

GAME ART PRESERVES CULTURAL AESTHETICS AND IMPLICATIONS

Interactive Qualifying Project Report completed in partial fulfillment
of the Bachelor of Science degree at
Worcester Polytechnic Institute, Worcester, MA

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March 2, 2012

Advisor Signature

This paper summarizes what game artists perceive on their own work and how game art may affect the society. It is intended to provide insight on artists' views on the game industry. This research also covers how players view game art of the same genre.

Acknowledgements

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Introduction

The goal of this Interactive Qualifying Project is to examine game art's influence on people and its aesthetic implication. The video game industry was brought to its prosperity by improvement in technology and the introduction of digital medias. It has developed to be a source of communication from one generation to the next. Game art is a prominent representation of digital art, an art form made possible by current technology. This report discusses how much game art has evolved over the years and how similar game art have or have not become.

The reader will know what some of the best digital artists have to say about our research questions. For example, we asked the artists what would be their ideal project to find out the best foundation for game art to flourish. We asked the digital artists about their favorite artists outside of game industry to discover one of the sources of inspiration for digital art as digital art masters often excel in traditional painting as well. The artists freely discussed how they think digital art is different from traditional art and whether technology has made art creation a more fulfilling experience. Looking at game titles within some genres, we asked if the art in games has come to a plateau in recent years. Our concern was the possibility of game art losing its originality and falling into stereotypes. On the other hand, we were also concerned that game art has not been receiving credits that it deserved. Therefore, the reader will read about game art's artistic value and whether or not it has been underestimated. We also asked the artists what social effect game art has on players. Moreover, we noticed film industry, a

business that has been using computer graphics (CG) similar to that in games. The reader will find out how game and films use CG differently.

In addition, we conducted a survey sent to the WPI student body with 234 responses to research whether people can distinguish different games by their art styles. Our anticipation was people would mix some game titles because their art renderings are too similar.

The reader will learn about game art's importance from our report. Although game art influences those who play video games, the game industry is mostly controlled by players in attempts to please their targeted audience.

Literature Review / Background

Digital Art History

Also referred as “computer art” and “multimedia art”, digital art is a general term for a range of artistic works and practices that use digital technology as an essential part of the creative and/or presentation process.

(Wikipedia)

Digital technologies have transformed activities such as painting and sculpting over the course of many years. The history of art assets made specifically for games, though, is a topic rarely discussed or documented. Multiple searches through Google reveals a limited amount of resources pertaining to our research. We hoped to discover the history of game art’s evolution. The search engine believed we were searching for art games which are art focused games that have high graphics, but very limited player interaction. “Graveyard” by Tale of Tales is one such example where the art is rendered well, but the player can only move or run an old woman until she dies.

The development of art for games over the years is considered somewhat inconsequential. It’s something taken for granted or perhaps thought of being developed similar to how normal art developed. We hope to reveal a glimpse of the history of game art through the artists interviewed.

With the lack of information on the net about game artists and how they perceive things, we hope to use our interviews to fill that gap and begin to understand the views of these artists. The questions we ask may result in similar answers between game artists, but how they respond and develop their answers are different.

Introduction to Interviewed Artists:

Gerardo Garza:

Known for his expressive concept art and 3D work, Gerardo is a versatile artist who has a traditional painting background as well as extensive work experience in game industry as a concept artist. Gerardo has worked at Mad Doc Software, Airtight Games and Rockstar Games. He is currently working on Dead Space 2.

Website:<http://gerardogarza.net/>

Brownen Grimes:

Brownen is a technical artist at Valve who enjoys life drawing and photography. She has sophisticated skills of creating both art and scripts. Brownen has worked as a Senior Technical Artist at Pseudo Interactive and has a profound understanding of both artistic and technical sides of games.

Website:<http://www.bronwengrimes.com/>

James Gurney:

Best known as the creator of Dinotopia, James Gurney is a master of traditional painting.

His work of imaginative creatures and environments have inspired a lot of people.

James keeps a daily weblog at <http://gurneyjourney.blogspot.com/>

Andrew Jones:

Andrew Jones is one of the most creative artists out there. He co-founded Massive Black which is one of the biggest concept art focused companies and Conceptart.Org which becomes more and more popular among digital artists. Andrew's signature art style is extremely memorable. As an independent artist and educator, he is constantly exploring innovative possibilities of artistic creations.

Website: <http://www.androidjones.com/>

Eric Orr

Eric Orr is a eleven year video game industry veteran with six published DS and GBA games under his belt. He's currently an environment artist at 38 Studios. He's adept at the various tasks in the development of video games, from concept art to implementation of assets. He enjoys the preproduction stage of drawing and painting, but is skilled at modeling, texturing, and rigging.

Website: <http://www.subtlesquid.com/>

Eric Ryan

Eric Ryan is a concept artist with over eight years of experience in both film and video game industry. He creates images that are both fantastic and believable with his strong knowledge of creature anatomy. He currently works as a senior concept artist at Sony Computer Entertainment of America.

Website: <http://mellowsmootheart.blogspot.com>

Methodology

The Interviews

To get a better idea of what lies behind the creation of the artwork in video games, we decided to go to the experts. We conducted interviews because it felt more formal but at the same time, allowed us to be friendly and communicate directly the artists. We also felt an interview would give us a better opportunity to gather responses instead of sending an email linking them to a survey which they could consider to be junk mail.

Our interviews were mainly structured around seven questions we generated in preparation to ask our interviewees. In our phone interviews, we found that our questions were too broad or ambiguous that we had to modify these questions so it was easier to understand. On top of that, we spontaneously created follow up questions in response to the artist's answers especially when they have already answered a question we were going to ask them. In the email interviews, we sent the artists our original questions.

We acquired potential artists to interview by going through our "favorite list"; searching popular games with great graphics to locate contributing artists and looking for industrial experts whose response would strengthen our research. We then obtain the artists' email addresses from their websites or blogs.

We conducted three phone interviews and three email interviews. Halfway through the process of emailing artists, we switched from requesting only phone interview to having both phone and email interview mainly because we discovered that some artists preferred to answer questions via email, or they were too busy to schedule a phone interview. All of our interview questions were open ended because we were hoping to hear the artists' opinions.

We used many ways to conduct and record the phone interviews. We used our own phones, Skype, GoogleTalk, and a recorder from either the ATC or built into our laptops. For almost all the phone interviews, we had difficulties understanding what the artists were saying, not due to accents which none of them had, but due to how well the technology performed. We did the interviews in two areas our own rooms and the library. Sitting in our own rooms were comfortable, but we had to use three softwares to connect to each other as well as the artist we were interviewing. In the library, using the Internet access through Wifi was not the best experience as halfway through interviewing with one of our artists the signal was weak and our call was dropped. We frantically recalled the artist and continued with the interview using our own phone, which turned out to be running on very low battery. Thankfully we got through almost the entire interview.

The artists that we interviewed came from different backgrounds (traditional painting, digital painting, industrial design) and have different interests, which provided a vital element, diversity, to our research.

We have reproduced their responses in the Result section.

The Student Survey

In addition to conducting interviews with experienced artists, we conducted a student survey which resulted in 234 responses. Our survey was open to the entire WPI student body, which we thought was the best way to get gamers as well as non-gamers that may be interested in our concerns.

Designing our survey questions, we decided that the questions should give us feedback that would help us analyzing game art's associating qualities.

For example, we asked students what their favorite games and styles of games were to discover what was most popular and to start off easy. Our next questions displayed screenshots of games in the same genre and asked the students to distinguish them. Our anticipation was that if a considerable amount of people mix up the games, the games can be said to have similar artistic renderings.

We took the students' responses and generated graphic charts to help readers comprehend the results.

Complications

There were many complications throughout the duration of our IQP such as attending other classes, collecting data, pre-testing questions, and being in different time zones. We did our best to deal with these obstacles and push forward with our report.

Acquiring interviews from busy artists proved to be difficult. We had to send over fifty emails requesting a chance to talk to them, and in the end we received twelve emails that have accepted to do the interviews either over the phone or through email. Six of those twelve actually did the interview. Each email was structured the same way, but personalized to let them know we saw their work and would love to hear their point of view about our report.

We did not thoroughly pretest our questions for either the interviews or the survey to the student body. Our interview questions were not thought out as well as we had believed them to be. We had reviewed them with our advisor, but some of the questions we asked were misinterpreted or confusing to the artists. In the survey we did not take into account that our title could be taken in a different light. We had used only the word “game” and as we were working very closely with our report, we could only think of “game” as the meaning of “video game.” The term “game” was thought by many students to be a sports, card, or board games. Fortunately, the WPI students were helpful and forgave our mistakes.

It took three terms to complete our IQP and money was not an issue as we were not sponsored. Geographically, some of the interviews we had were in different time zones.

We tried our best to be flexible and interview the artists at times when they are free.

There was a case where one of our artists was in New Zealand which is eighteen hours ahead of us, Eastern Standard Time, and we had a tough time making our schedules work with his.

Result and Analysis

Interview

1. Are there artists outside of game who you wish to have impact on games?

Gerardo Garza:

There are a lot of interesting things that have been done stylistically and artistically outside of game in traditional art. We should take input from traditional masters like John Singer Sargent to pop culture stuff by Mark Ryden. It's important for game developers to be aware of what's going on in the gallery world and traditional fine art and art history in general. Everything comes from something. We can only create things based on what we know, so the more we know, the more we can draw from to create. So knowing more about artists and art history will let be you a better artist/ designer/ writer. My background is traditional art and I learned some technical stuff later that helped me to become a concept artist.

Bronwen Grimes:

The artists here at Valve incorporate all sorts of influences, from architecture to cinematography to comic books to industrial design. There are certainly particular artists that I admire, like Jon Foster and James Jean, but those choices reflect my personal tastes and not necessarily what I think would work well in a game environment. In the end it comes down to a style that complements the game design. There are examples of many different art influences already visible in games. Take, for example, Okami (ink and wash), Jest Set Radio (graffiti), Valkyria Chronicles (manga), or Valve's

own Team Fortress 2 (20th century commercial art). I deliberately chose non-photoreal examples here because they're very clear. But even within the photoreal or hyperreal categories, you can draw parallels to films or famous photographs. Black Hawk Down was a particularly influential film in terms of visual style. You can still see its stylistic elements in many modern fps games. I don't think there's necessarily an underrepresented style or artist, and I don't believe you should approach a game from an art-first perspective. The gameplay has to work first. Then the art has to work with the gameplay.

James Gurney:

That's a little hard for me to say because I'm not current on game art. I watched over my sons' shoulders when they were playing video games, but that was 10 years ago. Nor am I very familiar with the artists 'inside of game' to compare them to. So I can't really say.

In very general terms, I think artists in any field should draw inspiration widely from all artistic influences going way back, and even more from nature directly.

Andrew Jones:

There are a lot of amazing artists out there. I'm a big fan of Joe Jusko, Jason Edmiston, Aly Fell, "Loopy Dave"... there are many more. These are artists that I think would bring a lot to any project they were to work on; in any industry.

Eric Orr:

Yeah. But I'm so bad with names, it's going to be hard to pick out a specific artists. But in a general way, game are a synthesis; there are so many forms of art that it's always good any type of artists to engage with the medium. Musicians, painters, whoever can have a positive influence in what we're doing. It's a fledgling medium that we haven't fully found the extent of what can be done in interactive medium. But for your question, maybe every artist in the world.

Everyone brings their own thing. There are a lot of artists I'm excited about like illustrator Bill Halo or musicians like Arnold Tildman. They have some contact with video game. I appreciate the diversity that can be brought to the games. It's such an open medium that anyone in perspective can expand it. There's the visual, sound, interactive aspect to it; all these sorts of things going on. It can be influenced by film, comics, illustrations, video, whatever.

Eric Ryan:

Definitely. I mean wow there's so many it's hard to say who specifically. I mean there's an artist by the name of Carlos Suante. He works at ILM. The big movie people would be great to see what they would come up with for games cause they're truly the masters of what we do so seeing what they could do, what they can offer for video games would be awesome. Even Druis Brusion can have an interesting effect on games or even Sid Mead can have a really awesome effect on video games. But the thing is that I wouldn't be surprised if some of them have already put their fingers in some game companies because a lot of game companies tend to out source a lot of their artwork sometimes.

So I wouldn't be surprised if they also did a little bit of freelance work on the side for some video game companies.

2. What would your dream project be?

Gerardo Garza:

At this point, I don't know if I had a dream project because I've worked on so many projects. I think for me it's more about the team, the challenges, telling a good story, and making something that's visually interesting. I can mention games that I like but I wouldn't say that I have a dream project.

Bronwen Grimes:

My dream project would be a game that excites and inspires its audience, is entertaining and commercially successful. For me to be useful, it would be a game where the gameplay can be influenced or improved through the visuals. I would want to have a proper understanding of the goals of the game, and be allowed to solve the problem through experimentation. Lucky for me I'm describing every project I've worked on at Valve. So I've made my dream project a couple of times, now! The last time was on Portal 2.

Andrew Jones:

Hmm... I've been considering an idea for a surreal adventure game of my own for some time now. I'd like to make it from scratch, myself. (Well, all except the music anyway, music's something I know nothing about...)

Eric Orr:

I'm kinda working on that right now. I'm a visual artist; I'm primarily a painter. So a project that really uses those kind of skill of stylization, superflucation of visual idea, having a lot of content to produce. I really like creating a big world, so I'm working on a multiplayer project now and it's really exciting for me. Anything with a strong storytelling focus. Stories are very important to me in video games. That's something that's not a universal position, but for me I want, not necessarily a cinematic experience, but a narrative experience.

Eric Ryan:

My favorite project? Um, wow. *laughs* I like everything from Greek mythology to the future, you know, the futuristic genres. I really like aliens; that type of dark futurist genres are really cool. I feel like you can choose any genre but you have to create a certain set of rules for yourself in order to make it good. It's not necessarily, you know, if it's first person shooter or if it's a Greek game vs. a futuristic game or if it's a strategy game. It just doesn't matter as long as you choose a genre, you stick to it, and you stick to a good story, and you hire some of the best people in the industry that you will come out with a really good product I think.

3. Do you feel that technology makes game art more fulfilling?

Gerardo Garza:

There is a lot of interesting stuff out there. I'm checking art websites almost everyday, looking at art books and stuff like that. Good art is a combination of both traditional art knowledge and computer skills. You can't be a car designer, for example, if you don't know how cars work. Car designers don't just draw pretty cars; they understand functions. For video game specifically, I think you need to have the traditional skills, understand the technology and understand how games are constructed (Know stuff like Maya, 3ds Max, Photoshop, vertices, nurbs, game budget, performance, lightings). Not knowing how that stuff works cripples you as an artist because - even if you are a concept artist - you need to know how the game lights something to create a design that's more plausible to the game engine.

Bronwen Grimes:

I think it depends on the person. Speed is naturally an issue. For a digital artist, the time required to get a piece of artwork to a finished enough stage that it can be shown to others is quite short. That means that collaboration and critique are easier and faster for digital artists, and that can result in a better product. Modifying digital artwork is easier than traditional artwork. Experimentation is lower-cost. You can try something and roll back your changes without destroying anything. All these factors add up to increased iteration and decreased emotional attachment to each permutation of a piece. In short, you try more things faster, which means you're more likely to create a successful piece of work. And success is inherently fulfilling.

If you're asking whether improved technology over the past few of years has improved things for game artists, definitely! Sculpting software like ZBrush, Mudbox, and 3D Coat has made the producing of 3D artwork much faster and more intuitive. Generally the results are higher-quality than box-modeled equivalents. Cloth simulation tech has improved a lot and has become much more interactive, so that we can now costume characters and simulate cloth folds. The results from that are pretty accurate, very believable, and faster to generate than hand-sculpting. When it's applicable, it can be very helpful. Improved rendering techniques such as real-time global illumination mean game artists can get their final results closer to the visual targets (typically photographs, paintings, or high-quality offline renders). So yes, naturally, better tech means more success, which is, again, inherently fulfilling.

For some artists, though, the tactile component of traditional artwork can't be replaced by any current means. Their process for finding inspiration and making artistic choices is inseparable from the feel and capabilities of their chosen medium. For those people the answer would be an emphatic no. Digital art would definitely not be more fulfilling. Some artists working in games create character maquettes or concept art paintings in traditional media for just this reason.

Speaking for myself, I do find technology makes creating artwork more fulfilling. I'm in a bit of a fringe field, though. A technical artist spends all her time trying to solve artistic problems through the direct application of technology. The type of artwork that a

technical artist ends up creating or contributing to can't be achieved through any other means, which makes the question, unfortunately, irrelevant.

Andrew Jones:

As in in-game graphics? Personally, I don't think that game graphics have holistically improved gameplay in quite a long time. Two of the most involving games I've ever played are "It Came from the Desert" and "Wing Commander" (both from around 1989/1990). The graphics were as good as they needed to be and were used skilfully to set the atmosphere. These days I think the same applies as it always has: Graphics of any technical depth can be used well or badly, and good storytelling doesn't need much support to come to life.

Eric Orr:

Yes and no. Having technical challenges can bring out creativity. The void can be a daunting thing to try and create so when you have limitations on that it can be easier to get started and even technical limitations can act that way. I feel like we're at a good point with technology for visual editors because there are finally tools in place that we can pull off. If we want to do something realistic, we can do that. If we want to stylize in various ways, we can do that. The only limit is our ambition, our imagination. And so to that extent, the advance of technology has been a wonderful boon. That's a wonderful, fulfilling kind of feeling when you can imagine something and bring it to fruition very close to your original vision. And I think that's only really been possible with this latest

generation of games because shader technology and lighting and all that stuff gotten so much more advanced.

On the other hand, I started out making pixel art for GBA games and I came from a traditional art background. It's sort of daunting to have to engage with a limited scope of colors and of pixels to communicate an idea. Those challenges really helped me expand my skill set. The important thing in any visual to communicate well is establishing the silhouette that communicates what you want to convey. Like if it's an imposing character or a towering evil castle or anything. The first, initial impression comes from silhouette of anything you're showing to the player. Because I have that limitation of just a few colors and pixels, I had to learn to read them so as much as I could with those simplest tools. It was a very powerful learning tool for me. I'm a much better artist for having gone through that.

Eric Ryan:

Well game *art* yes, I do. I think even though there is a place in everybody's heart for the stuff that came out for the first Nintendo. I think that it resonates a lot more with people when those things are more clear and more realized because a lot of the times the character design process or the environment design process wasn't nearly in depth back then as it did now because it didn't need to be. Like you didn't need somebody to really think about how to create this vast, realistic world for Super Mario Brothers. It looked like you got all the environments and it looked like they were shooting from the hips or all that. It's not to say that's bad, it ended really well for them because Mario is a

classic. So in a way that worked out, but it just wasn't the same demand back then that people have now. Another thing too that's happened over the years is the audience has become more sophisticated because they have seen that change in games so they want more now. They're not as willing to go back to Nintendo.

4. Do you think that the game industry has come to a standstill in terms of artistic renderings of similar likeness?

Gerardo Garza

I don't think so. It sometimes has to do with how game technology renders things, and sometimes it has things to do with marketing. We are limited technology-wise to what current consoles can do but I think what limits us artistically is the market. If a game that looks really cool doesn't get purchased by anyone then we can't make that game because games are expensive to make. Companies need to make games that sell. If people are interested in military games then that's what companies are going to make. Artistically that's what limits the games. I visit game forums and some people say that "they shouldn't make games for the casual gamers and should make games for the hardcore gamers" but the problem is, again, it's really expensive to make a game, and hardcore gamers aren't enough to support the companies.

Bronwen Grimes:

Absolutely *not*. There are continual advancements. Just look at what Team Bondi and Rockstar were able to achieve with LA Noir using facial capture technology. And games are increasingly photoreal. Forza Motorsport 4 on 360, FIFA Soccer 12 on PC, and Battlefield 3 on PC would all be good examples.

As hardware improves, existing technologies that have been too hardware-intensive to use realtime will start to find their way into games. Check out the Emily Project from Image Metrics for an example of the type of tech that game developers are keeping an eye on. We also have an increasing amount of crossover in terms of personnel between games and film. Film experts are enriching our abilities and pushing both the art and the technology of photoreal rendering in realtime. That's not to say that we don't have plenty of experts that are home-grown in game development. But the more cross-pollination there is, the more techniques and information we have available. And the root of invention is knowledge. Inspiration only happens when you let your unconscious loose on a sea of facts.

Andrew Jones:

Do you mean can in-game graphics no longer get any better? No. I think that CGI has a long way to go before it looks completely real, even in films, and of course games will take a long time to catch up to the level of realism in films.

Eric Orr:

I really don't. I can see why people would have that first impression. But like I was saying in the last question, we finally have the tools to do so much that we like to. Also I think it gives some really interesting visual taste. Gives it an edge and pushing the boundaries in 3D. We can simplify shape language and bold colors. That's something you couldn't have done in the previous generation at all.

There's rapidly increasing technology, the big idea behind that was thinking we need more realism, more realism and that was something that would slow it down. Games would try to be differentiated not by color and how realistic it looks than what has come before, but by having a clear vision for the overarching style of how it looks. The best example I think of for that are Half-Life or the Skyrim series, Gears of War, but all these games are differentiated by style. It's pretty clear picture of what the sequel will be like and the colors involved are comes to mind. I think we're at the beginning of the blocking of possibility of game visuals instead of the end of an era.

Eric Ryan:

So are people getting tired of that? I don't think so. *laughs* I think that, I'm not saying that because that's going to benefit me, but I'm saying that because it's just when you look at. Just look at John Madden or Call of Duty or Medal of Honor those games. Those games still sell out. They're all the same. Not only do they look the same, but they're all the same genre for the most part. Madden came out with his 12th game. You know what I mean, people aren't getting tired of it.

I think that people aren't getting tired of games like John Madden. And I think that game specifically constantly have new updates with new people who join NFL or College Football. But you're constantly getting something newer it's almost like a subscription to a magazine. Or whereas, if we're going to compare Medal of Honor to Uncharted. You may be able to draw parallels in how detailed things are, how realistic they are, but they

are totally different in their experience and their interactivity and I think that's the main thing when you go from one game to the next. You can say that it's rendered similarly, but in the video games it's all about interactivity. That's what makes them different. It's like saying why does this movie look as realistic as the next movie and are people going to get tired of that. And that's not the point, I think. There's the story difference, there's interactivity differences, there's style differences, there's so many other variables that go into play.

4.5. How do you think that as game artist we can push boundaries creating those experience for gamers?

Eric Ryan:

I think one thing that hasn't gotten old and one that needs to be drilled into the heads of game industry people more is story. I think that's a huge thing because having a compelling story is what separates bad games and good games. I think the other thing is that game companies have to master, like movies have tended to master over the hundred years it has been growing, is game play. The ability for the game art to interact with the environment and the people and how that relates to the story. Making that fun and making that feel new for every game is not an easy task. I think that's one of the things. For every game artist, making art that fits a compelling story is crucial. Even art directors tend to veer towards art that fits. If your art doesn't support the storyline and the storyline isn't solid, your game suffers very quickly as a result and the game play needs to support story and story needs to support game play.

5. Do you think that game art has a social effect on players?

Gerardo Garza:

A kid might want to play Pokemon. A nerdy guy might want to play Assassin's Creed.

Different art and concepts attract different people. Casual games are involving more like reality TV; they are not involving story-wise. They are good for the industry.

Andrew Jones:

As much as any other kind of art does, yes. Art (whether it's the graphics in the game or the supporting artwork on the cover or splash graphics etc.) bring the game closer to reality. The closer a form of storytelling is to reality, as I see it, the greater the social relevance.

Eric Orr:

The art industry of art, the use of art that combines colors, music, and painting, and dance, and video games, all those things. That usage is about the effect. The visuals are only a small part of that. The most potential is unexplored in game design.

Absolutely, it can have effects on opinion on an emotional state. I think we're still at a very early stage to see how that's done. I think the state of video games right now is like the state of movies in the '30s. Where we just nailed down the glamor of some things in games, where we start exploring and expanding what could be in video games.

There are some people who try to communicate emotions more powerfully. There are a few people trying to make political games. People still don't understand fully what it is we're doing. In particular, people want to tell message through story and leave out the

game mechanics. The best examples I can think of, I don't remember what the name is called, but it was made by [Ian] Bogost who is a blogger who makes flash games and stuff. He made a game shortly after 9/11. It was a flash game and you're in a village and there's people walking around. Most of the people are dressed in white and some are dressed in blue and sort of angry looking and those are the terrorists. And the only thing you can do is shoot missiles at the terrorists, but it takes a long time to get there and the missile has a very large area of effect. And so, if you choose to shoot missiles at the terrorist you probably will kill some civilians too. If there's civilians walking around and they see a dead civilian, they turn into a terrorists. So the result is you can get lucky and bring down the level of terrorists, but usually you increase the number because you're doing so much collateral damage and you're flattening the building and destroying the town. The visuals and the mechanics are working together to illustrate this play to show that violence is not a way to convince people you're not the enemy. How to really communicate an idea through a video game. Some of the war defenders on the other end of the spectrum like Uncharted are trying to get emotional and stuff, but the mechanics and the visuals doesn't really affect what you're doing. I think games have the potential to be more effective than movies because of the interaction. The players draw their own conclusion based on how the mechanics work out on the best course of action is.

Eric Ryan:

Stereotypes. To me, I'm more liberal when it comes to that type of things and it's not because I want to see a girl walking around with big boobs or a guy that's super huge.

It's like when you're playing a game like God of War or a game that has any kind of very powerful, physically powerful males which most games do. It's hard not to want that. Story-wise you can't put a skinny guy in there. I don't know that every character needs big boobs, I think that's more of a choice than rather something that's story driven. I think something like that can be toned down a little bit. Even in my work, people would come to my desk and I'd assume they want women with big breast and they'd ask me to tone it down, I can respect that. I think when you have a character that needs to be powerful that needs to be able to wield a huge sword you kind of expect them need to look physically powerful, but there are games like Devil May Cry where the guy is average built and he can do amazing things. There's a range on there, not a wide rage. Movies tend to push toward stereotypes as well. To me those stereotypes are a lot more controversial. To me if you chose a story that's unique that does not include women with big boobs or needs a guy that huge and got his shirt off all the time, I think that's a bold choice to make and a fair choice. If the story requires something like that, requires a sexy women or a big buff guy with his shirt off then you have to make art that fits that. It really comes down to the story you chose. It does affect players and how they perceive society. It's not just video games. Makeup commercials also make us perceive what's pretty and what's not. Even movies have a huge impact on people. I think there's sometimes good impact and sometimes there's bad impacts. It comes down to parenting or being just able to have your own mental filter and say "hey this is just a game" or "hey this is just a movie" or "hey this is just a commercial." Even stuff on the internet you have to be able to say "Hey this isn't real. This isn't worth me being concerned about." Look at the reality shows that are out there. There's a whole lot of

trash that's being produced in the world and video games are just a fraction of it. With new technology people just have to be able to filter things out better.

6. Game art has a good commercial value. Where do you think game art has value outside of games?

Gerardo Garza:

I don't know if it really does. Game art is made for games. Cinematics (for movies) is something else. From where I live now, Pixar did a show on the art of Pixar where they displayed the planning, sketches and designs. It's really cool to see those things. I think showing people the work it takes to make a game will help games being understood by people who play games and appreciated by people who don't play games. So I think that game art has purposes and deserves a general appreciation. There's a comic book museum here in San Francisco area. They change the art every once in a while to keep us refreshed and interested. It would be cool if we can have a museum that introduces the history of video games and have themed galleries- say, showing the art of Assassin's Creed, the art of Mass Effect... the tricky part is that you have to get the studio to coordinate.

Bronwen Grimes:

Were you wondering what value the art of games has outside of the commercial sphere, or whether there is another direct application for game art assets in another commercial endeavor? Let me try and answer both.

Games are an art form that has the same type of intrinsic value as any other medium. To paraphrase Sherwood Smith, an artistic endeavor is successful if it shows insight. Games can certainly show insight, insight into all sorts of human (and non-human) conditions. They can be a teaching tool. They can elicit emotional responses, draw communities together out of disparate individuals, and inspire all sorts of artistic contributions to the game's universe. There's a plethora of fan-created images, videos, and music inspired by, or designed to fit into, a game's aesthetic or story. There's lots of mash-ups, too, where game universes cross-pollinate. And there are, of course, whole communities of modders who collaborate to create new levels and game modes to extend the game experience.

For other commercial applications for game art, game music often ends up scored for live performance, and is used in concert just like film soundtracks. Recordings are sold independantly of the game. There are lots of comic books based on game universes, and art books that collect the concept and production art of a game. Character assets are often used as a basis for toys and statues that are sold commercially. And some game assets find a second life in short films, or are re-created at higher resolution for that purpose. Check out the official announcement trailer for Dead Island. It's a commercial, but it's also a pretty incredible short film in its own right. But these are all part of the game's commercial ecosystem. None of that would exist in the absence of the game.

James Gurney:

That's also a hard question to answer, not being very conversant with game art. What value does it have outside of games? I don't know. I suppose it could be inspiring to concept artists for other things, such as films. It might be exhibited somewhere.

Whether that has commercial value or not I don't know.

Andrew Jones:

Games are just another form of storytelling. People have always loved artwork that illustrates and expands on the stories that they love. Games, as I see it, are a particularly fragile kind of story, as when the hardware to support them is no longer used, they can be forgotten. Going back to illustrate them allows artists to access whole worlds of forgotten ideas and at the same time give old fans a nostalgic trip.

Eric Orr:

Yeah, absolutely. I don't think the value is fully explored at this point. I think that it is uniquely powerful to accept people's understanding of experiences because you can have people use that experience. In most forms of art, the viewer watches and the art is presented to them and they can use it to something they've already experienced, but you're not really giving someone a new experience that way. You are sort of in this limited scope like in a gallery or in a theater. I think because the people playing video games is engaged in making decisions and are affecting the outcomes, they can be affected and they can even invoke thoughtfulness which is hard to do in other mediums. I think you can do it without the audience knowing you're doing that to them. Like in Bogost game, which I think if I remember correctly, it's called September 12th. Because

the player is engaged with making decisions on how something turns out, you can somewhat lead them to the conclusion like a good salesman does. A good salesman would sell you the car by making you sell yourself the car. Like a good artist could tell you the point, but let you work out in your own mind. You just have to be so engaged with manipulating a system with the video game that you make so many decisions that can be guided by the designer that those ideas almost become your own. We have the potential to give each other ideas through games in different ways and deeper than any other medium. I think the social impact of games and art is fairly minimal. It's very much a pop search. And that's because it's expensive to make games, but it's getting cheaper all the time. All the money and research that all the corporations are putting into it, they're really creating tools that are going to democratize the ability to make games. So it'll be easier and easier to make complex games for more and more people. I think that's only good for the medium, but it probably won't be good for careers for making games.

Eric Ryan:

In a way it's kind of like movie art because a lot of art is behind the scenes and very secretive until the game is released. It's just like movies. I think a lot of best art that's being created in the world right now is in entertainment art and I think it's unfortunately hard to be made available to other people other than the form of an "Art of" book. Even then the only people who buy those books are the gamers or the geeks. I would love, and I know a lot of people would love, to go to a museum and see artwork that's been done and produced or anything from a movie. Have a huge gallery showing of all the

artwork that's been done for movies over the past hundred years. That would be awesome, you just don't ever see that. All that stuff is kind of hidden, you don't ever get a chance to see it. I went to Tim Burton's exhibit out here, actually it's weird because I never really cared about any of his drawings at all, but my favorite part of the exhibit were the props he brought in from the movies. Like he brought in the Planet of the Apes helmet, he brought in the Batman cowl, the Catwoman outfit, and all the Nightmare Before Christmas stuff. That was way more interesting to me because all that takes a lot of skill to make. If I saw an entire museum of that stuff, I wouldn't know what to do with myself, but there's never that opportunity. It's just not made public, but it's the best work that's out there.

Alt 7. Do you think that game art helps artists communicate with each other better?

Eric Orr:

Yeah. It breeds cross-communications between mediums. A lot of artist can do work in a solitude way. The larger the scope of the project, the more you have to collaborate with other people. My environment art teams are now, I think, is forty-five other people and there's a lot of consensus that has to go on before we work on a shared vision. But yeah, the process is very unique as far as movies, another type of art, that brings together huge teams of creative people. I mean the model that I'm working on now I don't think is much bigger than movie staff would be. And so, you learn a lot from the people you work with and everyone would sort of call you on different things because they have different ideas they're looking for. So yeah, absolutely, I have conversations

with audio designers where the company is trying to make painting and music game. See how we can use that combination of sound and imagery.

7. Do you think the game industry and the film industry use CG differently?

Gerardo Garza:

They all use CG to manipulate viewers/players' emotions (light flickering for example).

We are very aware of what we want the players to feel. However, games don't have the luxury to render like movies. We can't spend hours rendering a frame and we have to render everything light. We will be continuing learning from movies. But games are different because they need to be interactive. You can have a movie like the Lord of The Ring where what the characters do most of the time is running around, but you can't have that in a game.

Bronwen Grimes:

There's a definite difference in capabilities and in production pipelines. For film, you create shots that can take days to render. Elements are created separately and composited together, sometimes in ways that couldn't really coexist in euclidian space. The shot can be tweaked per-pixel. And once it's approved and done, you never touch it again. For games, your assets have to render in hundredths of a frame, limiting their complexity. The camera placement is often procedural, so you control nothing about the composition of the shot. Everything must coexist in the same space. And if you change an asset, you've changed it for every moment of the game. No part of the game is done until you send it out for manufacturing -- and even then, with patches and

downloadable content, you can continue to work on a game after it's in the hands of the consumer. Rigging, rendering and simulation must be simpler and faster to compute than their counterparts in film. That means some techniques are simply not available, particularly raytracing, muscle simulation, and fluid simulation. (As I was typing that I thought of exceptions for all of the above, but even still, the use of the techniques is limited and simpler by orders of magnitude.) Game artists typically go for breadth of expertise rather than depth, film artists the opposite. Film is full of specialists with very deep understanding of their own sandbox. Their production pipelines are linear, and have clear separations between functions. In videogames, artists have to understand the interconnections and dependencies for their assets, which means at least a rudimentary knowledge of almost every department and specialty. But the basic toolkits are the same. We use Maya, we use Houdini, we pre-render some assets (like effects for particle systems) or pre-bake animations (like building destruction) using the exact same techniques that apply in film. And there's plenty of cross-over from film to games in terms of personnel. (I don't know what it's like going the other direction, though.)

There's also the obvious: many films use CG to enhance real-world footage, whereas most games are 100% CG. Incorporating CG into existing 2D footage is its own industry with its own specialists, like Lola Visual Effects, a studio that is known for its facial tracking and replacement. We don't use those skills at all in games. And since films don't render real-time, there's plenty of innovation in real-time rendering and simulation that isn't used in film at all. Some real-time is used sparingly in film, mostly rudimentary rendering for pre-visualization. So there's subsets of technology where

there is little or no crossover at the moment. Of course, I can only answer for this snapshot in time. Things are changing all the time.

Andrew Jones:

Games and films are becoming more and more closely linked. Films can always take the lead in using technology both because of their budget and the fact that they're linear in what they show. I guess that in a few more decades films and games will be (to look at) almost indistinguishable.

Eric Ryan:

They have to because with film you don't have to create a fully realized world. You don't have to create a world that's in the realm so to speak. You can go to all the different parts of the world and have full interactivity whereas in games you have to be able to do that and you have to give the person who's playing the ability to do and create different things and be able to interact differently however you want to with the world. In movies the only way the person interacts with the movie is just by the 2D image you see on the screen. So you can put anything you want in that image and a movie is just a series of paintings put together in a two hour strip. So the person doesn't have to be able to walk into that painting and move things and make things interact with each other.

Student Survey

1. What's your favorite game?

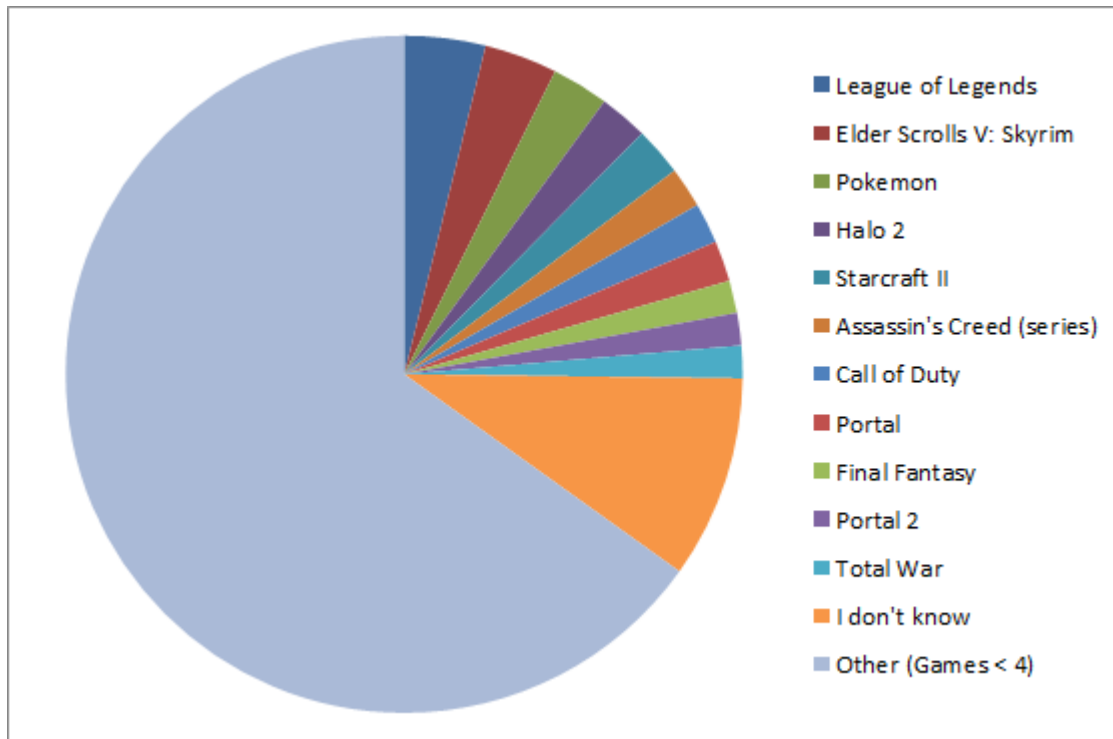


Figure 1

2. What is your favorite style of game?

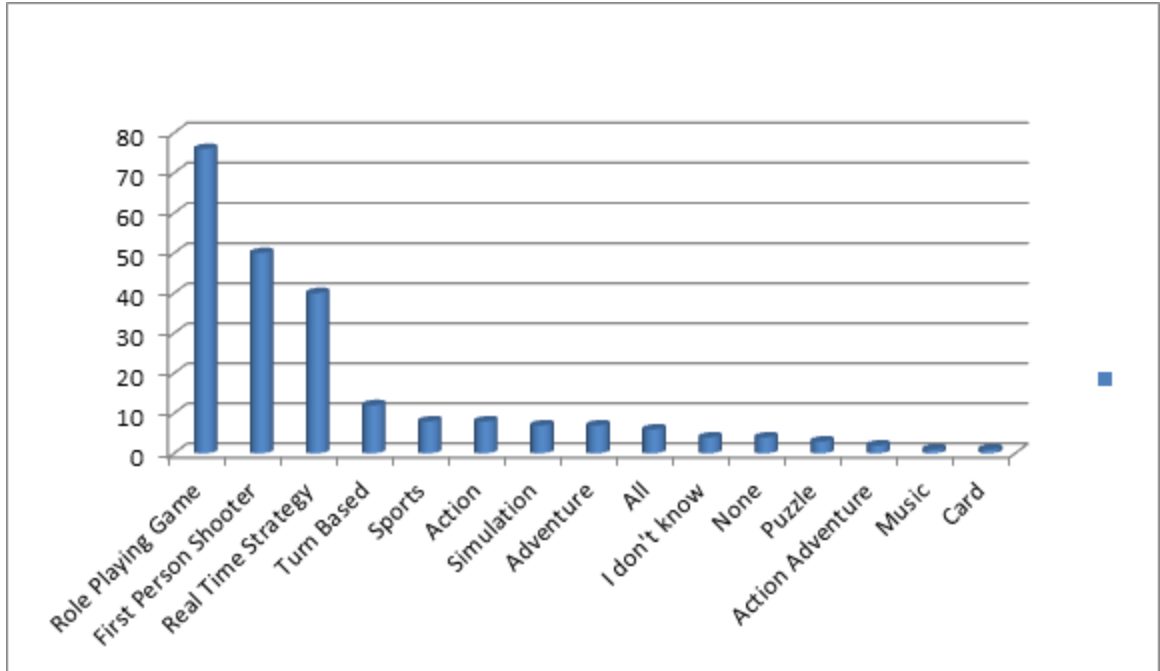


Figure 2

3. What is the game of the screenshot you see below?



Figure 3

http://www.surl.org/usabilitynews/102/images/FPS_01.jpg

A: Halo 3

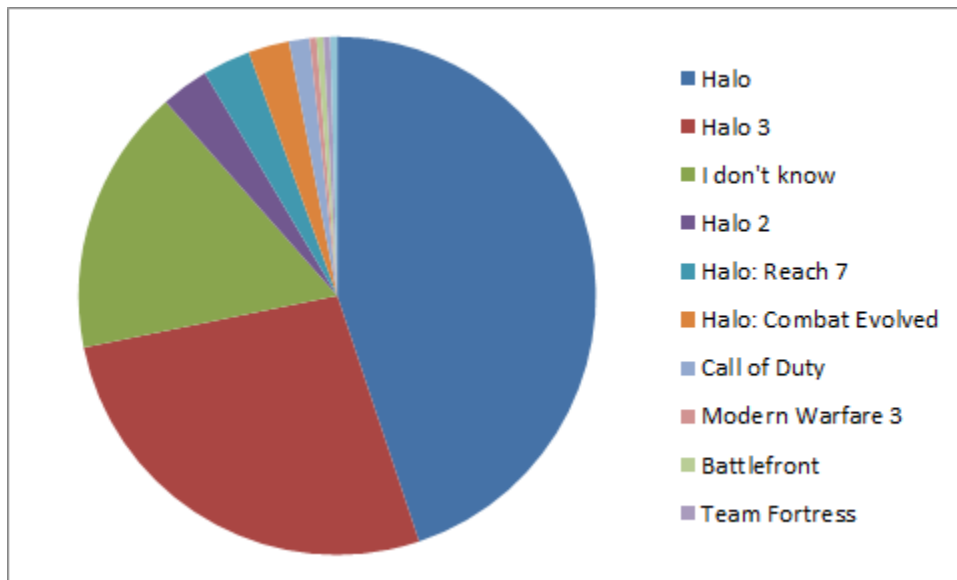


Figure 4

4. What is the game of the screenshot you see below?



Figure 5

<http://videogames.techfresh.net/wp-content/uploads/2008/08/combat-arms.jpg>

A: Combat Arms

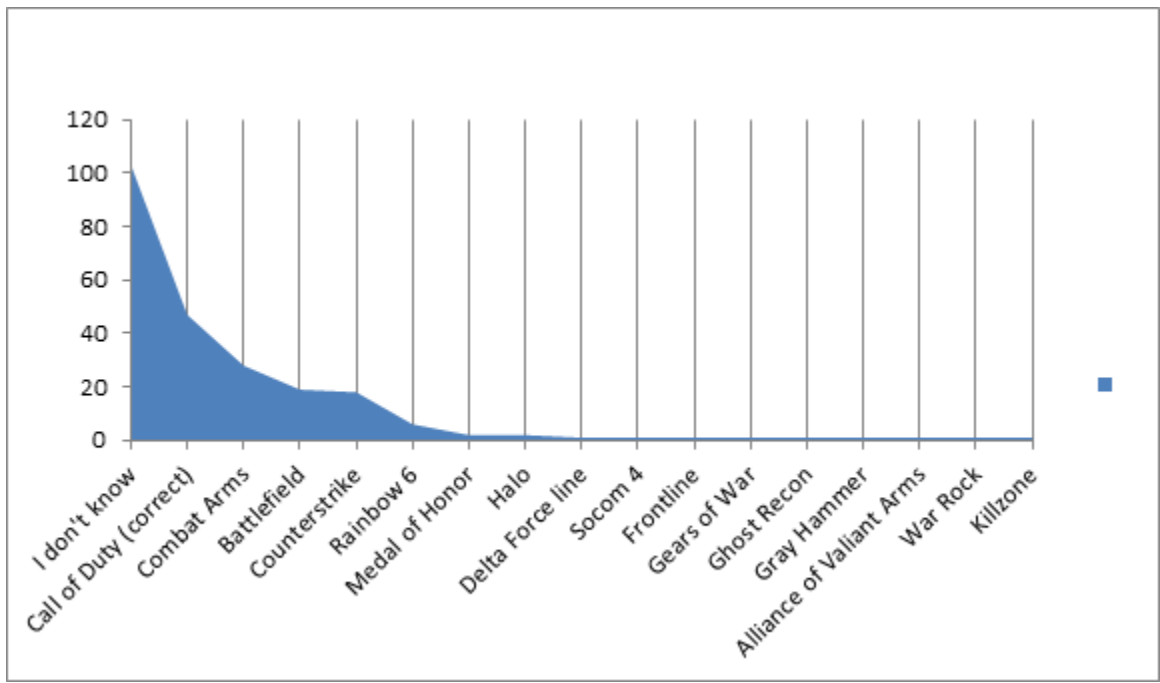


Figure 6

5. What is the game of the screenshot you see below?



Figure 7

A: Call of Duty: Black Ops

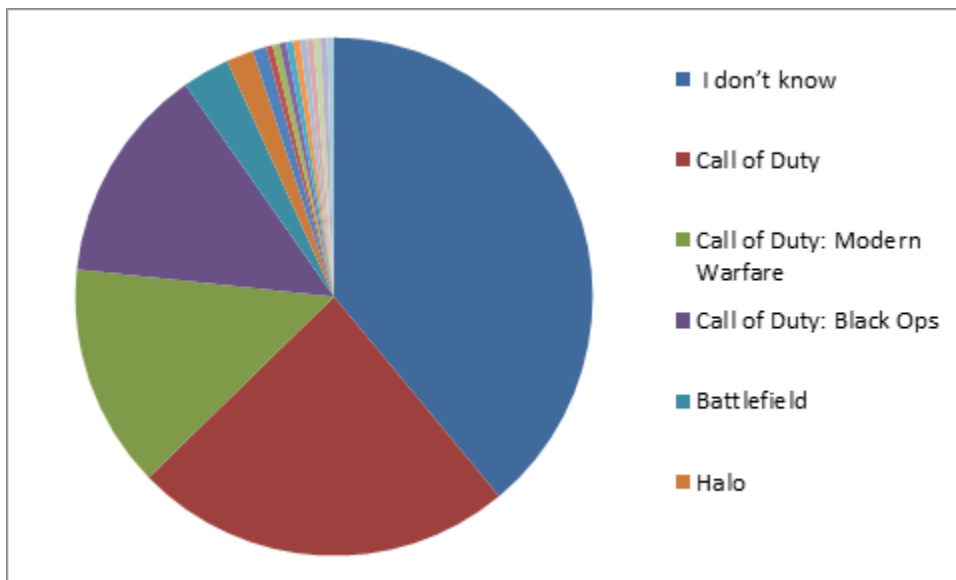


Figure 8

6. What is the game of the screenshot you see below?



Figure 9

A: Dungeon Siege

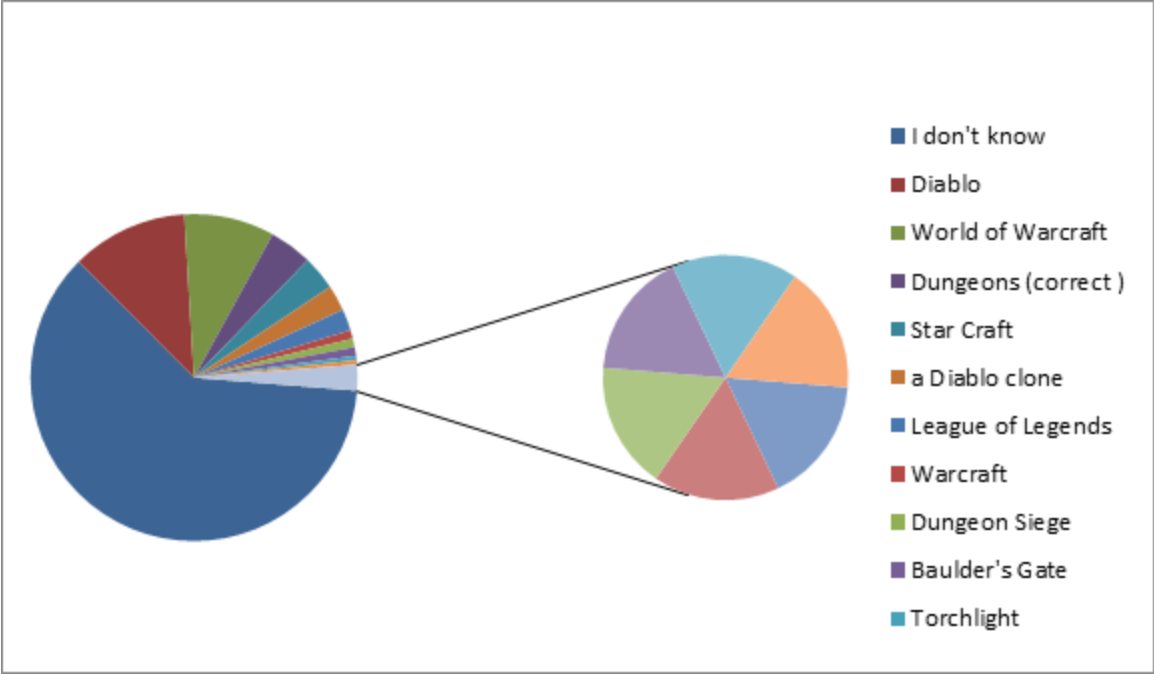


Figure 10

7. What is the game of the screenshot you see below?



Figure 11

A: Dungeon Keeper 2

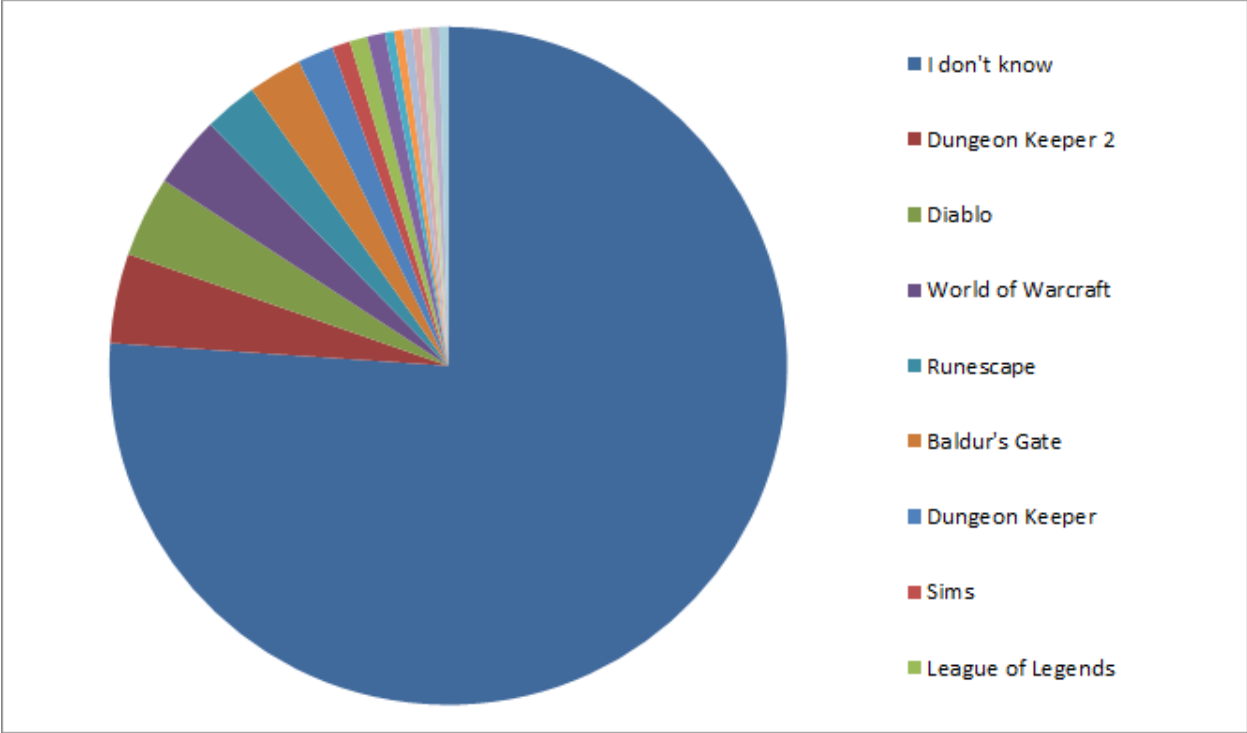


Figure 12

Conclusions

Game artist should learn from traditional artists.

We discovered from our interview with the artists that the source of inspiration often comes from life and what we know. Traditional masters have always impressed people by presenting their artistic interpretation of themes stylistically. A personal preference for artwork by a particular painter or sculptor is highly likely to affect a digital artist's art style, and an eye-refreshing traditional art creation technique or graffiti may inspire digital artists to create cool effects.

At the same time, game artists often come from a variety of backgrounds. Their backgrounds contribute to their art styles as well. Artists who have an industrial design background may produce impeccable line work and precise mechanical structure even for a random doodle.

The Game Come first.

All the game artists discuss the kind of games they dream to make artwork for, but each artist comes to the conclusion that the storyline is what brings their dream project to life. Their desires usually align with a game that can invoke feelings within their players and themselves. A game is never just about the art; the artists would always work to incorporate their art styles with the story and the challenges of the game.

As much as the artists want to influence the audience with their art, they want the art to serve as an improvement in the visual department for the game. Having a decent understanding of how a game works and what is happening on the pipeline helps each game artist to create better art for the game. They love to bring a surreal world and fantasy to people, and that is why many games thrive with the artists' magnificent imagination. In a way, that explains why many game artists are fond of narratives. Methodologies, books and films are always inspiring.

We Like Technology

Games are constrained by technology, which means that game graphics are constrained by technology as well. It is critical for a digital artist working in the game industry to understand how a game is constructed in order to produce artwork that seems plausible on a game engine.

It is an obvious fact that the time it takes to successfully bring your imagination to fruition is shortened when drawing with a tablet. However, to some artists a digital art has less emotional attachment compared to traditional art. Many artists do believe that technology has been wonderful for game art. For example, a simulation technology enhancement always brings game interactivity and realism to the next level, and the ability to rollback if you make a mistake without destroying anything.

However, the fulfillment of digital art creation is different from that of traditional art.

Although they have enjoyed learning to master both ways, the artists we interviewed have agreed that a medium would not be the other's substitute.

Again, imagination is the only limitation. Just like the way game art is there to assist a good game, new technology is there to support art creation.

In Progress, Not On Pause

Market limits game art, but the art is not in a standstill. Artists are pressured to make games look really cool otherwise the games will not sell well. Game companies have to make games that sell and cater to what people are interested in. This usually calls for art styles that are very similar because people gravitate toward those kinds of visuals. Nevertheless, the art in games has been evolving and is becoming increasingly photoreal.

Impact Society

Game art does affect people just as much any other kind of art does. Its impact can be minimal or extreme depends on each individual. Video games are not the only culprit influencing people. Makeup commercials and movies have huge impact on what is deemed pretty or what is good and bad. Each person has a mental filter to help perceive what is real and what is not.

Game Art Has Value

The artists have different opinions, but overall they believe that game art does have value outside of games. Most of the artists wish there were museums that can display the art of games. The game art is valued by the fans through fan-created images, videos, and music that are inspired by the game. Old game art can send old fans on a nostalgic trip.

Games VS Film: CG Is Used Differently

Games and films are so closely related that one would think they use CG similarly when in fact they do not. Computer graphics encompass a variety of usage. Games and films cover different portions of it. Unlike the “stable and still” movies, games are limited by hardware they are built on and are interactive. Both industries do use the similar tool-kits, and games have been using some same techniques that apply in films.

Similar Game Art Confuses People

There's a distinct line between hardcore gamers and the casual gamers. The hardcore gamers can identify which game is shown in a screenshot whereas the casual gamers may be able to point in the general direction or not know at all. Some players who have not played certain games could possibly identify what game it is through commercials they have seen or friends whom they have watched playing it.

Art styles that are too similar will cause confusion as to the identity of a game unless there are some unique characteristics that make it stand out from the rest. For instance, our screenshot for Halo 3 resulted in almost all the answers being Halo or Halo 3 because Halo is well known for its unique art style. The other screenshots we had produced a variety of answers where some people were confused as to whether the screenshots were from the same game or not.