) / map(s) / screen(s) / cycle(s)

game-document(s)

game(s) - document(s)

inspiration(s) / imagination(s)

- vision of the game summary, game goals, mood/theme
- primary & secondary features environments, mechanics, interactions
- game mechanics traversal, camera control & movements
- combat style & delivery, targeting, charge-ups, defense, combo(s)
- $\bullet\,$ player challenges enemies, strength & weakness, attacks, AI & NPC(s)
- $\bullet\,$ environmental designs & interaction terrain, interaction, danger, scope
- characters attributes, locations, destination(s)
- level design layout, maps & hotspots, puzzle(s)

GDD: chapter

game-dodge(s)

eyebook / game(s) / source / cycle(s)

iframe width=550 height=450 src=../media/sample-js-dodge.htm; no iframe supported i/iframe;

game-dynamic(s)

```
game(s) - dynamic(s) / adding a game layer on top of everything
                                                                                                     gogbot(s) /
   / moore law(s) / inspire(s) / imagination(s)
   • appointment(s) – in which you must succeed / in time
   • influence & status – achievement(s) / I want this!
   • progression(s) – towards completion(s) / monitor(s)
   • communal discovery – cooperation(s) / reward(s)
                                                   chorewars.com / tip(s) for real / book(s) / mechanic(s) / sign(s)
   / story / addiction(s) / / challenge(s) / ground(s) / skill(s)
game-engine(s)
game(s) - engine(s) / CTSG / ximpel / processingjs
                                                                   inspiration(s) / imagination(s) / comparison(s) /
machine(s)
   • unity - unity3d.com / resource(s) / tutorial
   • webgl – description(s) / engine(s) / scenejs.org / tutorial(s)
   • delta3D - www.delta3d.org
   • XNA – game studio express / resource(s) / particle(s)
   \bullet source sdk – source.valvesoftware.com
   • unreal – udk.com
   • open framework(s) – www.openframeworks.cc
   • basic technologies (DIY) - HTML5 / flex/as3 / processing
game-example(s)
game(s) - example(s)
                                                                     serious / inspiration(s) / engine(s) / resource(s)
   • world of goo – 2dboy.com/games.php
   • crayon – www.crayonphysics.com
   • flower(s) - thatgamecompany.com/games/flower
   • braid - www.braid-game.com
   • zen bound – zenbound.com
   \bullet lapis – www.moboid.com/lapis/LapisPres.htm
   • blueberry – eriksvedang.wordpress.com/blueberrygarden
                                               trendspotting san francisco GDC 09 (VPRO) / floor game(s) / cycle(s)
game-health(s)
game(s) – serious / CTSG / health initiative(s)
   common(s) / display(s) / create / art(s) / _ / .
   • fitness – www.virtuagym.com
   • elderly care – www.silverfit.nl/en

    diabetes – www.gripsugarkids.nl

   • learn to fall – nos broadcast (nl)
                                                           crossfit exercise(s) / immovator / izovator / sign(s)
```

play(s) / sensor(s) / map(s) / screen(s) / cycle(s)

game-idea(s)

```
game(s) / workshop(s) / challenge(s) / TINAG / go / CTSG
```

communication is the key to creativity

creative technology / multimedia @ VU classic(s) / cycle(s)

game-imagination(s)

innovation(s) / space(s) / communication(s) / idea(s)

imagination is the one weapon against reality

/ whatsthehubbub.nl / screen(s)

/ play / tribe(s) / network(s) / identity / flow(s) / chart(s) / cycle(s)

game-imitate(s)

quest(s) / innovation(s) / screen(s) / machine(s)

... immature poets imitate; mature poets steal; bad poets deface what they take, and good poets make it into something better, or at least something different.

T.S. Elliot, from: Jesper Juul – The Casual Revolution (p.85) play / pirate(s) / product(s) / cycle(s)

game-innovation(s)

idea(s) / engineer(s) / imagination(s) / health / instinct(s)

play/game(s) is the key to innovation(s)

education(s) / com(s) / roll(s) / thought(s) / situationism(s) / direction(s)

game-instinct(s)

understanding / innovation(s) / document(s) / quest(s)

one of the most difficult tasks men can perform, however much others may despise it, is **the invention** of good games and it cannot be done by men out of touch with their instinctive selves.

from Penny de Byl (supposedly: Jung 1977) / $\rm cycle(s)$

game-machine(s)

game(s) - machine(s)

world(s) / experience(s) / dream(s) / chance(s) / space(s)

stories and games can each be thought of as machines that help create experience(s)

... the idea that the mechanics of traditional storytelling, which are innate to the human capability to communicate, are nullified by interactivity is absurd!

Jesse Schell – The Art of Game Design – A Book of Lenses play / story / math(s) / screen(s) / sensor(s) / cycle(s)

game-marker(s)

```
game(s) – ludic marker(s)
```

 \dots / design(s) / emergence(s) / exercise(s)

... if the game can be identified easily as play, then it should be easy enough for bystanders to accept or refuse an invitation to play.

The adoption of ludic markers is the easiest way to sidestep some ethical questions.

... ludic markers need not be explicit but can focus on communicating playful or fictional aspects of the game.

pervasive games / cycle(s)

game-math-dropsum(s)

Enjoyed by over 7.5 million PC users worldwide, Dropsum will stretch your mental agility and give your brain a good work out.

In DropSum you release numbered balls into a grid. The aim is to make a line of these balls add up to 9, either horizontally or vertically. When your column or row totals nine, you score points and all the balls involved change color. They start out grey and advance to blue, yellow and then red. Once a red ball has been used to make a sum of nine it will explode and allow any balls above it to fill the gap. The falling numbers then have the potential to form scoring combinations with their new neighbours, which may burst other balls, and so the chain reaction progresses. Setting up large combos like this is the way to score serious points. The game ends when the whole grid is filled.

Destroy special octagon tiles and you'll release a special star. These stars are gathered up after a short while. The more stars gathered, the higher the bonus you'll receive.

youtube

DropSum becomes very addictive and will improve your basic maths skills the more you play it. It's great for both kids and adults and will help speed up your mental maths agility.

- $\bullet\,$ Listen to the relaxing in game music or your own iTunes music
- Your progress is always saved if you quit at any point
- Ten trophies to achieve
- Classic and techno display themes with their own music styles

game-math-quote(s)

How do you use maths in programming, and more specifically just game programming?

Math is an integral part of programming and you cannot write applicable code without understanding basic maths. More-so in games programming which often requires tens of thousands of states to be stored, modified and acted upon during the real-time execution of the game. A good starting point to understand the game maths is to study algebra, and specifically the idea that you can store values in variables represented as letters, and produce complex equations and produce different outcomes based on the data you input. You will find the very first computer programs you write will almost certainly follow these lines. Also, as we move increasingly to a 3D centric approach to games, an understanding of basic trigonometry and three dimensional functions would be invaluable. Leave school with a good grasp of these, and you are half way towards working on the next generation of games.

from game creators newsletter Nov 09

game-mechanic(s)

```
game(s) - casual / mechanic(s) / rethoric(s) / moore law(s) / inspire(s) / imagination(s)
```

```
seeking
                                           hitting
                      managing
         bouncing, tossing, rolling & stacking
      chaining
                      constructing
                                         socializing
                                                                       {\rm chorewars.com}\ /\ {\rm tip}(s)\ {\rm for\ real}\ \ /\ {\rm dynamic}(s)
   / addiction(s) / challenge(s) / ground(s) / skill(s) / cycle(s)
game-personal(s)
game(s) - personal health / it's all in the game / C4(X) /
   common(s) / display(s) / create / art(s) / _ / .
   • teen problem(s) – personal investigator
   • controlling biometric(s) – www.wild-divine.nl
   • parental divorce – www.ziplandinteractive.com
   • (child) cancer – wish / misson(s)
   • asthma – bronkie
   • heart attack(s) – sense
   • gluco level(s) – diabetes control / nutrition(s)
                                                          topic(s) / sensor(s) / map(s) / play(s) / place(s) / cycle(s)
game-plane(s)
game(s) – perspective(s): structure / presentation / functionality
                                                                                       design / world(s) / space(s)
   1. rule-based space – mathematics, physics, AI
   2. mediated – image(s), cinematic(s), animation(s)
   3. fictional (imaginary) space – story & plot
   4. play – game mechanics, interface(s), hardware
   5. social space – context, rank(s), multiplayer
                                                                                                 Michael Nitsche
   Video Game Spaces – Image, Play and Structure in 3D Worlds
                                                / play / tribe(s) / network(s) / identity / flow(s) / chart(s) / cycle(s)
game-quest(s)
game(s) - quest(s) / mono myth(s)
                                                                    world(s) / perspective(s) / mechanic(s) / quest(s)
   1 ordinary world
         2 call to adventure
         3 refusal of the call
         4 meeting the mentor
```

matching

sorting

```
5 crossing the threshold
        6 test, allies, enemies
        7 approach to inmost cave
   8 supreme ordeal
        9 reward
  10 road back
       11 resurrection
       12 return with the elixer
                                from: Michael Nitsche - Video Game Spaces - Image, Play and Structure in 3D Worlds
game-question(s)
game(s) - persuasive / serious game(s) / it's all in the ... / C4(X) /
   common(s) / display(s) / create / art(s) / _ / .
   • how do games affect social networks?
   • do players need to know the purpose of the game?
   • where is the boundary between gameplay and serious issues?
   • where are we 5 years from now?
   • do games help to live independently?
   • what are the demographic(s) of gamification?
                                                   serious games / change(s) / behavior(s) / collaboration(s)
                                                 play(s) / gamification(s) / sensor(s) / map(s) / screen(s) / cycle(s)
game-serious(s)
game(s) - persuasive / serious game(s) / it's all in the ... / C4(X) /
   common(s) / display(s) / create / art(s) / _ / .
                              travel(s) / autonomous (inter)active social fun
   \bullet awareness – game(s) / arg(s) / dilemma(s)
   • education – reference(s) / www.mijnnaamishaas.nl
   • problem(s) – health / remediation(s)
   • therapy – learning skill(s)
   • experience(s) – playful application(s)
                                                       question(s) / serious games / change(s) / behavior(s)
```

play(s) / gamification(s) / sensor(s) / map(s) / screen(s) / cycle(s)

game-skill(s)

game(s) - learning skill(s) / it's all in the game / C4(X) /

 $common(s) / display(s) / create / art(s) / _ / .$

- 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
- overcome fear(s) www.vrphobia.com

play(s) / sensor(s) / map(s) / screen(s) / cycle(s)

game-space(s)

```
innovation(s) / rule(s) / world(s) / CTSG / experience(s) / _ / .
```

... 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.

```
/ theory / control(s) / book(s)
/ play / mechanic(s) / display(s) / vision(s) / cycle(s)
```

game-theme(s)

 $innovation(s) / assignment(s) / rule(s) / world(s) / _ / .$

- 1. **urban** (un)safety in urban environment(s)
- 2. climate climate change and energy consumption
- 3. fitness- (social network) support for sport and fitness
- 4. **media** prevent(ion) of media and information overload
- 5. **scenario(s)** emergency / rescue in public area(s)
- 6. **communication** exchange(s) in private/public space(s)
- 7. idea(s)? ...

experience(s) / CTSG / scenario(s) / vision(s) / cycle(s)

game-world(s)

```
game(s) - world(s)
```

dream(s) / plane(s) / quest(s) / CTSG / experience(s)

navigable 3D spaces allow us to crawl, jump, fly, or even teleport through fictional worlds that come through life in our imagination. We encounter these space through a combination of perception and interaction.

... video game spaces stage our dreams and nightmares and they seem to get better at it every year.

```
Michael Nitsche – Video Game Spaces / play / tribe(s) / network(s) / identity / flow(s) / chart(s) / cycle(s)
```