



Battle of Origins — Theory Defender

April 7, 2015

Figure 1: Battle of Origins | Theory Defender



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1. Game Description

1.1 Storyline

We live in a world where to all questions humanity asks itself an answer is found in religion and science. Two branches that split the world into two parties drifting more and more apart. Neither of them willing to accept or even listen the opinion of the other. But humanity cannot progress when it is at conflict with itself. The time has come to reunite the population of our planet and to lead humanity on its one and only true path. For a peaceful and strong world one side needs to disappear forever. Starting with the most fundamental question: "how did we become what we are today?". Was it an instant creation of perfection or an evolution that took billions of years to make us who and how we are to this day. Choose your belief and convert everyone who dares to challenge your norm of existence in the epic "*Battle of Origins*".

1.2 Gameplay

Before the match begins the player may choose a belief. Either religionist or evolutionist. The main aim of the game is to convert the entire opposing team to your belief.

The teams will consist of 30 people each. Non-human players will be controlled by an artificial intelligence. Each player is able to blast the players of the other team away, causing them to fly through the air and temporarily take their ability to move. To convert the opposing player to your belief a big wonder must be cast. A big wonder can be generated by standing together as a group from the same team. Standing together allows the player to press the pray/study button which will start filling the big wonder progress bar. While standing together the players have an increased vulnerability. Meaning if an opposing player A is shooting at a player B who is currently praying/studying, player B will be hurled further away than he would have been if he had not been studying/praying. In addition while the players are standing together the rest of the map is blurred out so they cannot see approaching enemies. This can only be done if we use multiple screens. When releasing the pray/study button the player has a cool-down of 2 seconds before he can start running and shooting again. The speed of the wonder-creation progress is determined by two factors:

1. **The size of the group:**

The more people close to each other, the quicker the progress bar will increase

2. **Wonder Skill:**

The creating-wonder skill of each player that is currently in the group (see subsection 1.4)

Once a big wonder is generated it is indicated by multiple representations:

- The progress bar is full (visible to all players)

- One player is now in possession of the big wonder (see subsection 1.5 to see visual representation)
- A sound lets all players know that a big wonder is ready

The player who is in possession of the big wonder can now cast this whenever he wishes. While he is in possession he cannot be converted by a big wonder of the other team. Furthermore the possessing player has an increased running speed. A timer lets all players know how much time there is left before the wonder cannot be cast anymore. Once the big wonder is cast, the player becomes immune to all types of attacks (main attacks and big wonder conversion) and he is able to control the big wonder's area of effect. Any opposing player who is in the area of effect will be converted to the own team. While the wonder is active the progress bar decreases. Once it has reached zero the wonder will be deactivated and the player will have normal running speed and be vulnerable to all attacks again. Players of the same team can remain studying/praying while the wonder is active in order to lengthen the period of the wonder.

1.3 "Death" of players

There is no real death in the game. One can only hurl the other players through the field and making the unable to move for a period of time. There are two modes that control what happens after a player is converted. This mode can be selected by the player at the beginning of the game:

- mode 1: If a user-controlled player is converted he takes control of another computer controlled player of the team he originally picked, as long as there still exists one. If no computer controlled player is left in the team the player enters spectator-mode until computer controlled players are available again. This simply allows him to watch the game without having any influence.
- mode 2: If a user-controlled player is converted the user remains in control of the player but is now helping the other team to convert his originally selected team. This results in all players to be winners in the end.

1.4 Evolving Upgrades

Players will evolve on the fly while playing. They will not have the ability to choose an upgrade themselves. The more they perform a specific action, the better they will become at it. Following is a list of automatically evolving skills:

- Running Speed
- Power of main attack
- Precision of main attack
- Contribution to creating a big wonder

- Immunity against attacks

The visual difference of each upgrade can be seen in subsection 1.5. Each player starts with 0-skill points on each skill. A class can be chosen before the game starts. Choosing a class will give an initial boost in a certain skill or allow the player to gain skill points in a certain skill faster.

1.5 Visual Difference

Although each player has the same power and tools, they are visually and audibly different depending on the chosen belief. Here is a table of what each part will look like

1.5.1 Main Game Aspects

See table 1

1	Religious	Evolutionist
<i>Main Weapon</i>	Force push	Blast gun
<i>Main Weapon (upgrade)</i>	Super force push	Blast cannon
<i>Main attack</i>	Use force push	Shoot blast gun/cannon
<i>Big Wonder</i>	Rays of god	Rain of books
<i>Creating Big Wonder</i>	Praying	Studying
<i>Big Wonder finished creating sound</i>	Angels singing "Aaaaah"	Pen on paper scribbling OR Voice saying "Q.E.D"
<i>Possessing wonder</i>	Wings	Carrying big book, Big glasses, robot, orbiting planets/atoms OR light bulb above head

Table 1: *Main Game Aspects*

1.5.2 Character Upgrades

See table 2

	Religious	Evolutionist
<i>Immunity against attacks</i>	Skin color (white → silver)	Skin color (white → silver)
<i>stronger main Weapon (upgrade)</i>	Glove color (white → red)	Gun size (small → big)
<i>Faster Running</i>	Bigger feet	Bigger feet
<i>Big Wonder skill</i>	Size of hands (small → big)	size of head (small → big)

Table 2: *Character Upgrades*

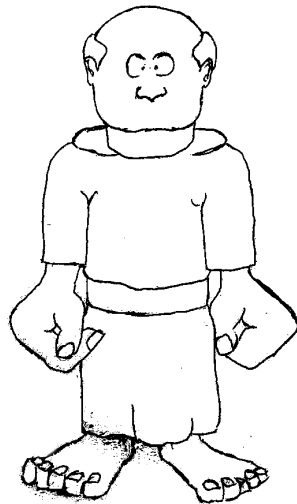


Figure 2: Creationist

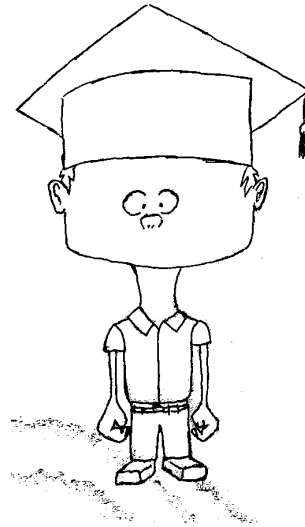


Figure 3: Scientist

1.6 Important Aspects

1. Fair Teams:

We want the teams to be equal in the sense that both possess the same offence/defence. Therefore, winning merely depends on the strategy and the aiming skills of the player

2. Unique Gameplay:

We want our game to be extraordinary, but still playable by common users, without directly fitting into a game category or the need to have long tutorials.

3. Cartoon/Non-Photorealistic Rendering:

Since we are touching a controversial topic we blind out some seriousness by making the characters and surroundings cartoony

4. Visually stunning and self-explanatory:

A player should be entertained by simply watching the game. Furthermore it should be self-explanatory without the need of long tutorials

5. Multiple Tasks:

During the game the player needs to perform different tasks at the same time. On the one hand the game can only be won when a big wonder is cast and thus, players need to form study or praying groups to fill the big wonder bar. On the other hand players must prevent the other team from filling their big wonder bar. Some players in the other team will also pursue this task of distracting the prayers or the studying. Therefore, in order to win the game players also need to protect the players filling the big wonder bar.

2. Technical Achievement

For a game like the one presented in this document the interaction between the players is crucial. Therefore it depends a lot on a rather large group of players, such that the player won't get bored if no one else is around him to interact with. To achieve the player to feel like a part of something big, as well as being attracted by the game by lots of interactions and possibilities to behave is the balance between the level size and the number of players in the game.

If the level is very large and there is only a small number of players on the field, everybody is just playing around on his own and not interacting a lot with the other players. It takes a long time to reach the other players to either attack them or to pray or study with them. An experience like this would probably not make the players to fall in love with our game immediately.

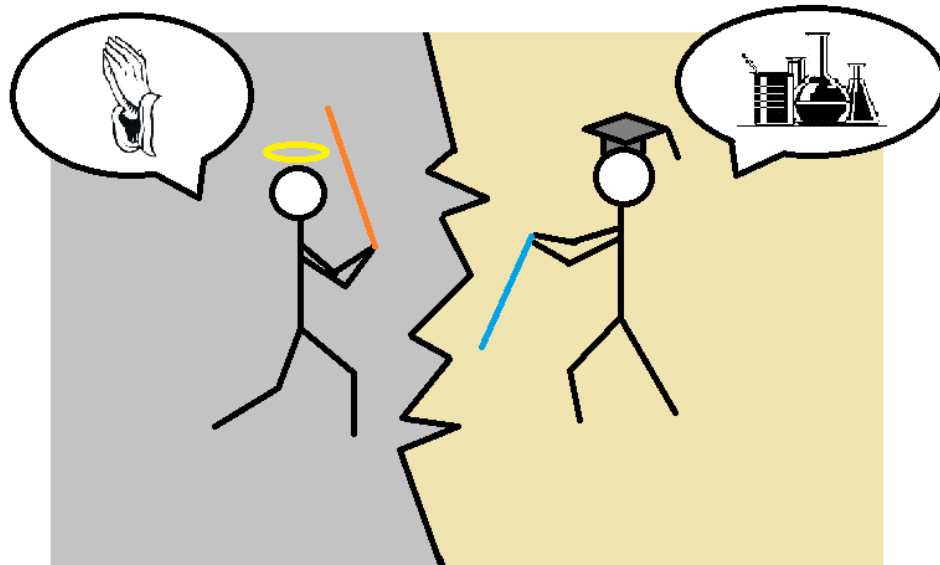
If, on the other hand, the level is rather small and there are many players on the field, the player will feel challenged and necessary to help his team win the battle. If he has to deal with lots of enemies before being able to reach his fellow campaigners, he will stay active and motivated throughout the entire game. This is the effect we are aiming for.

Of course it is not always possible to start a game with that many friends who can join. But since the number of players is really crucial to the game, we will provide non-player characters (*NPC*), which will be controlled by the computer rather than by some human. The artificial intelligence to make these NPCs behave intelligently is the most prominent technical achievement we want to reach. For the player it should not feel different when playing with NPC or with fellow human players. Therefore the artificial intelligence should make the NPC behave similar to characters controlled by humans. On the other hand the artificial intelligence must not be too good. If an NPC is clearly better than the human player, he might feel overchallenged. Therefore we will try to find a good compromise between stupidly behaving NPCs and super-soldier NPC who are invincible.

3. "Big Idea" Bullseye

Big Idea: Don't Kill, Convert

Technical innovation: Not a standard shooter



Fight the battle of existence!

Figure 4: Big idea Bullseye

4. Development Schedule

4.1 Layered task breakdown

1. Functional Minimum
 - Players from two teams running around
 - Overflow flat Map
 - Counting collective hits
 - Game finishes after 8 min
 - Winner is Team with most hits
 - AI Controlled Allies/Enemies.
2. Low target
 - Add Audio: Music + Sound Effects

- Add Physics:
 - Players flying away when hit
 - Cooldown before being able to move & attack
 - Immunity cooldown before being vulnerable again
- Add Wonder:
 - Wonder is generate after every 50 collective hits
 - Wonder is possessed by a human player
 - Wonder can be cast
 - Wonder visually recognizable
 - Wonder converts players
 - Converted Human player plays for the other team
- Winner is the team with the most members
- Map includes obstacles

3. Desired target

- Characters visually polished to look from same theme
- Wonder Creation:
 - Creating a wonder by standing together and pressing "commit"
 - Cooldown after releasing "commit"
 - Increased vulnerability during praying and cooldown
 - Larger Praying/Studying Circles will generate quicker progress
 - AI upgrade to take new wonder creation into account

4. High target

- Converted Human player will controls free NPC if available
- Evolving Players
 - Players evolves numerically according to their actions (Running, Shooting, Praying/Studying)
 - Players evolves visually

5. Extras

- Online multiplayer
- Procedural, automatic level-design (each level is different)
- Classes of characters (specialized for praying/studying or shooting)

4.2 Task Allocation

4.2.1 Project Management

See table 3

4.2.2 Engineering

See table 4

Task	Description	Who	Hrs	Actual
	Idea Finding			
1.	Brainstorming Design	All	5	7
2.	Character modeling	Gregory	20	
	Assignments			
3.	Project Proposal Draft	All	10	10
4.	Prototype Chapter	All	10	
5.	Interim Report Chapter	All	10	
6.	Alpha Release Chapter	All	10	
7.	Playtest Chapter	All	10	
8.	Conclusion Chapter	All	10	
9.	Demo Video	Patrick	50	
	Presentation and Demos			
10.	Pitch of the Game	All	7	7
11.	Formal Game Proposal	All	10	12
12.	Paper Prototype	Jacqueline	5	6
13.	First Playable Demo	All	30	
14.	Interim Demo	All	50	
15.	Alpha Release Demo	All	100	
16.	Play-test presentation	All	75	
17.	Final Public Presentation	All	40	

Table 3: Task allocation

4.3 Timeline

See table 5

5. Assessment

Our game shall stand out in several ways. We want to create a funny, cartoony, visually stunning gaming experience that fascinates someone by only watching another person playing the game. By “funny” we mean that everything from design over physics to sound will be produced with always keeping humour at the back of one’s mind. For example, if a character gets hit by an enemy’s shot, it will fly through the air far away from real-world physics. Also, we want to include a dimension of “cuteness” into our gaming experience by using non-photorealistic rendering and a cartoony overall look. We believe that the combination of cartoony visuals, a camera that shows a wide part of the action and a fast effect-overloaded gameplay will create a special form of appealing that will bring the player

Task	Description	Who	Hrs	Actual
Functional Minimum				
18.	Players from two teams running around	All	15	
19.	Level Design: Overflow flat Map	All	15	
20.	Counting collective hits	All	15	
21.	Game finishes after 8 min	All	15	
22.	Winner is Team with most hits	All	15	
23.	AI Controlled Allies/Enemies.	Ruben	15	
Low Target				
24.	Audio: Music + Sound Effects	Patrick	15	
25.	Physics: Players flying away when hit	All	15	
26.	Physics: Cooldown before being able to move & attack	All	15	
27.	Physics: Immunity cooldown before being vulnerable again	All	15	
28.	Wonder: Wonder is generate after every 50 collective hits	All	15	
29.	Wonder: Wonder is (visually) possessed by a human player	All	15	
30.	Wonder: Wonder can visually be cast	All	15	
31.	Wonder: Wonder converts players	All	15	
32.	Wonder: Converted Human player plays for the other team	All	15	
33.	Winner is the team with the most members	All	15	
34.	Level Design: Map includes obstacles	All	15	
Desired Target				
35.	Characters visually polished to look from same theme	Jacqueline, Gregory	15	
36.	Wonder Creation: Creating a wonder by standing together and pressing "commit"	All	15	
37.	Wonder Creation: Cooldown after releasing "commit"	All	15	
38.	Wonder Creation: Increased vulnerability during praying and cooldown	All	15	
39.	Wonder Creation: Larger Praying/Studying Circles will generate quicker progress	All	15	
40.	Wonder Creation: AI upgrade to take new wonder creation into account	All	15	
High Target				
41.	Converted Human player will controls free NPC if available	All	15	
42.	Players evolves numerically according to their actions (Running, Shooting, Praying/Studying)	All	15	
43.	Players evolves visually	All	15	

Table 4: *Task allocation*

in a good mood while providing an experience of fun in every second of playing. By “visually stunning” we want to say that the player will see a battlefield with a lot of characters

fighting each other and building pray/study circles, objects that are hit and therefore flying through the air, different looking characters according to their skills and a lot of light and particle effects caused by the weapons, power-ups or the skills of characters. As criteria for success we elaborated our own “big idea bullseye”. On the one hand, our core idea consists of the effect-overloaded non-realistic cartoony styled fight over evolution including the “super-power” of converting enemies. On the other hand, our technical innovation is a shooter where you can’t kill enemies and where team play is crucial to win the game.

Task	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Idea Finding														
1.	A	A												
2.	G	G												
Assignments														
3.		A	A											
4.				J	A									
5.						A	A	A	A					
6.										A	A			
7.												A		
8.													A	A
9.													A	A
Presentation and Demos														
10.	A													
11.				A										
12.						A								
13.									A					
14.											A			
15.												A		
16.														A
17.														A
Functional Minimum														
18.					A									
19.				A										
20.					A									
Low Target														
21.						P								
22.						JG								
23.						R								
Desired Target														
24.							A							
25.							A							
26.							A							
27.							A							
28.								A						
29.								A						
High Target														
30.								R	R					
31.								A						
32.								A	A					

Table 5: *Timeline*
A = All, P = Patrick, R = Ruben, J = Jacqueline, G = Gregory