

[www.cs.vu.nl/~eliens/serious/link.html](http://www.cs.vu.nl/~eliens/serious/link.html)  
twinkle(s) / difference(s)

serious design

## theory

create art

co-creation(s) / project(s) / media / utopia / resource(s)  
twinkle(s) / difference(s)

human(s)  
is(a)  
playful  
organism(s)

co-creation(s)  
/ gamification(s) / mechanic(s) / resource(s)

twinkle(s) / difference(s)

attitude(s)  
rule(s)  
player(s)  
skill(s)

serious  
/ gamification(s) / mechanic(s) / resource(s)

twinkle(s) / difference(s)

```

graph TD
    A[number(s)] --- B[cause(s)]
    B --- C[math(s)]
    C --- D[dilemma(s)]
  
```

theory  
/ gamification(s) / mechanic(s) / resource(s)

twinkle(s) / difference(s)

design(s)  
role(s)  
challenge(s)  
experience(s)

design  
 / gamification(s) / mechanic(s) / resource(s)  
 twinkle(s) / difference(s)

engineer(s)  
 change(s)  
 human(s)  
 world(s)

create  
 / gamification(s) / mechanic(s) / resource(s)  
 twinkle(s) / difference(s)

literate(s)  
 teaching(s)  
 travel(s)  
 time(s)

media  
 / gamification(s) / mechanic(s) / resource(s)  
 twinkle(s) / difference(s)

artist(s)  
 understand(s)  
 critical(s)  
 game(s)

art  
 / gamification(s) / mechanic(s) / resource(s)  
 twinkle(s) / difference(s)

creative(s)  
 destruction(s)  
 kill(s)  
 machine(s)

utopia  
 / gamification(s) / mechanic(s) / resource(s)