FULLFILLING THE GAMERS SHOES

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CONTENT:

Introduction

Subject Content/Description

Lots of games these days use a wide variety of adjustable 3D avatars to let players from around the world create individual avatars to represent themselves. Some games take this to extremes, such as the SIMS 3 where you can adjust every facial aspect in detail. However, in contrast you also have games where you are only able to choose between 6 ready-made characters or just 1 accessory. So what do people need in an avatar? And what are the differences between the need of certain gamers and certain kind of games?

Research Purpose

If a player is comfortable and happy with their avatar they will have a better gaming experience and if they keep investing in their avatars they will also be more likely to keep playing for a longer period of time.

Literature overview:

To assist my research I choose 3 papers closely related to my subject. From them I would form a new subject and use their research as a foundation.

1 Body and Mind: A study of Avatar personalization in Three Virtual worlds

Body and Mind is a paper about Customizable 3d avatars. How people customize their avatars, the reasons behind their actions and how they experience certain avatar creation tools. The writers used 3 virtual environments and compared them. They were: MAPLE STORY, WORLD OF WARCRAFT and SECOND LIFE.

The paper was written by Nicolas Ducheneaut, Ming-Hui "Don" Wen, Nicholas Yee, Greg Wadley in 2009.

    URL: http://www.nickyee.com/pubs/Ducheneaut,%20Wen,%20Yee,%20Wadley%20-%20CHI%202009.pdf

2 Avatar Categorization

Avatar Categorization is a paper about the theory behind avatars, readymade characters such as LARA CROFT and adjustable characters like the avatars from the SIMS games.

This paper was created by Daniel Kromand from the University of Copenhagen, 2007.

3 The Influence of the Avatar on Online Perceptions of Anthropomorphism, Androgyny, Credibility, Homophily, and Attraction

The title is pretty informative. This paper used a set of avatars and tested how people responded to them.

Created by Kristine L. Nowak, Christian RauhArticle. First published online: 9 AUG 2006.

Research Question

Does the adjustability of an 3D game avatar influence how much a player can immerse themselves in a character?

Avatar Representation

When using an avatar a player can be however he/she wants to be. The avatar usually represents this. They consciously or unconsciously chose for a specific type of avatar. Through my research I've divided them into 5 categories.

1. **Realistic avatars** are avatars where the player tries to make them look like a representation of themselves. Often this cannot be achieved but the player will try to get as close as possible.

2. **Idealistic avatars** are avatars where the players tries to create an avatar that represents their selves like they would want to see themselves. Often these avatars fit the Western standards or even the beauty model standards. But there are also players who wish they had a different style or a more original appearance then they have in real-life.

3. **Unrelated avatars** are usually what's created in fantasy RPG's. People who want to escape reality and simply create an avatar that looks appealing and has nothing to do with their normal day-to-day lives.

4. **Complete opposite**, sometimes a player wants to try out and experiment with being completely different. So they'll try and make an avatar that's the complete opposite of themselves.

5. **Impersonation**, when a player creates a character that looks like someone else. Could be a famous actor, singer or even a character from a book or movie. They even sometimes make an avatar that looks similar to a family member or friend. They do this because they look up to this person or character or because they are very fond of them. Sometimes the challenge to recreate something is enough to prompt someone into impersonating.

There was one more category that I couldn't define since it can be applied to all of the above and that is: **standing out.** Some people just want to be noticed, to get attention or to simply be different from the rest.

Online games that primarily have a social game play often tend to have more realistic and idealistic avatars then RPG's, where the avatars tend to be more unrelated to the player. This is probably closely related to that fact that males rather create avatars that stand out while females often create idealized avatars[1]. As well as the fact that most RPG's are played by people who want to escape reality and most social games are played by people who want to experiment socially or just be socially active.

Avatar Creation

In 3D virtual environments the avatars creation systems are often very diverse and complicated. However, because the game-play often takes place in a third person view a lot of attributes are seemingly useless. Faces are too small to be recognized, not to mention piercings and makeup which appear almost invisible.

Predefined avatars such as LARA CROFT and MARIO are easily recognizable but to be able to customize these kind of distinguishable avatars, you would not only need a highly advanced character creation system but also a professional character designer.

However, we can create easily recognizable characters by using distinguished colours, clothes, accessories, hairstyles and body types. These are the things that are often the most distinguishable in games. Though many games lack in variety in these important categories to a point where a limited amount of popular sets of templates would work better[1].

Sometimes it doesn't even matter what kind of avatar you create. In many RPG's, where a big part of the gaming experience is to collect armour and weapons, you'll probably end up being covered from head to toes with your precious gathered armour. It is even worse when you have reached your maximum level and all that is left to do is to get the best gear there is, which is exactly what everyone else is doing. Originality and identity will quickly fade away, however it appears that in these games achievements are more important then looks.

WORLD OF WARCRAFT © 2004 – 2011 Blizzard Entertainment

It seems like these games only have an avatar creation system to create a more interesting start of the game and to jump start your affection for your avatar. In the beginning you'll have an avatar that looks different and original and you can make friends that you can easily recognize. Then once you get a lot of experience it won't matter what you or your friends look like because you've already invested a lot of time into your avatar and you've gotten comfortable enough with the game to know who's who.

So what about change? In real life we change our appearance daily and drastic changes can occur over time. Our clothes get worn out and eventually replaced with something else because the original clothes are no longer available. Our hair grows and needs regular grooming, often prompting us to try something different this time (you're at the hairdresser anyway). If we could implement this into games, people might be more encouraged to try different things, different looks and experiment more.

So how can you give your avatar an identity? The people from "Body and Mind: A study in Avatar Personalization in Three Virtual Worlds"[1] suggested that hair might be the most important feature for giving the avatar its identity because besides the armour it's one of the most visible features in third person view.
The participants from their own survey even had complains about the limited variety in hair in the games they played and they emphasized how their own hair was important in real life and therefore should also be important in virtual environments as well.
Though hair seemed to be very important to the players and their avatar's identity, most people rarely gave the avatar their own hair colour or even a natural hair colour. Their study also found that the avatar's skin colour didn't seem to be an important feature.

Besides giving the player a virtual identity the avatar has another purpose which is communication. In bare basics the avatar is our virtual communication tool[1] and in this task it is aided by 3 things: Body language/animations, Animation Macro's[a] and Voice Macro's.

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[a] "Macros" are instructions for your avatar to talk (to say hello or tell a joke) or move (bow or wave).

Avatar Affection

Most people who spend a reasonable amount of time on their avatar develop a certain level of affection for it. Females often have more sympathy with their avatars than males who see their character more as a tool. This is determined by genetics and further confirmed by the types of games females and males tend to play (SIMS vs UNREAL TOURNAMENT).

However despite our gender we are more inclined to give affection and sympathy to avatars what have traits such as big heads and eyes, exaggerated body language and comic relief.[2]

Players who experiment with their avatars and try and make them look the complete opposite of what they look in real life often have little to no affection towards that avatar. It's fun for a little while but they usually won't invest a lot of time in them because the opposite usually means something they don't really want to be. It's great for experimenting but not for getting a greater affection to your avatar.

Now people who idealize themselves tend to have a higher attachment to their avatar, they often have a low self-esteem and have a need to fulfil the western standards on how people should look.

However people who have an avatar that is very similar to their own physical appearance tend to be happier with their avatar then the people who idealize their characters[1].

This might have something to do with how people tend to adjust and experiment with their avatars appearance but not with their own personality. Sure, players are often more open and confident online, but their personalities remains mostly the same while their appearance can take any form. Perhaps this is the reason why people are generally happier with an avatar that fits their own personality as well as their avatars.

Method

Research Question(s)

How important is someone's appearance in real life? How does he/she handle it and take care of it? And how does this same person threat the appearance of their avatar in virtual environments? Is there a connection between the two?

Research Type

Online Survey: "Real life altering VS. avatar altering"

A 7 page online survey with 20 questions about the participants appearance and his or hers avatar creation preferences.

Sample of participants

100 Participants filled in the online survey. They were personally asked at IGAD and DEVIANTART (an art website), from the IGAD FACEBOOK, from hearsay (email and vocal distribution) and through online forums such as CGTALK and COSMOPOLITAN.

The participants age ranged from 18 to 56 and had an average age of 23 years old. 57% was male and 43% was female and they all had experience with playing games and creating avatars.

Used Materials

I used **www.kwiksurveys.com** to create an online survey. They allow for unlimited questions and have a lot of different survey question forms such as a drag and drop rating:
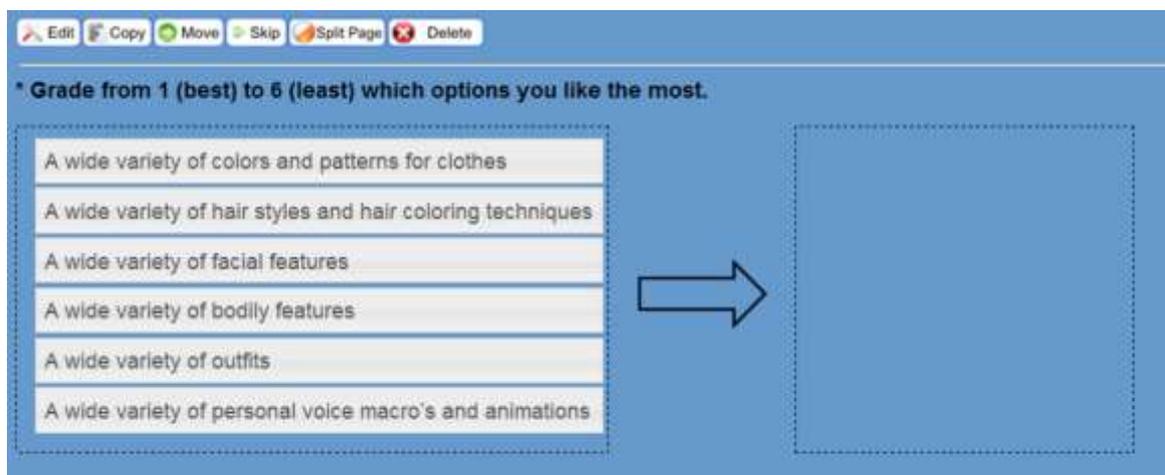
The website also allows you to add filters to the results so you can study the result more clearly. A very user-friendly site and it is free of costs.

Description of field phase procedure

The survey consisted of 7 parts.

General information, Personal information, Hair & make-up, Clothes & accessories, Physical & mentality, Avatar creation and Final questions.

1. In general information we asked for the participant's age and gender.
2. In personal information we tried to gauge the participant's confidence in his/her appearance, how much time they spend on it, what kind of appearance altering they have or had and what skin type they are.
3. In Hair and Make-up we asked questions about when they groom and style their hair, if they ever go to a hairdresser and what they do there. We also asked if they've ever worn makeup, why and what kind of products they use.
4. In Cloths and Accessories we gauge the opinion of braces and prescription glasses. We ask which accessories the participants would wear in public and why. Which parts of their outfit they feel need to match together.
   We also ask the participant to describe their favourite clothing article / accessory and the reason why.
5. In Physical and Mentality we ask what the participant would improve about their appearance and who they would want to be in real life.
6. In Avatar Creation we gauge the importance of certain avatar creation tools and the amount they are willing to spend on creating an avatar.
7. In the final part we ask the participant what kind of genre he/she plays, what kind of avatars they usually create and if they have any comments about the survey or other.

Results

1 General information

Gender

57% of the participants were male and 43% were female.

Age

The age of the participants ranged from 18 to 56. Though the average participant was 23 years old, the median was 22.

2 Personal information

Self-knowledge, confidence, satisfaction and importance of appearances.

More than 58% claimed they knew themselves and 28% knew themselves very well. Their confidence was a whole bit lower. 37% was neutral and 36% had some self-esteem. Their comfort ability with their appearance laid somewhere between self-knowledge and self-esteem. With 42% being content with their appearance and 10% very content.

The importance of their physical appearance was the most spread out. Though the average person (30%) was neutral about its importance, there was also 11 % who thought it absolutely unimportant and 7% who found it highly important.

Time spend on Appearance

Most people (32%) spend 10 minutes on their appearance. No-one spend more than 1.5 hours on their appearance.

The mass majority of the male participants would spend between 5 and 10 minutes on their appearance and none of them more than half an hour.

Appearance Altering

Most popular appearance altering is a regular ear piercing. The second and third favourite are naturally and unnaturally coloured hair.

Select the boxes of appearance alterings you have or once had:							
Regular ear piercings	42		21.99%	Serious and regular sunbathing	7		3.66%
Naturally colored hair	32		16.75%	Visible tattoo (face hands lower arms)	5		2.62%
Unnatural colored hair	29		15.18%	Teeth Bleaching	5		2.62%
Other ear piercings	16		8.38%	Cosmetic surgery correction (big ears cleft lip)	3		1.57%
Dental Corection (chipped/missing teeth)	15		7.85%	Cosmetic surgery	1		0.52%
Body piercings	13		6.81%	Cosmetic surgery (fuller lips less wrinkles)	1		0.52%
Not so visible tattoo (back ankle side)	12		6.28%	Split tongue	0		0.00%
Face piercings	10		5.24%	Dermals (submerged piercings)	0		0.00%

Type of Skin

- Type I: Pale Skin (Always burns never tans)   16%
- Type II: Fair Skin (Usually burns sometimes tans)   51%
- Type III: Light Brown Skin (May burn usually tans)   23%
- Type IV: Olive Brown Skin (Rarely burns always tans)   9%
- Type V: Brown Skin (Rarely burns not sensitive to sunlight) 1%
- Type VI: Black Skin (Never burns not sensitive to sunlight) 0%

3 Hair & make-up

Grooming/Styling of hair

28% of the participants groom or style their hair every day while 9% doesn't do either.

35% doesn't groom/style often, and 28% grooms/styles often but not every day. The participants seem to have different reasons for maintaining their hairdo but the general rule of thumb seems to be always or when they have to leave the house. Most of the participants who filled in "never" or "rarely" were male, yet females were the majority when picking the option "Only for special occasions".

Hairdresser

45% visits the hairdresser a couple times a year, 22% every other month and 13 % every year. The remaining participants were spread out sparsely though nobody visited the hairdresser more then on a monthly basis.

What have you done with your hair, while visiting a hairdresser?

Trim	75	38.27%
New hairstyle	35	17.86%
Layers	29	14.80%
Color	23	11.73%
Styling	19	9.69%
Shave	10	5.10%
Perming curls dreads or straightening	5	2.55%

Trimming is the most popular hairdresser task by far while changes to the hair structure was not at all popular.

Make-up

90% of all the women who took the survey has worn make-up at one point. 57 males and 4 females claim to have never worn make-up or cosmetics with the single exception of nail-polish.

From the 39 participants who wore make-up, 28% wore it always, 26% only when they had to leave the house and 28% sometimes.
There were no certain preferences for "special occasions", "workdays" or "get-togethers with friends".

Why do you wear make up?

To improve my appearance	29	33.72%
For fun	17	19.77%
To do something different with my appearance	16	18.60%
To impress	13	15.12%
To stand out	6	6.98%
To imitate a style or trend	5	5.81%

Types of make-up/cosmetics

The most common used cosmetics were mascara, followed by eyeliner and eye shadow which are all eye make-ups.

The least favourite form of cosmetics were bronzer, primer, fake eyelashes, finger nails and lip liner.

Subtle make-up such as lip gloss and blush also seemed to be less popular then make-up aids such as foundation and Concealer.

What kind of make-up/cosmetics do you use?

Cosmetic	Count	Percentage	Cosmetic	Count	Percentage
Mascara	37	14.68%	Lip gloss	16	6.35%
Eyeliner	33	13.10%	Blush	16	6.35%
Eye shadow	27	10.71%	Bronzer	7	2.78%
Nail polish	24	9.52%	Primer	6	2.38%
Foundation	21	8.33%	Fake eyelashes	4	1.59%
Concealer	20	7.94%	Fake finger nails	3	1.19%
Lipstick	19	7.54%	Lip liner	2	0.79%
Toenail polish	17	6.75%			

4 Clothes & Accessories

Prescription glasses

54% of the participants wear prescription glasses, 6% used to and 40% has never needed them.

61% of the participants were positive about the look of prescription glasses on people, 29% was neutral and 10% found wearing prescription glasses had a negative effect on someone's appearance.

Braces

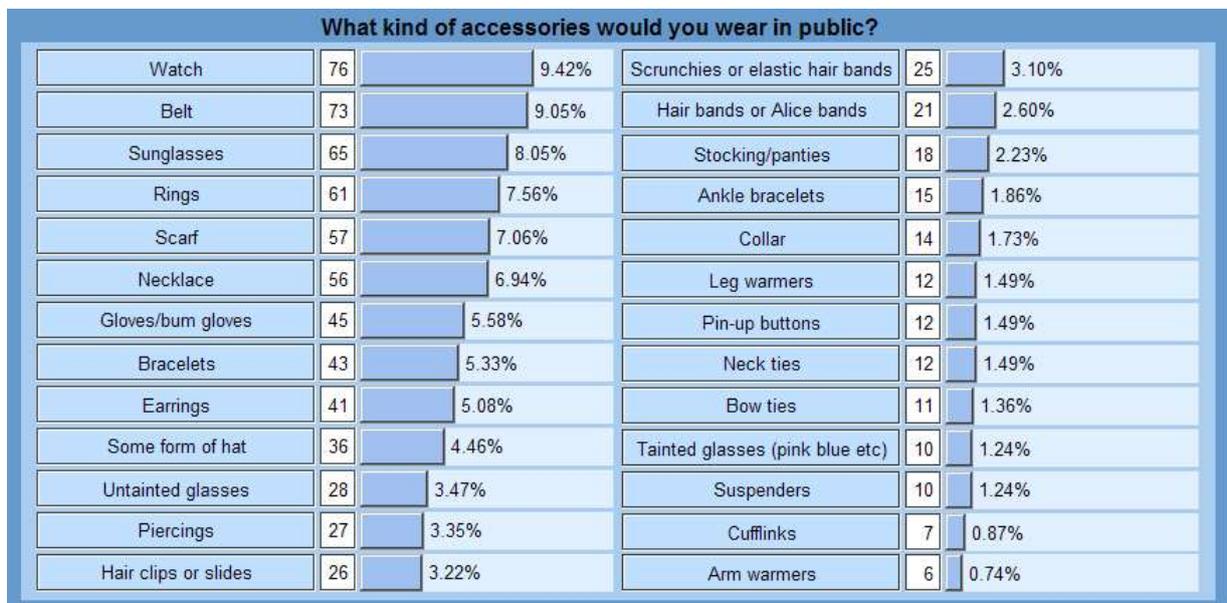3% of the participants wears braces, 36% used to and 61% has never worn them.

16% was positive about the look of braces on people, 43% was neutral and 41% found wearing braces had a negative effect on someone appearance.

Accessories

30% strongly agreed and 40% agreed that they would wear accessories because they were useful.

33% strongly disagreed that they would wear accessories to imitate a style or trend.

50% agreed that they would wear accessories to do something different with their appearance.

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What kind of accessories would you wear in public?						
Watch	76	9.42%	Scrunchies or elastic hair bands	25	3.10%
Belt	73	9.05%	Hair bands or Alice bands	21	2.60%
Sunglasses	65	8.05%	Stocking/panties	18	2.23%
Rings	61	7.56%	Ankle bracelets	15	1.86%
Scarf	57	7.06%	Collar	14	1.73%
Necklace	56	6.94%	Leg warmers	12	1.49%
Gloves/bum gloves	45	5.58%	Pin-up buttons	12	1.49%
Bracelets	43	5.33%	Neck ties	12	1.49%
Earrings	41	5.08%	Bow ties	11	1.36%
Some form of hat	36	4.46%	Tainted glasses (pink blue etc)	10	1.24%
Untainted glasses	28	3.47%	Suspenders	10	1.24%
Piercings	27	3.35%	Cufflinks	7	0.87%
Hair clips or slides	26	3.22%	Arm warmers	6	0.74%

Matching outfits

35% found it unimportant to match any parts of their outfit.

23% was only interesting into matching their clothes while 6 % didn't care if their clothes matches as long as certain other articles matched.

Most popular item was "clothes" (which 59% choose) and "Shoes" (37%)

The other categories were significantly less popular ranging from 21% to 10%.

Favourite Clothing article of Accessory

When we asked the participant to pick and describe their most favourite clothing article or accessory 6% refused to answer because they couldn't decide on a favourite piece or because they had none. 5% also couldn't decide, but they simply picked their two favourites.

16% people couldn't name a precise object from which, 7% picked clothing articles, 5% picked jewellery and 5% picked misc accessories.

21 % didn't describe their favourite article.

Clothes(60):	T-shirts(21)	Jackets(10)	Jeans(9)	Shoes(7)	Pants(4)
	Sweaters(3)	Dress(2)	Vest(2)	Top(1)	Blouse(1)
Accessories (10):	Scarves(3)	Hats(3)	Sunglasses(2)	Bag(1)	Glasses(1)
Jewellery(27):	Necklace(8)	Bracelet(6)	Watches(5)	Rings(5)	Earrings(2)
Rarities (3):	Lipstick(1)	Headsets(1)	Tattoos(1)		

T-shirts were the most popular choice with 21%, Jackets ended 2nd and jeans 3rd.

For the way people described their most favourite clothing article or accessory, they mostly described the colour and material.

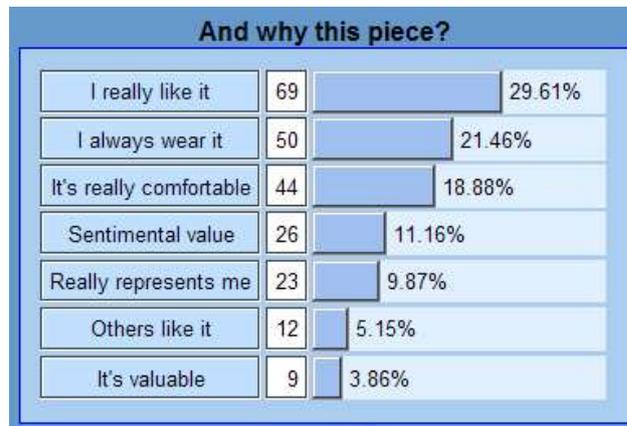| Misc (20)	Comfortable (4)	Gift (3)	Expensive (2)	Daily Worn (3)
	Big (3)	Old (3)	Durable (1)	Rarely Worn (1)
Colour (32)	Colourful (4)	Dark (2)	Specific colour (26)	
Type/Style (14)	Military (2)	Skinny (3)	Neat(2)	Sporty (1)
	High Waist (1)	Polo (1)	Designer (1)	Casual (1)
	Fancy (1)	Stylish (1)		
Details (14)	Laces or not (2)	Pockets (2)	Feathers (1)	Peace Sign (1)
	Bear shaped (1)	Zipper (1)	Heart (1)	Striped (1)
	Prescription (1)	Heels (1)	Diamond (1)	Chain (1)
Materials (23)	Linen (0-21)[b]	Denim (1-10)[c]	Silver (5)	Leather (4)
	Gold (1)	Woollen (1)	Sapphire (1)	Chiffon(1)
Brands(9): Sin7sins, cyberdog, allstars, rayban, Nintendo, allstars, levis, ytmnd, plo.				
Prints(8): cool print, spider web + spiders, fav series/games, dragon, fictional fastfood.				

From the 26% who choose colours to describe their favourite article, the most popular colour was black with 8%. Then evenly beloved with 4% were red, pink and blue. Green, brown and white all got 2% of the votes.

23% choose to describe their article by material. Popular combinations were "Leather jacket" and "Silver jewellery".

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[b] Though no-one actually mentioned linen shirts, I can assume that most of the t-shirt were made out of a linen blend. Hench the numbers (0-21).

[c] Only one participant actually named their jeans denim however I can assume that the people who chose jeans as their favourite article did so because it's denim.

And why this piece?

I really like it	69		29.61%
I always wear it	50		21.46%
It's really comfortable	44		18.88%
Sentimental value	26		11.16%
Really represents me	23		9.87%
Others like it	12		5.15%
It's valuable	9		3.86%

The main reasons for choosing their favourite article were simply because they either liked it, always wore it or because it was really comfortable. Value of said piece and whether or not others liked it hardly seemed to matter.

5 Physical & Mentality

Self Improvement

More than half of the participants wanted less fat (64%) Which was about the same for more muscles (67%).

Most people didn't want to change their age, though 11% wanted less. Their ages ranged from 20 to 28 with the average of 23 years.

There were 18 males and 21 females who would like more tan, but only 5 of them actually worked on their tan. The 7 participants who worked on their tans had very different skin types. 6 Males and 2 females wanted less tan.

Femininity and masculinity were kept mostly the same with a margin of 10% in each direction, though no-one wanted lots more or lots less of both options.

Appearance Altering

We asked the participants what they would change about their appearance if they could temporarily and effortlessly alter things about themselves.

Body Shape was the most popular appearance altering people would like to experiment with, more than half the participants (64%) chose this as their number one preference. It was also the option that most people picked.

Options most picked as nr 1:	Most picked options:
1. Body Shape (Wider/smaller hips/shoulders)	1. Body Shape (Wider/smaller hips/shoulders)
2. Skin (different texture or color)	2. Hair Color
3. Hair Style	3. Length
4. Gender	4. Hair Style
5. Length	5. Eye Color
6. Eye Color	6. Face (nose/eyes/ears/mouth)
7. Face (nose/eyes/ears/mouth)	7. Skin (different texture or color)
8. Hair Color	8. Feet
9. Feet	9. Gender
10. Hands	10. Hands

And even though not all people choose the option skin, it was the second most favourite number one (26%) though hair style was a close third (24%). People cared the least about altering their hands, and only slightly more about their feet.

Experimenting with gender was also highly important to some, though not too many.

Who would you like to be?

Most people were happy with who they were, 36% loved it while half (52%) liked it and 10% remained neutral.

On a slightly lesser scale (but still very positive results) the participants wanted to be a better version of themselves, 29% would love it, 38% would like it and 32% was neutral.
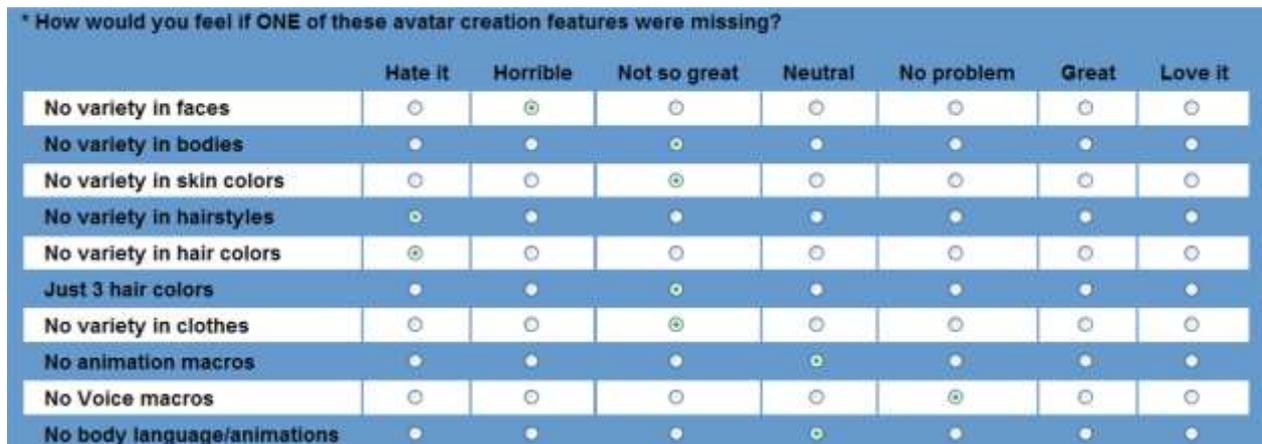
When we asked the participant to be someone else, the results became more negative. Half (46%) would dislike it, 15% would hate it and 26% remained natural.

The results from being different from yourself were very evenly distributed. Whilst a massive 58% would hate to be the complete opposite of themselves.

6 Avatar Creation

Missing Avatar Creation Features

The average opinions of the participants about missing certain avatar features.

* How would you feel if ONE of these avatar creation features were missing?	Hate it	Horrible	Not so great	Neutral	No problem	Great	Love it
No variety in faces	○	◉	○	○	○	○	○
No variety in bodies	●	●	◉	●	●	●	●
No variety in skin colors	○	○	◉	○	○	○	○
No variety in hairstyles	◉	●	●	●	●	●	●
No variety in hair colors	◉	○	○	○	○	○	○
Just 3 hair colors	●	●	◉	●	●	●	●
No variety in clothes	○	○	◉	○	○	○	○
No animation macros	●	●	●	◉	●	●	●
No Voice macros	○	○	○	○	◉	○	○
No body language/animations	●	●	●	◉	●	●	●

This chart indicates that most people would hate not to have any variety in hairstyles or hair colours and would find it horrible if there was no variation in faces.

The participants found that no "variety in bodies", "skin colours", "variety in clothes" and "a selection of only 3 hair colours" was not so great but they would not have a problem if there were no voice macros in their game.

They remained neutral about animation macros and body language/animations.

Most Popular Features With A Wide Variety

To gauge which features would be most popular with a wide variety we asked the participants to make a top 6 about the following features. This list was the average top 6.

1.	A wide variety of facial features
2.	A wide variety of outfits
3.	A wide variety of hair styles and hair coloring techniques
4.	A wide variety of bodily features
5.	A wide variety of colors and patterns for clothes
6.	A wide variety of personal voice macro's and animations

Facial Features were the most popular while the voice macros and animations were the least favourite.

Favourite Avatar Adjustments

The participants had to make a top 10 about their favourite avatar adjustments, however if they didn't like any of the options they were allowed to skip them.

The Clothing Accessories (Belts, Ties, Scarves, Bum gloves etc) were mostly chosen as the number 1 favourite with 28%. Overall the Hats scored the highest points, though they were not everyone's favourites as this option was only selected by 71%.

Most nr 1	Most value*	Most picked
Clothing Accessories (28%)	Hats (961)	Clothing Accessories (75)
Hats (24%)	Clothing Accessories (758)	Other Accessories (72)
Make up (20%)	Other Accessories (634)	Hats (71)
Tattoos (20%)	Jewellery (625)	Tattoos (71)
Hair accessories (11%)	Tattoos (621)	Jewellery (70)
Other Accessories (8%)	Make up (574)	Hair accessories (66)
Jewellery (6%)	Hair accessories (564)	Make up (65)
Body altering (5%)	Ear Piercing (561)	Ear Piercing (63)
Other Piercings (3%)	Other Piercings (437)	Body altering (62)
Ear Piercing (3%)	Body altering (297)	Other Piercings (59)

*Grade x Nr of participants selected. Maximal score: 1000.

Body Altering (Split tongue, dermals) scored an all time low with 297 points. It was often chosen for the 10th place (45%) However the option did get chosen which indicates that people would still like to have it as an option.
For some people make-up was very important, ending up first place 20 times. However overall it scored lower then Tattoos and Jewellery.
Clearly Body Altering, Other Piercings and Ear Piercings were the least favourite avatar adjustment.

How Much Time Spend On Creating Avatars?

When asked how much time the participants would spend on creating an avatar, 25% said 10 minutes. 21% Said half an hour and 19% said 20 minutes.

So most people (65%) would spend between 10 minutes and half an hour on creating their avatar.

15% Would spend about 5 minutes on the process and 13% an hour.

Only 4 participants would spend less than a minute on their creation process. And 3% more than an hour. One of them even stated to spend more than 2 hours on it.

Males (Virtual)

Less then a minute	4	7.02%
5 Minutes	10	17.54%
10 Minutes	16	28.07%
20 Minutes	11	19.30%
Half an hour	9	15.79%
One hour	6	10.53%
One and a half Hours	0	0.00%
Two Hours	0	0.00%
More than 2 hours	1	1.75%

Females (Virtual)

Less then a minute	0	0.00%
5 Minutes	5	11.63%
10 Minutes	9	20.93%
20 Minutes	8	18.60%
Half an hour	12	27.91%
One hour	7	16.28%
One and a half Hours	2	4.65%
Two Hours	0	0.00%
More than 2 hours	0	0.00%

Males (Real Life)

Less then a minute	7	12.28%
5 Minutes	21	36.84%
10 Minutes	20	35.09%
20 Minutes	5	8.77%
Half an hour	4	7.02%
One hour	0	0.00%
One and a half Hours	0	0.00%
Two Hours	0	0.00%
More then 2 hours	0	0.00%

Females (Real Life)

Less then a minute	1	2.33%
5 Minutes	5	11.63%
10 Minutes	12	27.91%
20 Minutes	6	13.95%
Half an hour	12	27.91%
One hour	4	9.30%
One and a half Hours	3	6.98%
Two Hours	0	0.00%
More then 2 hours	0	0.00%

Most of the 28 males who in real life would spend 5 minutes or even less on their own physical appearance would spend 10 minutes to 1 hour on their virtual appearance.

7 Final Questions

Game Genres

What do you play:	Never	Rarely	Sometimes	Common	Often	Always
RPG (Final Fantasy, World of Warcraft)	17%	13%	17%	18%	24%	11%
Shooters (Unreal Tournament, Team Fortress)	23%	15%	22%	15%	18%	7%
Strategy (Starcraft, Command & Conquer, Settlers)	23%	20%	23%	17%	11%	6%
Adventures (Monkey Island, The Longest Journey)	25%	21%	29%	17%	6%	2%
Virtual worlds/Social networks (Second life, Gaia Online)	57%	24%	12%	4%	1%	2%
Simulators (Rollercoaster Tycoon, The Sims)	16%	24%	27%	14%	8%	11%
Puzzle (Bomberman, Tetris)	15%	28%	35%	13%	6%	3%
Platform (Super Mario Bross, Terraria)	18%	19%	32%	19%	8%	4%
Sports (Dance Dance Revolution, Fifa Soccer)	47%	26%	17%	6%	4%	0%
Fighting (Mortal Combat, Street Fighter)	31%	34%	20%	11%	4%	0%
Music (SingStar, Guitar Hero)	28%	29%	26%	10%	6%	1%
Racing (Need for Speed, Dirt)	28%	33%	22%	9%	8%	0%

53 % commonly played RPG's, 40% shooters and 34% Strategy.

Virtual worlds/Social networks were played the least.

Type of Avatar

When asked what types of avatars the participants usually created, 21% said that they always created an avatar that was "totally unrelated" to themselves, 19% said it was often and 11% did it commonly.

More than half of the participants (60%) had never created an avatar as an impersonation of someone else and half (51%) had never created the complete opposite of themselves.
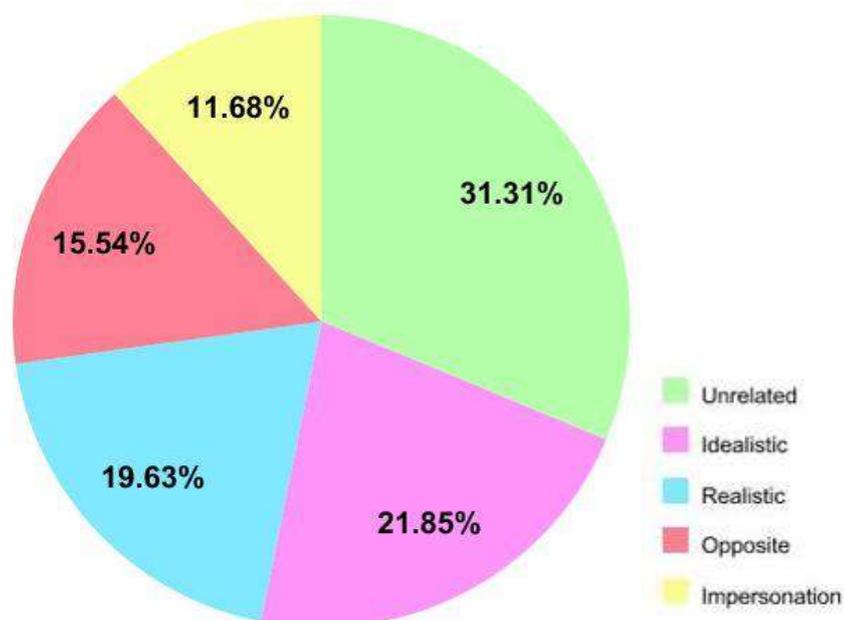
Conclusion

Favourites

When choosing their most favourite clothing article or accessory, most people picked a clothing article. Jewellery was second and Accessories third.
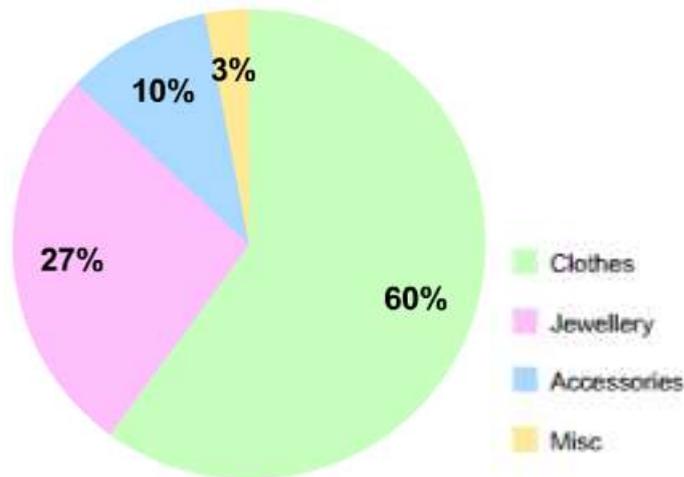

I had expected accessories to have been more important. However the preferences for their clothing articles can be explained through the reasons of why they choose certain items, which was the following question.

Most of the favourite pieces were picked because the participants either always wore it or because it was comfortable.

Clothes in contrast to jewellery and accessories, are a necessity, so they are worn often, enabling the wearer to become attached to it. Plus their main goal is to keep the wearer warm. So clothes automatically provide comfort.

It's in human nature to grow attached to something that you see (wear) often and gives you comfort. So it's only natural to become attached to your clothes.
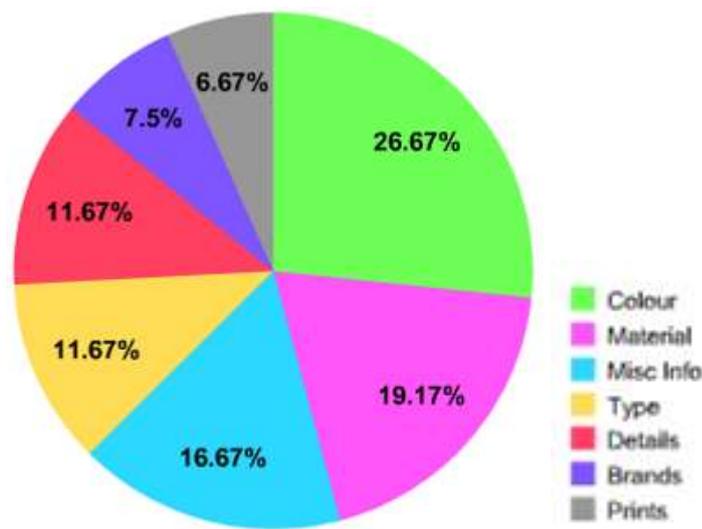
When asking the participants to describe their favourite article it was interesting to see how they used colour and material most.

Brands and Prints didn't seem to be important at all.

However does it really matter that their pants are made from denim? If the jacket's made out of leather or if the ring is silver? More precisely would the person have bought the "leather" jacket if it was plastic? The pants if they were red instead of black? Or the ring if it were gold?

Most certainly not, because we all have a certain taste which gives away our personalities and our preferences. We want "our things" to represent us, so it's all about the combination of which articles with which colours and materials.

Variety

The "Body and Mind" study opted the notion that hair stood central to the user's identity and would need a greater customising to satisfy the customer's needs.[d] However during my study it seemed that the amount of variation in hairstyles and colours was less important than the amount of variation in facial features and outfits.

Perhaps this is because hair is our most adjustable feature. It's often costless to adjust, (styling, brushing) it hardly looks the same everyday (bed hair, rain, unruly hair) and if we really want to we can even make a total transformation with a bit of money. And if we have this fluent notion of our hair, it's less likely we're attached to it. Girls who have grown their hair their entire lives and then suddenly cut it off show

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[d] Keep in mind that these results were created around players from 3 particular games whilst my participants had no such restrictions.

forms of attachment to it, but only because of time. Cities you grew up in, but have completely changed lose their importance and meaning.

Now our faces, they stay with us all our lives (hopefully), so it's logical that this feature is the most important.
Our clothes are a different story, since they stay the same but we vary with them (or most of us do). The same as we sometimes like to vary with our hair.
Then why is our outfit a more important adjustment feature for our avatars then hair? Well as much as we would like it, our hair doesn't express as much as complete outfits can. Hence can be explained why most people rarely use their own hair colour in games and why their preferences goes to unnatural coloured hair[1]. Unnatural hair colours simply provide us with more choice in identity and personal preferences.

Now don't get me wrong, hair is still important in games, especially when the facial features and outfits are hardly visible in third view or covered by armour. But I'm simply stating they are just as important when it comes to giving the avatar a personality. If one of the three is missing you'll have no foundation to build on, unless you want your character to be bald or naked.

Communication
Though communication is an important task for an avatar it seems to be the least favourable avatar feature of all.

Perhaps Body animations don't seem to be that important because they are taken for granted. They need to serve a purpose such as making the avatar jump, fun or crouch. It doesn't really matter how we do that, as long as we can do it. The only animation that doesn't serve a real purpose is the idle animation, and sure they are fun and make the character alive but when you're too busy playing the game you'll hardly ever get to see it.

Voices are a very different story, our avatars does not necessarily need them. To verbally communicate with other players we can type messages or use a voice chat. The few voice macro's we have, hardly serve any other purpose then for fun.
And don't forget that most games don't even offer a choice in voices, let alone a wide variety. And this is an absolute must, because similar to our real life facial features our voice hardly goes through any changes. Have you ever heard a boy's

voice drop around puberty? It's a pretty dramatic change to go through. Or have you ever heard a recording of your own voice which sounds absolutely nothing like you imagined it? Most people don't like it one bit.

So if an avatar has a voice and it needs to represent the player or the avatar's personality it needs to fit and be to the players liking. So a choice in voices is needed, just in case you'll otherwise end up with a voice that you don't like.

Now animation macro's are similar to voice macro's without being so personal but they also relate closely to body language, whereas you often don't need them. The animation macro's are also very set in their own way, they leave no room for identity or personality. Maybe if we could make our own personal macro's people would use them more. Then the game would be able to express yourself not only by appearance but by manners and expressions! However such a tool would be very difficult to create, a more easy solution would probably be motion control.

So yes, these communicational features are not as popular as other features. The desire for more variety in them is also non-existent. So I think we need a way to use them more freely like motion controlling your movements and maybe voice chat animations that can interpret our voices phonetics from our headsets. It would certainly add a whole new level to experimenting socially in virtual worlds.

Avatar Attachment

So, does the adjustability of an 3D game avatar influence how much a player can immerse themselves into a character? Yes it most certainly does, with social online games especially. However the amount of adjustability isn't that important. Throughout my research I have come to believe that maybe people want a more stable character, one that is recognizable throughout the game, with clear facial features, an expressive hairdo and a recognizable style in clothes and accessories.

However to keep the player attached to his or hers avatar I think a bond needs to be formed, the avatar needs to provide the player with comfort. Which can be done by making the avatar explain the rules to the player, sympathizes when things are going bad and celebrates when things are going good.

Many dangers lurk with this kind of gameplay, the character can become annoying, time consuming and irritating. However if it's done right, I'm positive it will provide with a much more addictive gameplay that we've encountered so far.

An avatar that you can bond with.

Avatar Types

The "Body and Mind" paper concluded that people are less happy with avatars that are very different from themselves. Yet most people play with an avatar that is completely unrelated and seem to be happy with it, however it's quite possible that even though they think the avatar is unrelated to them, they still add features that holds their personal preferences. Sure they might alter things about the avatars appearance that they would never alter in real life, but that's the beauty of avatars. You can experiment with them, without it having real consequences.
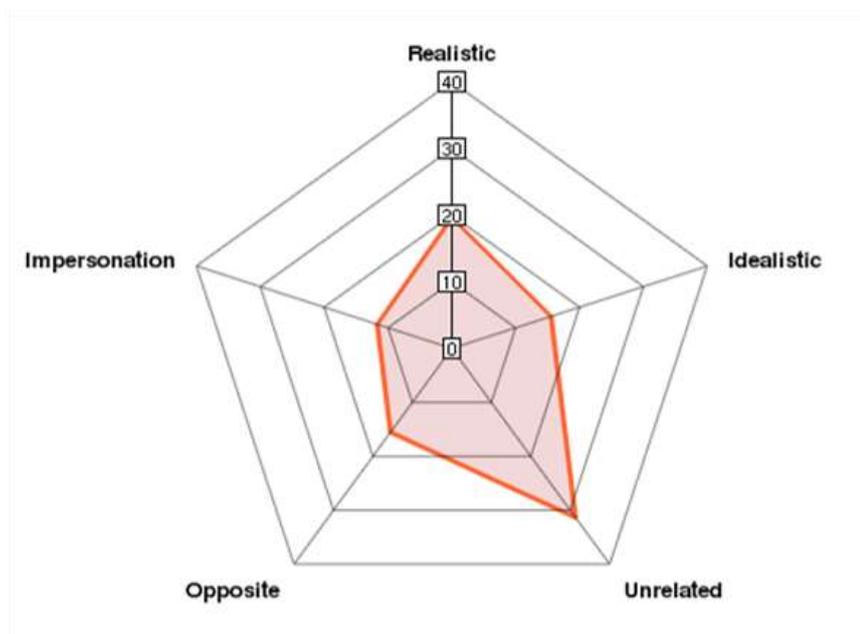
Sadly lots of people have never experienced creating an avatar as an impersonation of someone else or created an avatar that was the complete opposite of themselves. Some have even never created an idealistic version.

This is the result of two factors:

1. The preference of the player.

   The player might simply not be interested in his/hers appearance or imitating someone.

2. The game genre.

   Some games are just not meant to create specific types of avatars. RPG's are more suitable for unrelated avatars whereas Social Environments are more suitable for Realistic or Idealistic avatars.

So each genre needs its own character creation system to fulfil a specific need.

Final Conclusion

So what do people need in an avatar?

- An avatar that fits its purpose. Whether it be realistic, idealistic, unrelated, opposite or imitation it needs to have the right character creation tool designed for one of these purposes.
- An avatar that communicates clearly with other players. It needs to represent you vocally and animatedly.
- An avatar in which the player can invest. Either level based or skill based the avatar needs to have a reward system for the player, for spending time with their avatar (and preferably only 1 avatar). This will enable the player to become attached to their avatar much like popular MMORPG's do nowadays.
- An avatar with whom the player can bond with. By giving the avatar interaction with the player and a personality it will be able to help the player interact with him/her. When the avatar helps by explaining the game, sympathizes when the game isn't going so well and celebrates when the player wins, it will provide comfort and thus enable the player to bond with it more easily.

The avatar creation tool needs to have:

- Good developed facial attributes, expressive hair and clothes in a variety of styles that fits the players preferences.
- Adjustable colors and materials.

However what a player mostly needs in an avatar will remain the ability to experiment.
To experiment with their looks and personality and their interaction with other players in a safe virtual environment.

Research weaknesses

Distribution

Though I did manage to get a 100 English speaking participants and a reasonable equal distribution of males and females, they are not a good representation of the general population.

I gathered participants from:

SOURCE	Male/Female	Nationality	Gamers[e]
IGAD Students	Mostly Male	Mostly Dutch	Hardcore - Casual
Friends + References	General	Mostly Dutch	Hardcore
COSMOPOLITAN Forum	Mostly Female	Global	Casual
CS Forum	General	Global	Hardcore - Casual
DEVIANT ART	Mostly Female	Global	Hardcore - Casual

The survey was also spread through email, forums and vocal promotion which is not a trustworthy selection system.

Meticulousness

Some questions lacked thorough research.
I could have gone more into detail about game genres and about the player's personality. However these two things are research fields on their own and I deliberately decided to simplify these greatly to prevent the survey from getting too big.

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[e] With Hardcore I mean people who game regularly or are in the gaming business and with casual I mean people who occasionally play games.

Proposed Further Research

I'd propose a more in depth research about avatar appearances that are very similar to a player real life appearance. Since research has pointed out that either satisfaction or affection is greater when an avatar is similar to the players physical appearance However these kind of questions can only be found out through actual in-game testing.

Sub questions:

- How do people with a low self-esteem enjoy playing with a character that represents their physical appearance?
- If a player has to play with their own physical appearance will they behave more like themselves? Will they be less confident and open?
- Does the amount of time played with such avatars matter? Will their personalities become identical?
- Does it matter how they use their avatar if they can have more than 1 main avatar?
- If a player before playing must choose their hairstyle, clothes, accessories and makeup before playing will they be more inclined to vary with the appearance of their avatar?
- If their avatar hair grows and their clothes get worn out over an x amount of time will they be more inclined to vary? And how will they enjoy the experience?

Special Thanks to:

All the people who filled out the survey.

I could not have done it without them.

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