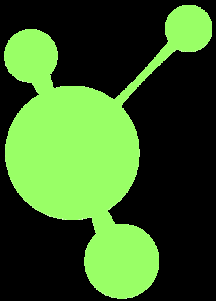


The CORE *of* FUN

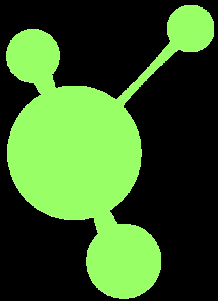
RAPH KOSTER

PRESIDENT, Areae Inc.



HOW MAGIC WORKS

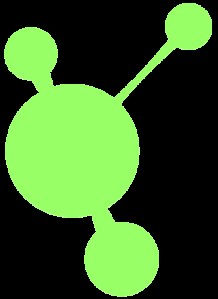
I - I⁷ - IV - I - V⁷ - IV - I - I



(audience claps and we sing blues)

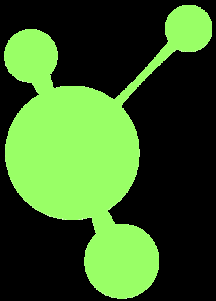
HOW IT DOESN'T

(audience makes random noises)



THINGS THAT “WORK”

often have underlying STRUCTURE

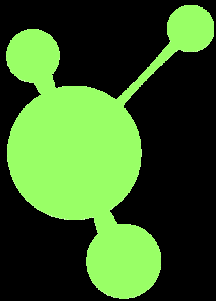


“SOLAR” by *MILES DAVIS*

$C^{maj7} - C^{-7} - G^{-7} - C^7$

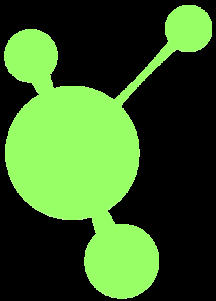
$F^{maj7} - F^{maj7} - F^{-7} - Bb^7$

$Eb^{maj7} - Eb^{-7} - Ab^7 - Db^{maj7} - D^{-7b5} - G^{7b9b13}$



WE CALL THIS STRUCTURE
“GRAMMAR”

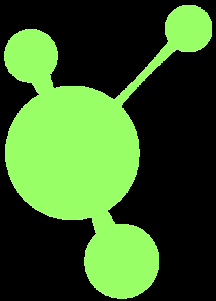
(“Solar” is a blues)



STRUCTURE IS DEEP: IT'S FRACTAL

When something works,

it works at many levels.



I - I⁷ - IV - I - V⁷ - IV - I - I

=

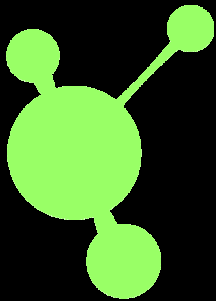
I - IV - V - I

=

I - V - I

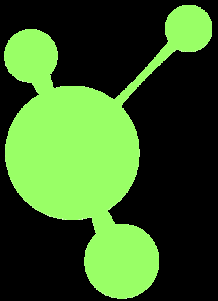
=

8 - 7# - 8



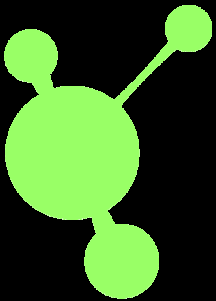
Songs are made of

Songs...

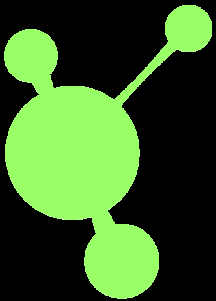


Harmonies are made of overlapping

Songs...



Visual compositions are made of spaces



That are visual compositions

14

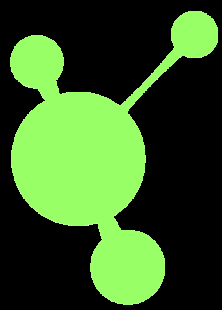
13



12

11

10



15

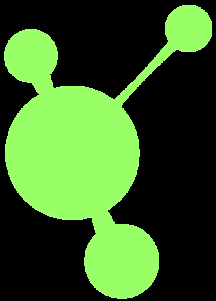
8

9

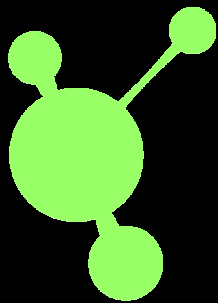
IN THE CASE OF GAMES

Games are made out of

Games

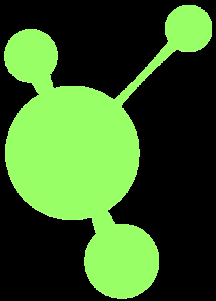


FROGGER



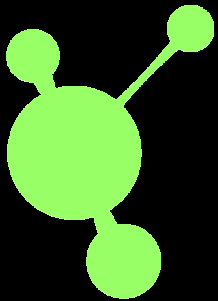
TURTLES ALL THE WAY DOWN

*U*ntil you reach the interface button.



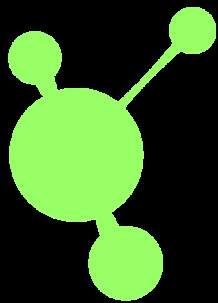
GAMES ARE DESIGNED TO EVOKE

FUN

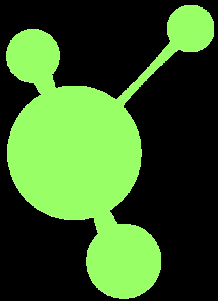
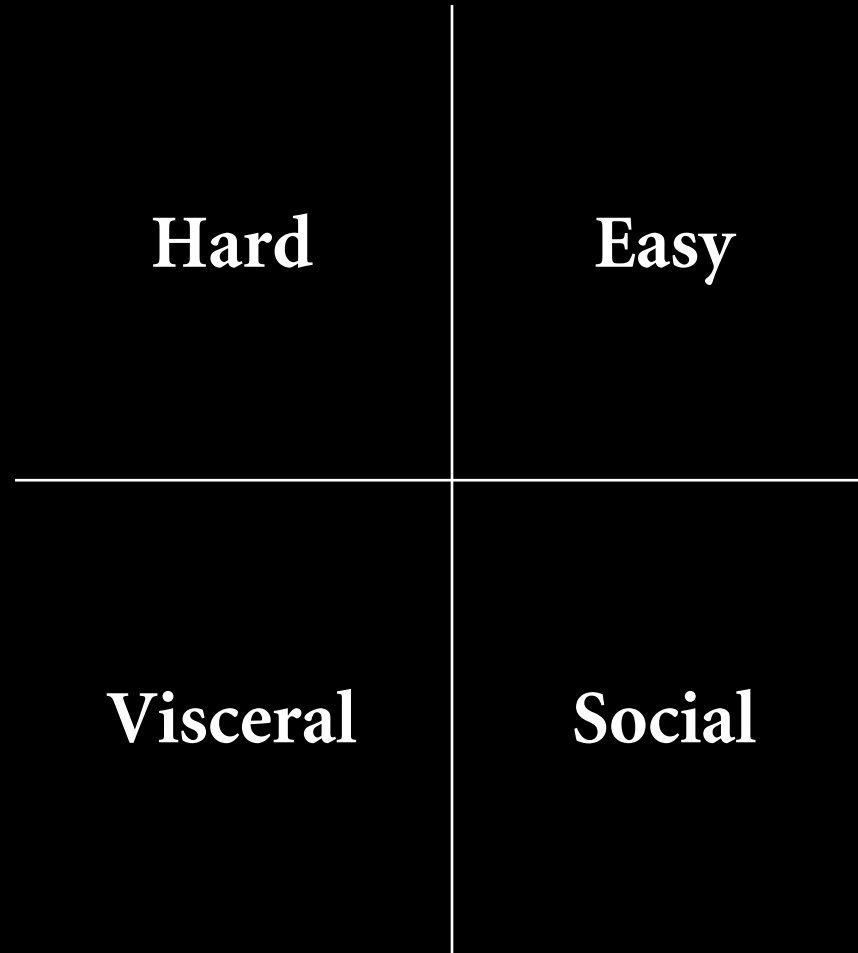


FUN

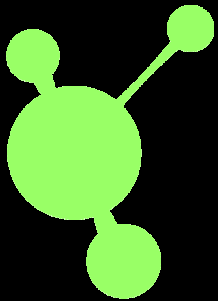
...is a chemical response



RESEARCH SHOWS 4 TYPES OF FUN



*G*ames mostly focus on hard fun.

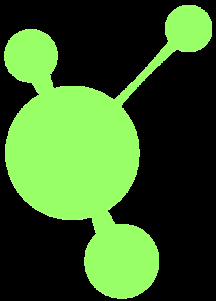


HARD FUN GRAMMAR

HARD FUN is about solving problems.

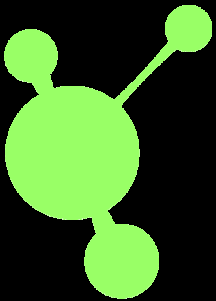
The problems tend to be mathematical.

- its grammar ignores presentation & metaphor.



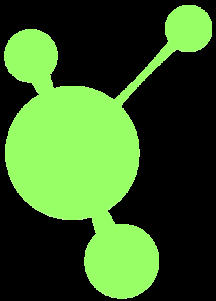
GAMES ARE MADE OUT OF
MAKING CHOICES

aka **Interaction Design**

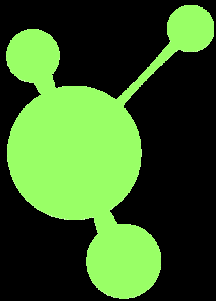


CRAWFORD

“*A* cyclic process where two actors alternatively listen, think, and speak.”

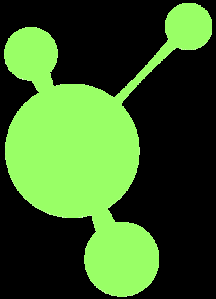


So let's talk about how you apply this to
the *Web*.

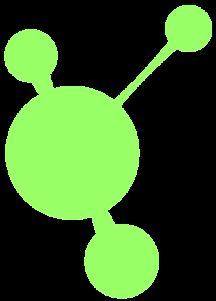


NESTED CHOICES

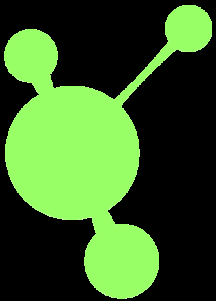
Let's go to
[amazon.com](https://www.amazon.com)



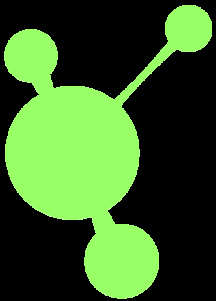
Typing in the URL for Amazon or hitting your bookmark, parsing the intro page, skipping your recommendations, finding the search box, the search, narrowing the results, finding the results you want, getting distracted by that other thing you meant to buy, comparing every result, parsing the product page, reading the reviews, finding the buy button from the four choices, making the purchase, picking shipping method, picking payment method, choosing gift wrap or not...



**The challenges are experienced
sequentially, but in practice they are
nested...**

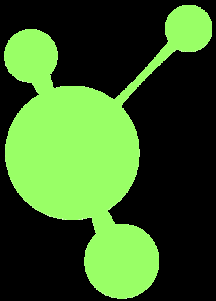


**...you might have the boss level encounter
with one-click multiple times in
different places or for different loot.**



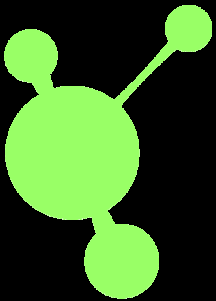
THE *MAGIC INGREDIENTS*

- *Territory*
- *Preparation*
- *Core mechanic (skill required)*
- *Range of challenges*
- *Choice of abilities*
- *Variable feedback*
- *Bad return on investment*
- *Cost of failure*



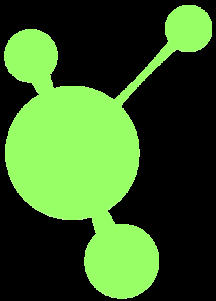
THE *MAGIC* INGREDIENTS

- *WHERE?*
- *WHEN?*
- *HOW?*
- *WHAT?*
- *WITH?*
- *FOR?*
- *FEW?*
- *PHOOEY.*



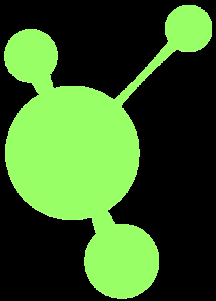
HOW?

The core VERB has to be repeatable.



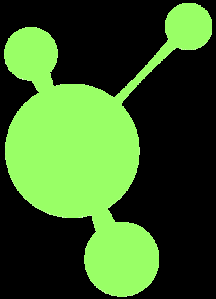
HOW?

Something that requires SKILL.



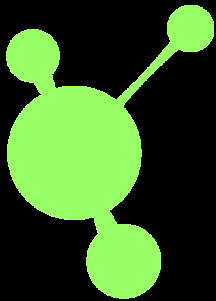
HOW?

Something that can handle
STATISTICAL VARIATION.



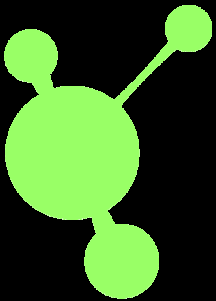
HOW?

Something that is COMPETITIVE.



WHEN?

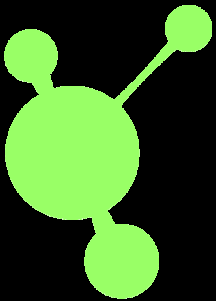
Everything you did before must matter.



WHEN?

**Whatever the opponent last did to you
should matter too.**

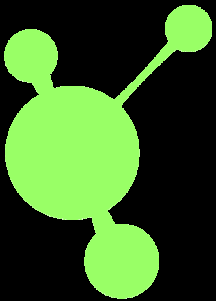
*N*ever start an interaction with no
CONTEXT.



WHEN?

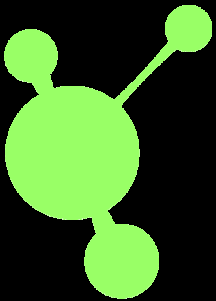
**You must be able to PREPARE for this
encounter**

In different WAYS.



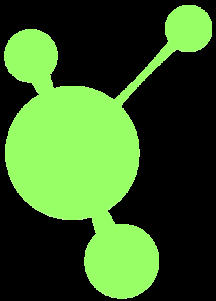
WHERE?

**The same challenge in different locales
should be a fresh SCENARIO.**



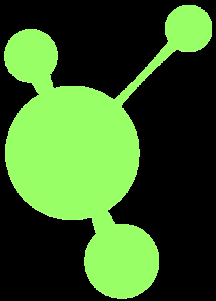
WHERE?

The TERRITORY and TOPOLOGY should
affect the outcome.



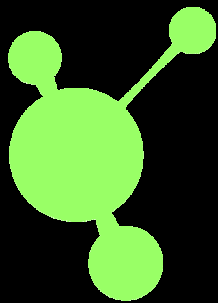
WHAT?

**The same VERB must be applicable to
many different CHALLENGES.**



WHAT?

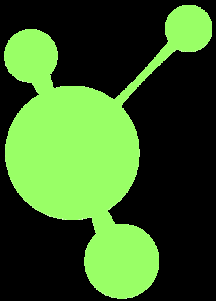
*T*hink of a verb as a *H*AMMER.



WHAT?

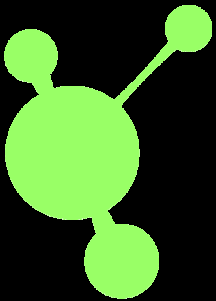
You should present users

with lots of kinds of *Nails*



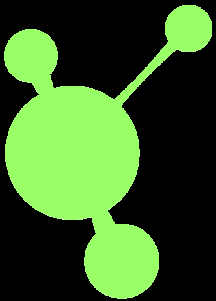
WITH?

There are lots of kinds of hammers too!



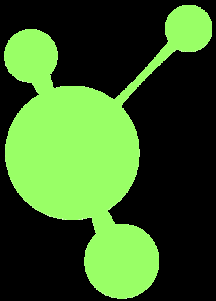
WITH?

Users should be able to solve the challenge with their choice of tools.



WITH?

*And you should reward them with
different FEEDBACK for it.*

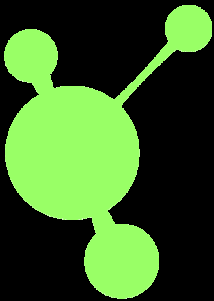


A STATISTICAL INTERLUDE

All the above are *Q*uantifiable.

You can arrive at a **RATING** for every challenge.

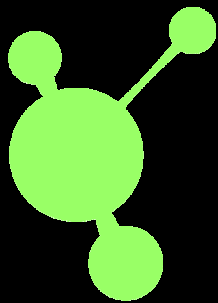
You can sum them for the **DIFFICULTY** of a
meta-challenge.



FOR?

A game that only has one outcome is

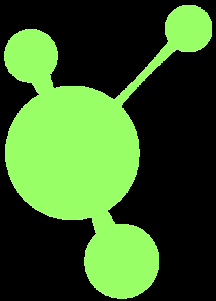
BORING.



FOR?

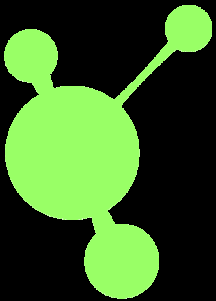
*V*ARIABLE FEEDBACK

keeps things lively.



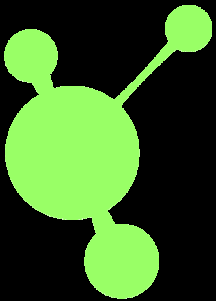
FOR?

(Usually, the *best* feedback is a greater challenge presented by the opponent.)



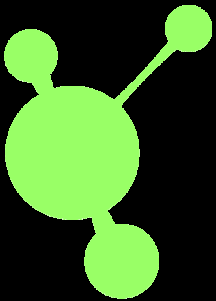
FOR?

Sometimes, it's a pleasant SURPRISE.



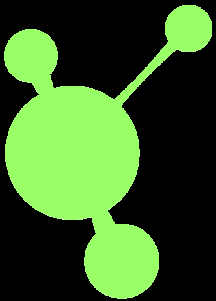
FOR?

**Either way, it has to be HIGHLY VISIBLE.
To everyone.**



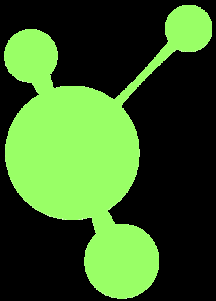
FEW?

*B*OTTOMFEEDING is bad for fun.



FEW?

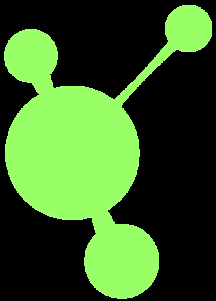
*In other words,
low-risk activity for high reward
is bad for fun.*



FEW?

You need to drive users to challenges at
the edge of ABILITY.

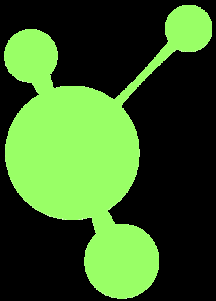
(*cf* Csikszentmihalyi's FLOW.)



PHOOEY

Making a wrong choice
has to be a SETBACK.

(Even if all it costs you is TIME).

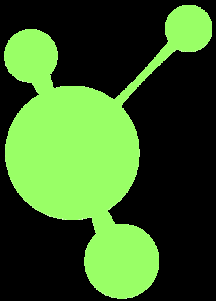


PHOOEY

FUN

does not exist where there is

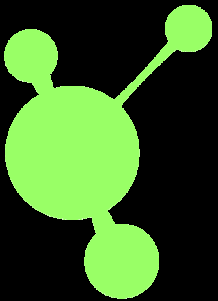
Zero CONSEQUENCE.



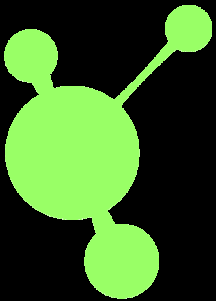
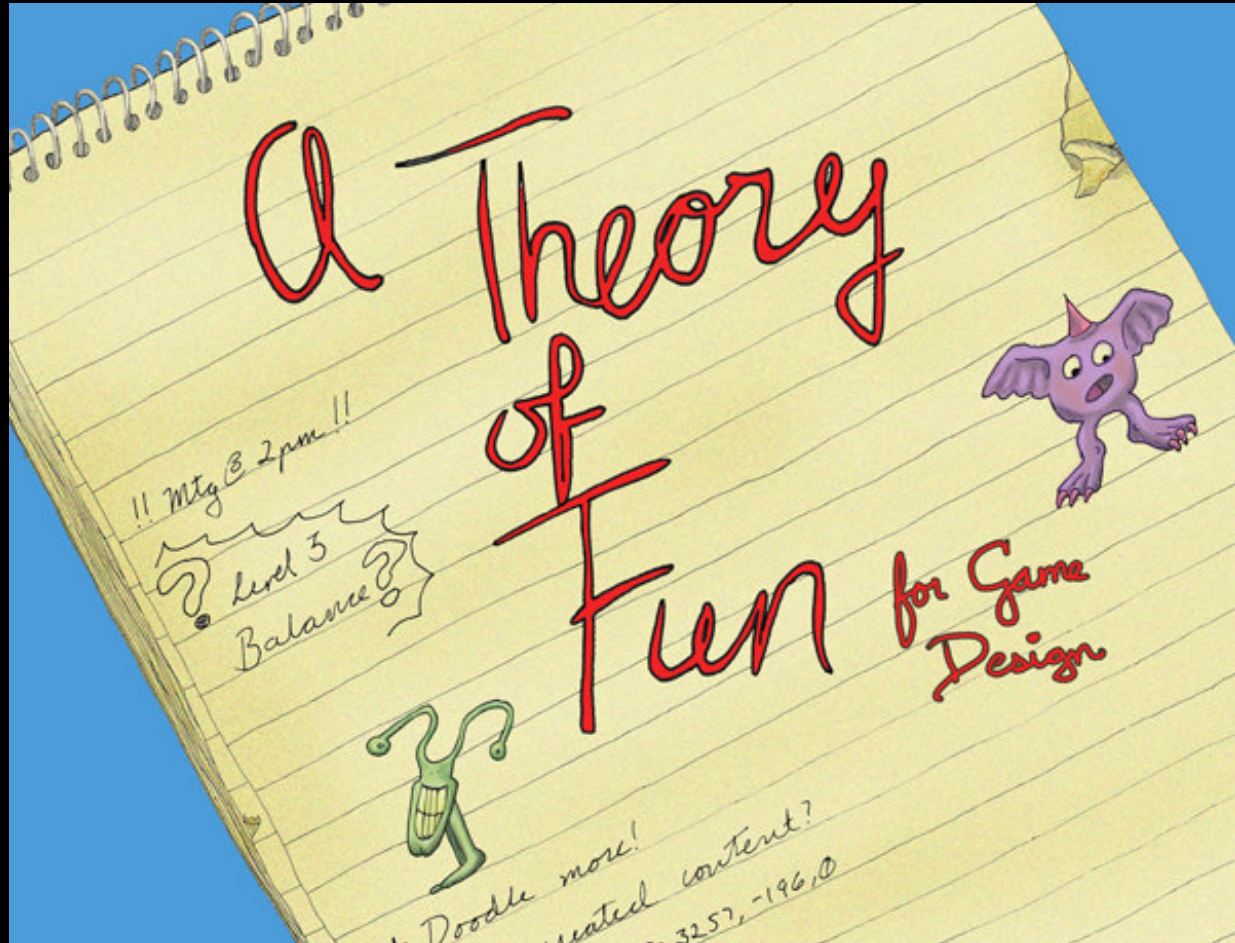
The absence of any of these features

makes things

less FUN.



WWW.THEORYOFFUN.COM



Spotting bad atoms

Never link or nest too many base atoms...

