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Investigation of Shapes and Colours as Elements of Character Design

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Abstract

Character design is applied widely both in the game and movie industry. For character designers, it is essential to design intuitively and to avoid repeated and unfulfilling designs. To understand certain methodologies used in design, this degree project investigates if there are further limitations or considerations that need more attention when designing purposeful characters.

To get an overview if culture, age and gender affect the choice of shapes and colour schemes of characters, as a method, the online survey was used providing results based on answers from 72 participants.

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Keywords

concept - an abstracted idea.

design - methodologies of how to approach a desired product.

shape - defined mass in space.

milestones - a methodology of how to approach production.

1 Introduction

"Personality usually dictates design, so I consider Silhouette, Shape, Proportion, and Pose." (Moshier Joe, Dreamworks, Character Designer) (Excerpted from Portillas, Bobby 2010. Design Presentation)

Silhouette, shape, proportions and pose are some of the principles to successful character design. However, are there any limitations to how many variations of shape and colour to communicate a specific character profile?

This degree project will research if there is any indication for this to be a possibility or if there will be a shape and colour scheme combination dominating the others and if so, then to analyze why this came to be. This paper will limit itself majorly to character design and its components.

2 Background: Design

Design is not the final entity designed. It is the product of a design. Because design is a process of thoughts and thought consuming activities which often is simultaneously analyzed and iterated until it creates a product. A product can range from a game, a cellphone, a furniture etc.

"Design is the thought process comprising the creation of an entity." (William R. Miller, Definition of Design, 2004)

To elaborate further upon this definition, design can be described as a fusion of insight, intuition and reason.

Insight is the very first thought of potential which commence the process of design. It is the very moment of understanding the capabilities of the problem and possible solutions. It is the intention, the purpose of the design. Intuition is the underlying subconscious that prompts the attempts to make analysis. Reason, is the conscious and rationalized analyzing of the problem and the potential solutions.

Design to product is often referred to as a linear process when in reality it is tasks synchronously monitored and taken consideration of to find solutions to be able to create the final ambitioned entity. It is often iterative and prototypical. Meaning, a prototype will be constructed, assessed and then reformulated based of the newly made understandings which will bring the design closer to its solution.

Since design can be applied to a wide variety of fields and involves several different procedures and structures, there is not just one correct methodology on how to design. It is depending on what entity that shall be created and what purpose it has.

Sandberg (2009) states that design is needed to reach out to a wider audience. Therefore we need to create designs conveying the product we want to sell. When designing we have to consider art principles that helps us to design purposefully. (Sandberg 2009:15-22)

The importance of relevant design in the movie and game industries are already widely applied. Design choices are made to avoid generic creations and create characters which meet the expectations of the product. Generic characters would be for example characters that the viewer would not be able to read from their silhouette alone if lined next to other silhouetted characters. In movies and games these easily distinguished characters are essential because of the distance the viewer has from the screen. The viewer/player needs to be able to distinguish what entities are dangerous or safe, at first sight. As the silhouette plays a role so does the colour choices. Even if the characters' silhouettes would be read, it would still be hard to determine whose an enemy or companion if these were to have the same or similar colour schemes.

2.1 Shapes

Shapes are mass that defines objects in space. It is also one of the basics in art to comprehend which cultivates intuitive designs and aids in avoiding creating unintended characters.

There are geometric and organic shapes. Geometric shapes are described as regular and mathematical. Organic shapes are most often irregular and asymmetrical. Geometrical shapes are most commonly found in architecture and organic forms are found in nature.

"If you rely too much on your imagination, your stuff will end up looking the same every time." (Colman David, Character Designer)



Fig.01 - *Square, Triangle, Circle*

Shapes have many variations but the primary shapes are square, triangle and circle. Bryan Tillman mentions a general perception of these shapes in his book *Creative Character Design* (2011). The keywords he has set for each basic shape are the following:

Square

- Stability, trust, honesty, order, conformity, security, equality, masculinity

Triangle

- Action, aggression, energy, sneakiness, conflict, tension

Circle

- Completeness, gracefulness, playfulness, comforting, unity, protection, childlike

The keywords Chris Solarski has set for the primary shapes are:

Square

- maturity, stability, balance, stubbornness

Triangle

- aggression, masculinity, force

Circle

- innocence, youth, energy, femininity

As noticeable, these definitions are very similar. It is beneficial to keep these general significances of these shapes in mind when designing even if it is not the vital focus of the character. It would be undesirable to suggest a character to be something different than intended. Shapes are one of the tools to make advantageous design.

"The structured process of defining your design goals before researching and character development will also ensure that you can visually engineer your designs to express specific ideas and emotions." (Solarski Chris, 2012)

To make these shapes interesting and appealing it is crucial to not to rely the design solely onto the general interpretation of the basic shapes. When considering how to make a character interesting and appealing the principles of art is deemed useful.

Sandberg refers to seven principles of art in his book, *Imagine*. Solarski mentions these principles too in his book where he shares his work process of a character design involving a game concept. The principles mentioned are:

- contrast
- movement
- unity/harmony
- variety
- balance
- focus/emphasis
- proportion
- rhythm & pattern

Using these shapes and principles within character design it is possible to elaborate these into more intriguing visual concepts.

Creating contrast, variety, proportion with only basic shapes are easily approached by putting two different looking shapes contradicting one another or/and keep different proportions. Having too many identical shapes and sizes will make the character look symmetrical and inorganic.

While doing this it is essential to find balance in the design as well, if there's too much asymmetry the design can appear unappealing, since humans like order amidst the chaos. While the contrast creates interest it also creates focus, if the character is being completely made out of contrast there will be no certain focus.

Human brains can recognize rhythms and patterns while examining something visual. We can easily take abstract forms and our brains will interpret it as something with those similarities. These are things to take advantage of and keep in mind.

These principles are suggestions that most likely will lead to better designs but for whichever reasons there are always exceptions considering what the project is about. As stated before, there is no correct methodology to design. These are guidelines that has been used through the history of art and deemed useful and relevant to make design decisions upon.

2.2 Silhouettes

To verify at an early stage if a character design is clearly read and distinguishable, many designers block them out in a silhouette. However there are some designers that start from designing solely from silhouette before even considering what details the character should have. This is to swiftly create a variety of thumbnails and to avoid selecting generic designs.

2.3 Gestalt

Gestalt is a psychological term from the 1920's which three German psychologists (Wertheimer, Koffka and Khöler) applied for their theories of visual perception. Their theories were that elements could be interpreted as a whole unit when distinctive principles were applied.

A) Proximity

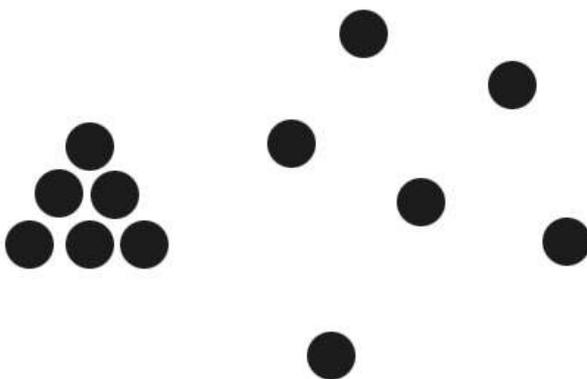


Fig.02 - *Proximity occurs to the left of the picture.*

Proximity or nearness is the perception of grouping elements because of the closeness of one another.

B) Emphasis

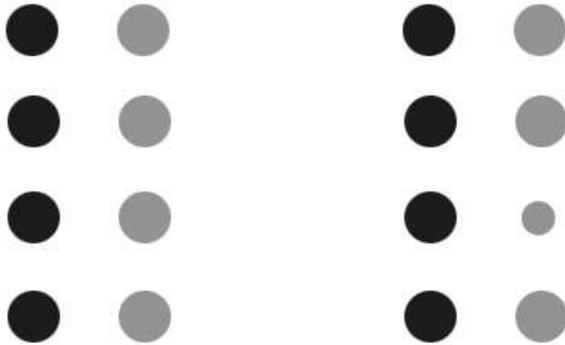


Fig.03 - *Similarity occurs to the left, dissimilarity to the right.*

When similarity occurs it is because the elements involved are similar to each other and creates an illusion of being a unit. Dissimilarity is triggered by an anomaly, an element that is dissimilar to the remaining shapes. It will become the focal point since the viewer will perceive this as more interesting than the remaining similar shapes.

C) Continuity



Fig.04 - *Continuity.*

Continuation is when the eye is led from one element to another by guiding of curved lines. This is widely used in illustrations and in character designs already. Whenever the designer or the artist wants to lead the viewer's eyes to a certain focal point this technique is sometimes applied. It is often fulfilled through the use of curved lines or curved shapes. Whenever the designer or artist wants to disrupt the eye from travelling further they usually use more stiffened and sharp lines to stop the continuity.

D) Closure



Fig.05 - Closure.

An object or space that is incomplete yet gives enough information for the viewer's eye to fill in the missing information is called 'closure'.

E) Figure and Ground

Any form, shape or silhouette is a figure (object) while the space around this will be understood as ground (background). Every letter is a figure surrounded by white space because of this visual perception.

2.4 Colour Theory

There exists a wide variety of colour theories that are more or less applied than others. The colour theory mentioned in this paper will be very limited to colours contrasting and harmonizing each other in a viewpoint of psychological perception. In particular what positive traits the viewer gets from observing those colours.

Similarly to shapes colours have predefined expectations from the viewer. It won't be mentioned of all the different responses for respective colours. To narrow down the choices of the actual meaning of colours in psychology, the major source for this is, *Understanding the Meaning of Colors in Color Psychology* (Scott-Kemmis: 2009).

Studies have been made what meanings and definitions some colours have in different cultures. Hodges (2011) has created an interactive chart online called *Interactive Colours in Culture*. It provides keywords for each colour that corresponds to the general views of said culture that has been collected data from.

Colours can be perceived differently according to gender since most of us have been brought up in stereotypical gender roles (baby boys get a blue blanket while girls get pink ones). These gender roles might affect us as younger but as we grow up it is common that we re-evaluate colour meanings to us, the individual.

3 Purpose

The matter of how important choosing the correct shapes to suggest character is something constantly mentioned in character designer viewpoints. The purpose with this project is to research if there are any indications that it is possible to use a variety of shapes and colour approaches to communicate the same character profile.

4 Method

4.1 Testing Materials

To answer the problem formula, there were at least four different character designs created based on a predefined character profile. The character profile is composed out of these keywords:

- female
- young adult
- independent
- adventurous
- confident

The theories deemed useful have been applied to this project to account to the question formulation if there are any indications of possibility to create the same character profile with consciously chosen different shape and colour methodology applied.

Shape design was chosen to apply to the character profile, while making conscious differences amongst the products of the design. As mentioned by Charlotte Jirousek, (1995) the viewpoint of which a figure is displayed will affect our impression of it. (Jirousek, Charlotte: 1995) Therefore the artistic guideline to have action poses has not been used because it suggests the pose to have personality traits rather than the shape. However a cluttered pose was also avoided since it would be hard to read the overall shape and would have had defeated the purpose to apply silhouette design to this project. Facial features have also been avoided since expressions will give the viewer and impression no matter how neutral the expression is depicted. It would probably be interpreted as a character lacking interest or being discontent. There have been made the same amount of colour schemes as in shapes and the choice of colours have been made to correspond to decided character profile.

The colour schemes used is heavily based from the *Interactive Colours in Culture* (2011) data source and *Understanding the Meaning of Colours in Colour Psychology* (2009). These two sources were chosen to have varying options to decide from to make the colour schemes.

The colours were primarily chosen after emotional responses and expectations within colours. Synonyms to the keywords were used for the character profile to easier analyze which colours that were most corresponsive. *Thesaurus* was used as an aid to find possibly fit synonyms.

- female: feminine, womanly, effeminate
- young adult: prime adult
- independent: individualistic, self-determined, unconstrained
- adventurous: audacious, bold, risky
- confident: hopeful, secure, valiant

Deciding Interactive Colours in Cultures key words were used with own judgment what deemed suitable to the character profile's keywords.

femininity (female): pink
fertility (female): red
growth (young adult): green
freedom (independent): blue
personal power (independent): purple, yellow, green
desire (adventurous): red, orange
energy (adventurous) red, orange, yellow
courage (confident, adventurous): red, yellow, orange
strength (confident): red yellow, gold

Positive keywords for the colours in colour psychology: (Scott-Kemmis: 2009)

Red

action, energy and speed, attention-getting, assertive and confident, energizing, stimulating, exciting, powerful, passionate, stimulating and driven, courageous and strong, spontaneous and determined.

Gold

Success, abundance, wealth, understanding, self-worth, wisdom, compassion, love, passion, charisma, winning, optimistic, positive, and masculine

Orange

sociable, optimistic, enthusiastic, cheerful, self-confident, independent, flamboyant, extroverted and uninhibited, adventurous, the risk-taker, creative flair, warm-hearted, agreeable and informal.

Yellow

optimism, cheerfulness, enthusiasm, fun, good-humoured, confidence, originality, creativity, challenging, academic and analytical, wisdom and logic.

Purple

unusual and individual, creative and inventive, psychic and intuitive, humanitarian, selfless and unlimited, mystery, fantasy and the future.

Blue

loyalty, trust and integrity, tactful, reliability and responsibility, conservatism and perseverance, caring and concern, idealistic and orderly, authority, devotion and contemplation, peaceful and calm.

Pink

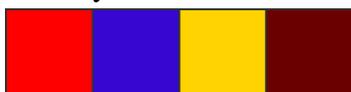
unconditional and romantic love, compassion and understanding, nurturing, romance, warmth, hope, calming, sweetness, naiveté, feminine and intuitive energy.

Green

growth and vitality, renewal and restoration, self-reliance, reliability and dependability, being tactful, emotionally balanced and calm, nature lover and family oriented, practical and down to earth, sympathetic, compassionate and nurturing, generous, kind and loyal with a high moral sense, adaptable, encourages 'social joining' of clubs and other groups, a need to belong.

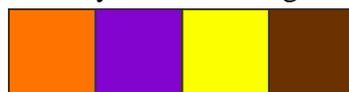
For each character silhouette the same variations of colour scheme options has been applied. The triad colour scheme designer (<http://colorschemedesigner.com/>) was used and the colours that applied mostly to the keywords were used as primary colours; however diversity were chosen consciously to answer the problem formula. These are the colour schemes that were used:

Primary colour: Red



Colour Scheme 01

Primary colour: Orange



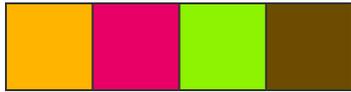
Colour Scheme 02

Primary colour: Yellow



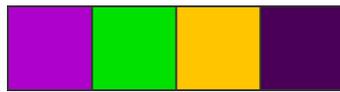
Colour Scheme 03

Primary colour: Gold



Colour Scheme 04

Primary colour: Purple



Colour Scheme 05

4.2 Survey

When the character concepts were done the testing was committed through an online survey. The goal was to obtain at least 25-30 test persons to take the survey, however 72 participants' data could be collected. Information about their age, gender and continent they inhabit was recorded. The information that was being shared with the test subjects was limited. This was to avoid getting too much influenced answers based on the thesis.

The testers were instructed to choose one of the five shapes to correspond to the mentioned character profile. They were also informed not to take the pose into account when doing their judgment and this was because it is mainly the mere shape they should make their decision upon. The shapes were showed separately and not beside each other to avoid influencing one another and making the viewer compare.

Colour schemes were asked to match the shape of the character they had chosen and were asked once again to match it towards the profile. All the shape variations had the same amount of colour scheme options to explore whether there is a connection between the subjects choices in colours.

There was an option to write individual thoughts but it wasn't mandatory and the main data collected for this project was statistical. Why this came to be was because of shortage of time to analyze and chart every 72 testers' individual opinions. Also testers that didn't follow the instructions well enough were not taken into account. An example would be if they had chosen no shape and then chosen one colour scheme for each shape. However if they had skipped choosing a shape from the start but chose on shape out of the colour scheme choices that counted as they had chosen that shape and that colour scheme. Similar situations were treated the same.

When the data was obtained I analyzed if there was a pattern to their choices based from what is known within shape and colour design today and to answer my problem formulation.

5 Result

Eight thumbnails were first created and four was meant to be chosen out of those; however it seemed to be too limited according to variations to make choices upon. Another four thumbnails were created which resulted into twelve thumbnails to select between. Silhouette design were mainly used to gain variety in a short amount of time, although, considerations of the shape choices and combinations were accordingly made. Massively cartoony style was avoided to not make the shape choices too obvious. This was because to keep the underlying shapes subtle to not make it obvious what shapes were in-cooperated within the silhouettes. The problem formulation would probably work as well to answer on if the shapes were that easily distinguished however it's interesting from a psychological viewpoint what our underlying conscious instead of our active conscious will find. It's also rare in the game industry to have too obvious read shapes in their character designs, if the design choices works together it shouldn't be too easy to dissemble the product of the design.

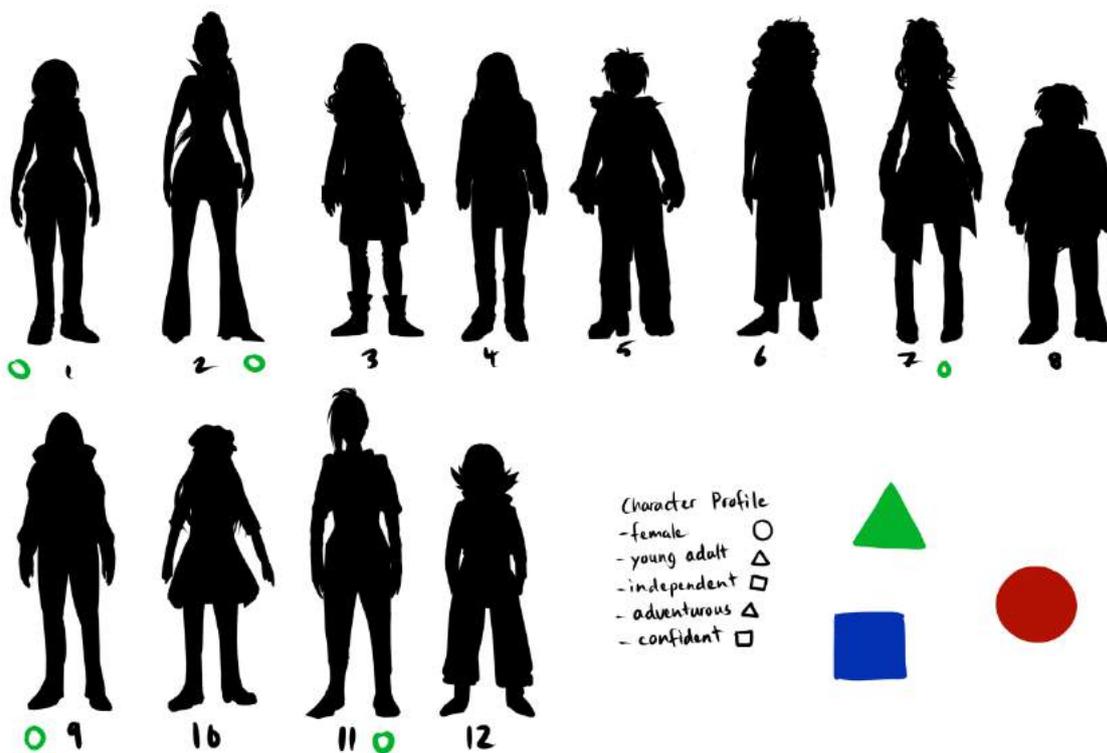


Fig.06 - Creating the twelve thumbnails while keeping in mind the character profile and have tried to match the following keywords to certain shapes, the selected five thumbnails are marked with green circles beneath the silhouettes.

Five thumbnails were chosen to use in the testing phase. They were all black silhouettes because the test subjects would focus on the general perception of the shape and not the little details that a body withholds.

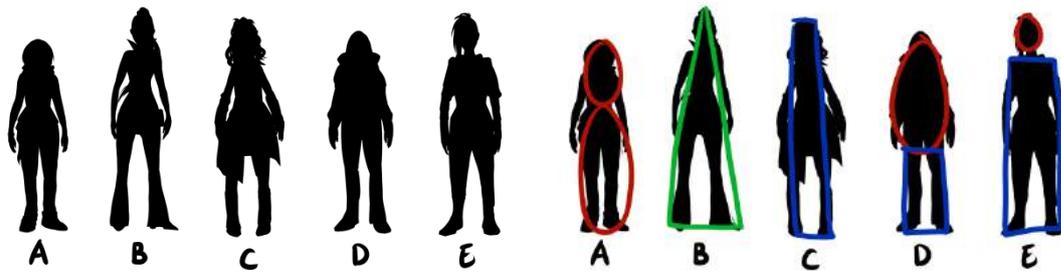


Fig.07 - *Shape differences in the five selected thumbnails.*

Throughout the report the five different shapes will be referred to with the letters A-E and the letter is placed beneath the corresponding silhouette.

The colour schemes originally planned to use were discovered to be too saturated and felt too cartoony and relatable to a different time period than intentionally. It didn't get treated in a purposefully and conscious design to the character profile.



Fig.08 - *Process to select and apply colour schemes. Early concept.*

The part prepared in this stage was colour combinations for the shapes to the test survey. However, all the characters look extremely cartoony cause of the immense contrast and the bizarre diversity of colours. To reprimand this, the choice to alter and desaturate the colour schemes was made to make the character appear slightly more realistic. Some colours were kept saturated to make contrast, create interest and to create variation.



Fig.09 - Final colour schemes used in testing. Colour schemes 01-05. Final concepts.

This is shape A with colour schemes 01-05, each combination of digits 0X referring to certain colour scheme. The time spent on detail was not prioritized as the major impression was what was taken into account.

When the shapes B-E following colour schemes 01-05 were applied for each shape, the online survey was created (*jotform.com*) and launched online for participants to fill the 13th of May. [Appendix A for online survey]

Optional answers to write why the testers chose a certain shape and colour scheme were made, to give a suggestion what they based their conscious decision making upon. However the individual answers was not taken into account for that certain shape or colour scheme during the analyzing. The statistical choices were the major factor during analyzing as they were easier to compound.

The results of the survey showed that a majority of the 72 participants were female. The majority of ages were distributed between the age categories 15-19, 20-24 and 25-29. The majority of the participants' continental inhabitants were North America and secondly Northern Europe. The options which did not get selected were left out of the pie chart for readability and because it was not of interest to the research. The shape that was mostly selected was shape E and secondly shape A that was almost equal in selections, the difference was in 4 individuals. Something to take notice of is that every shape got selected. The colour scheme results are very equal to one another, the differences are minimal.

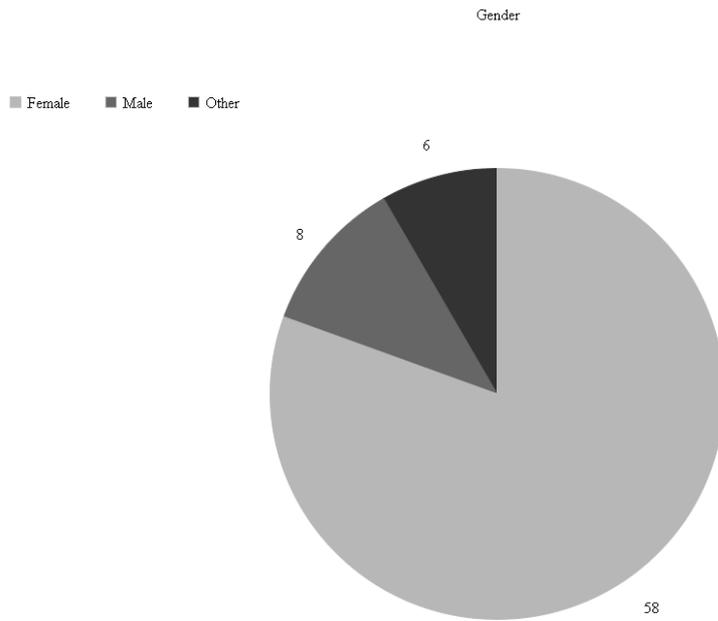


Fig.10 - Gender of participants.

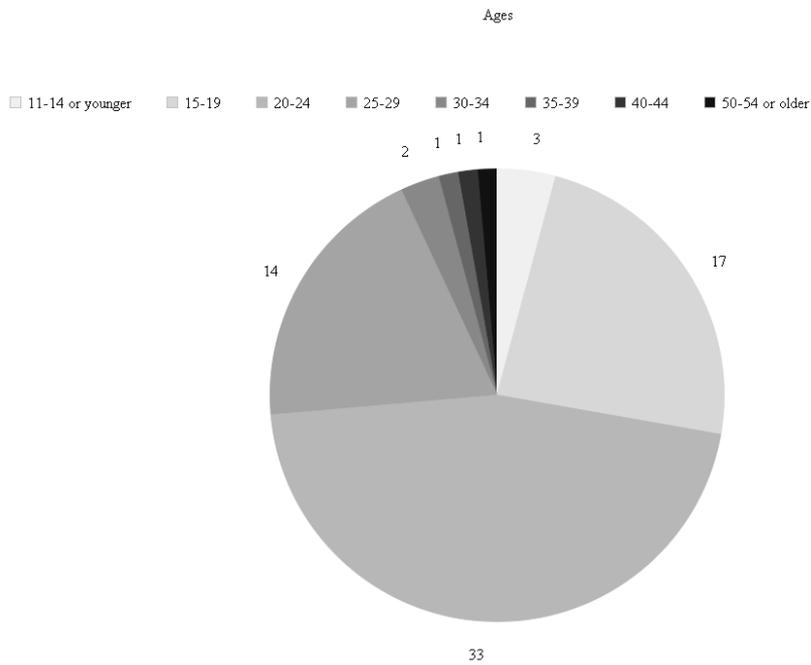


Fig.11 - Ages of participants.

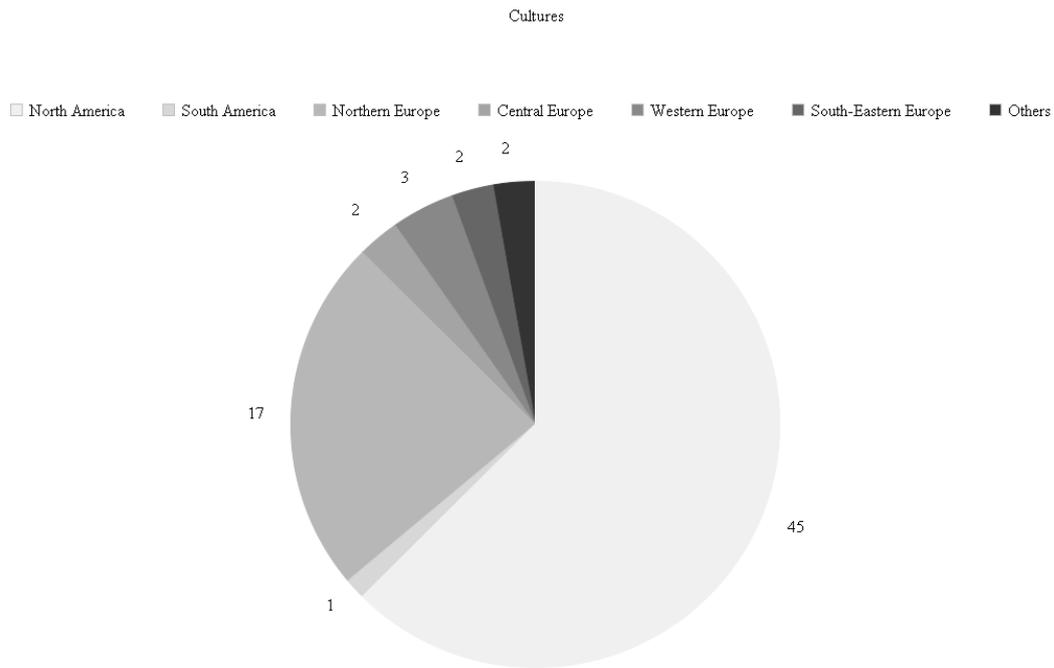


Fig.12 - Continental inhabit of participants.

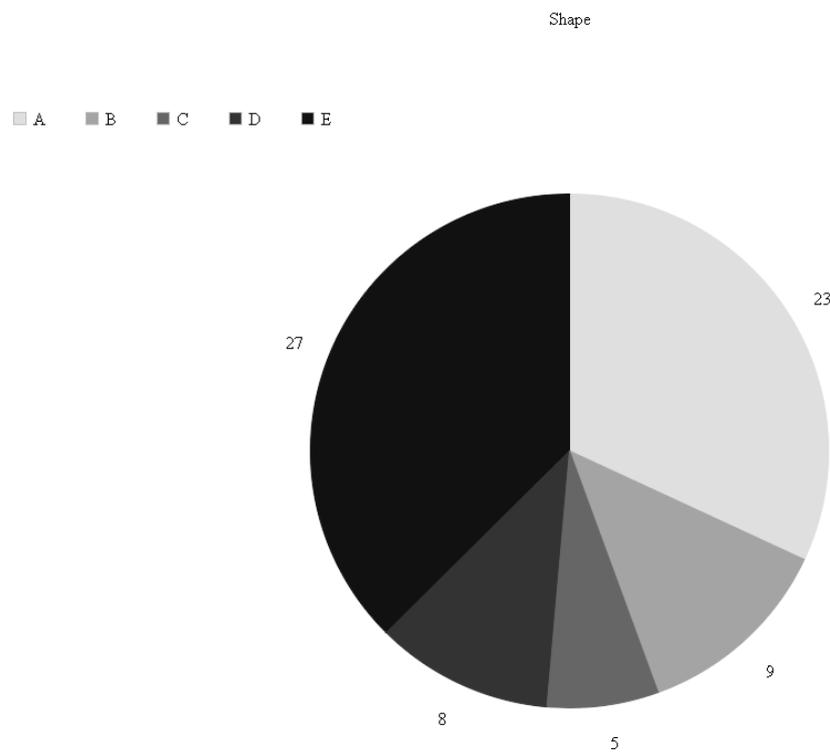


Fig.13 - 72 answered on shape, some of these chose the colour scheme with one certain shape

because of whatever reason they missed to choose a shape from the first part of the survey. I'm mentioning this abnormality because of the colour scheme abnormalities.

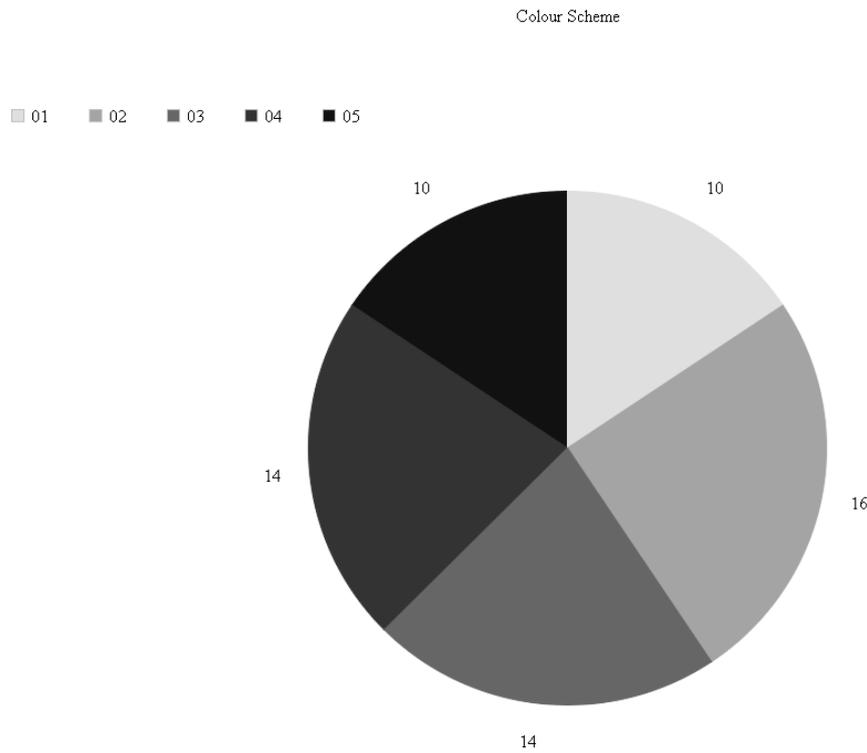


Fig.14 - 64 out of the 72 participants answered properly and these are the results of the colour scheme. This is because where participants have chosen none shape and several colour schemes with different shapes were left out of the statistics.

These are how the results were distributed amongst each shape and every colour scheme applied on each shape. The letter stands for what the shape was and the two-digit ending is information about what colour scheme it was combined with. To make an example, A01 corresponds shape A and colour scheme 01.

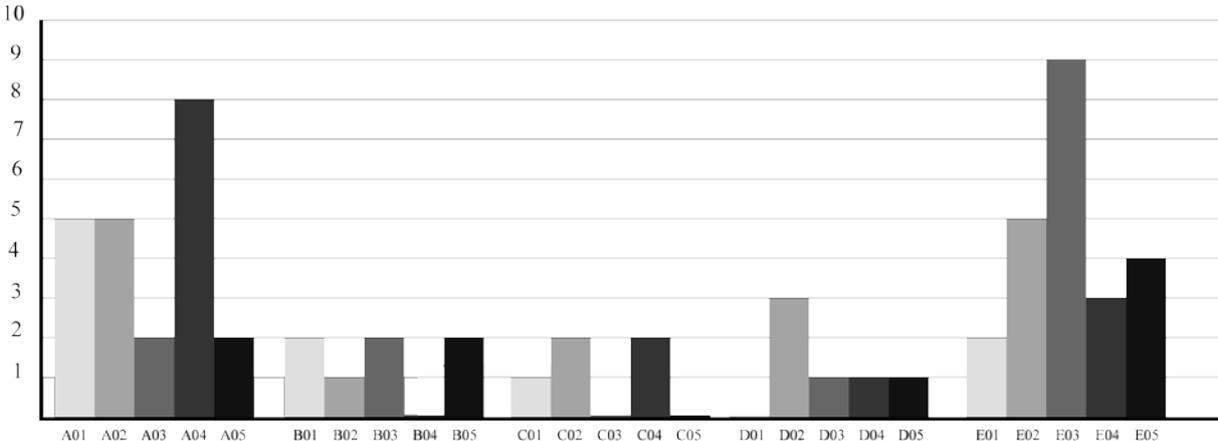


Fig.15 - This is the comparison between the selections of colour schemes within each shape.

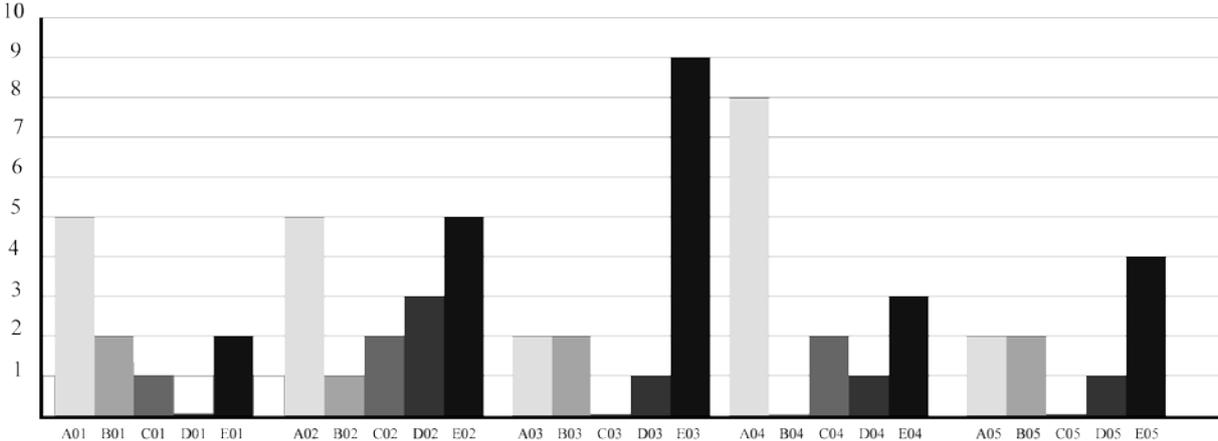


Fig.16 - This is a comparison between the selections of the same colour schemes within every different shape.

6 Analysis

Amongst the shapes it was clear that there were two dominating shapes that were chosen most to correspond with the chosen character profile. Shape A and E were different in that A were more feminine than E according to generalizations and stereotypes. A were designed to be oval and E were designed to be sturdy but had an oval head shape to contrast with the rectangular body and were given a side-cut to create asymmetry, creating interest. Another observation is that both these characters were percept with short hairstyles.

Although these were the majorly chosen ones at least each one of each shape was selected - there was no shape with zero votes. The optional comments suggested that some of the choices were made upon hair style and physique corresponding to the keywords.

- female
- young adult
- independent
- adventurous
- confident

These two factors propose that the testers based their shape decisions on what would be most practicable to the character's adventurous nature. The short hair would probably be less prone to get stuck, or get in the way of character's eyesight. As for the physique, it's hard to believe a thin, vice versa, a too bulky person to be athletic enough and have good stamina to adventure in all sort of places. Also to have a diverse style (hair, clothes, etc.) than from the general crowds often suggests on independency and confidence.

The test results shows the opinions were much split when it came to the colour schemes. The test subjects mentioned, balance, contrast and values if they left an optional comment. This result shows that corresponding to say character profile with lots of different colour combinations is indeed possible. However why this came to be is curious, since one can question how 64 individuals' thoughts were so derived from one another. To be able to be assured that this was not a coincidence, it would be necessary to have at least 64, preferably new, individuals to take the same survey.

As seen in **Fig.15** and **Fig.16** the shape had an impact on the colour scheme choices. Shape A's majority of votes were the colour scheme 04 while colour scheme 03 was not as popular within that shape. Shape E however had a majority of votes for the colour scheme 03. Hence it is an indication of how the combination of shape and colour scheme has lead people to different and derived opinions depending on what shape they were choosing to pick a colour scheme for. Because of this, the question appeared whether or not it would give different results if the colours were not directly applied onto the character. That they would be given the different colour schemes in the same approach as in this report when they were first being presented.

The colour combinations have not been considered how those would affect one another, although all the colours have been chosen to somehow correspond to the character profile. The primary colours were chosen because of them corresponding mostly to both cultural and psychological synonyms for the character profile. Would the results change if the primary

colours would have been switched with one of the sub-colours within the same colour scheme? If it had, then would that indicate that the combination of colours were not the major factor but the primary colour used in those?

How the different colour schemes were applied on each shape was obviously to give different impressions. However, it was taken into account and the same colour combinations were about equally distributed between one another. What was overseen was that the suggested clothes in the shapes were having a bigger role than the general shape gave. The testers liked to imagine the different components of the characters and made some of their decisions upon those. This was mostly indicated through the optional comments of the test subjects' choices rather than the statistical results.

The majority participating in the survey were from North America and Northern Europe. It is known that the west and northern Europe is influenced a lot by American culture and it can suggest that our colour cultures are similar to one another as well. However there is no data in *Interactive Colours in Cultures* about European colour cultures to compare to the Northern American that exists within this data chart. There is the *Colour Psychology* to consider too since the colour design decisions were used after its suggestions as well. How colours are interpreted psychologically is closely related to cultural factors but not only that, it is depending a lot on subjective experiences and feelings. Those two has probably been a higher factor than the cultural aspects in this survey and could be another reason to the wide diversity of the colour scheme choices.

A later realization is that the character profile was too broad and subjective. It would have needed to be narrowed down and possibly have some sort of proper game concept idea to design within. A simple genre choice would have had helped to design more purposefully. Example, if the characters had been presented that all were in an alternative futuristic game concept it would probably change the test persons opinions and choices according to the very same character profile keywords.

The design methodology was not towards any of Solarski's mindmap suggestion. If it had been, there would be a probability to get more solid and less confused products of design. The wardrobe was not a priority when designing as it was the mandatory shape that was focused upon. However the suggested garbs have left a bigger impression than expected and when applying the colours the choice of garments was not in mind, only to keep a somewhat equally distribution of colour between the different shapes.

If a mind map and a game idea were concluded in the start of the designing process, the product of the design would be more goal-oriented and easier to specify besides of the keywords of the character profile.

7 Conclusion

This degree project was to discover if there were any indications of possibilities to create the same character profile with a variety of colour and shape variations. The subject was limited to character design, majorly from a shape and silhouette perspective.

The results showed that the majority of the testers were from North America and Northern Europe, the ages mostly ranged from 15-29 years old and the majority of the testers were female.

The methodology was based on the data collected while attempting to make and decide upon design decisions with rationalized thinking. The limitation of shapes and colour schemes were majorly done to give the test subjects not too many impressions and lose their attentiveness when making the survey. It was difficult to find a free online tool to make a proper survey. The original thought was to have the test subjects choosing a shape and then get directed to that chosen shape's colour scheme. That was not an option to be found and therefore there was compromising done and the test subjects were relied on to follow the given instructions.

The colour theories were narrowed down to certain sources and approaches. These were majorly cultural and psychological. The reason why not to indulge too narrowly was to not to go too deep into the psychological terms and factors, since that would be slightly off subject to my problem formula.

When examining the results it was concluded that shape A and E were the most frequently chosen silhouettes to match the character profile. The two chosen shapes were both in-cooperating ovals in their design approaches but the main body of the both were contrasting. Shape A had an oval main body while shape E had a rectangular. In general shape interpretations the oval shape is more feminine than the rectangular shape that is more masculine. However when analyzing further into the reasons what other factors that made the testers choose these shapes it was indications it was the hairstyles and physique.

Comparing the selections of the colour schemes within each shape displays the results were fairly equal yet had some extreme abnormalities. The dominant colour schemes were 04 in shape A and 03 in shape E. When the same colour schemes were compared to one another with the different shapes, it was clear that the chosen shape affected the choosing of the colour scheme.

With the knowledge gained from this project different approaches would have been made to the planning. There would have had been a proper plan with milestones, which means to have several deadlines to fulfil before the major deadline. This would have had provided more time to consider and reconsider approaches to design decisions weekly.

It would probably have been better if the character profile had been narrowed down further to make the designing process more goal-oriented. Also further studies could have had been made with how colours in character design is already applied to suggest a character profile better.

During this project I have achieved a greater understanding of the importance designing towards clear goals and how iteration might be necessary to obtain preferred results.

In conclusion there are indications of possibility to create the same character profile with a variety of shape and colour. I base this onto the diversity of the majorly selected shapes (shape A contrasting shape E). However, there will be shapes that are more dominant than others which prove the usefulness and importance to thumbnail and iterate further to find shapes to present said character traits. The shapes that were less selected could have had been badly designed, hence, they did not fulfil their purpose to deliver the traits.

The colour schemes were varying a lot in selections which also supports the indication of the possibility of a wide variety of colour combinations to present a certain character profile.

However it shall be kept in mind that if the designs would have had a proper game concept the results would probably not be the same.

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Appendix A

Shapes and Colours - Bachelor's Degree Project Research Form

This is a bachelor degree project research form.

I'm grateful for you taking your time answering the following questions.

I will ask you to choose a shape out of 5 which you think corresponds a certain character profile which will be mentioned later in this form.

When you've chosen a shape you may write down the letter that represents it for yourself if you consider yourself having a poor memory, to be able to answer the following questions.

Please **do not** answer on the other colour schemes for shapes you didn't choose.
Thank you.

What gender are you?

- Female
- Male
- Other

How old are you?

- 11-14 or younger
- 15-19
- 20-24
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54 or older

Which continent do you live in?

- Asia
- Africa
- North America
- South America
- Antarctica
- Northern Europe
- Central Europe
- South-Eastern Europe
- Western Europe
- Other

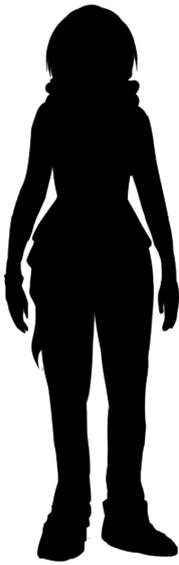
Choose a silhouette/shape which you think is most accurate describing of the given profile:

- female
- young adult
- independent
- adventurous
- confident

When choosing don't take notice of the neutral poses. Just think about the impression of shapes when you're making your decision.

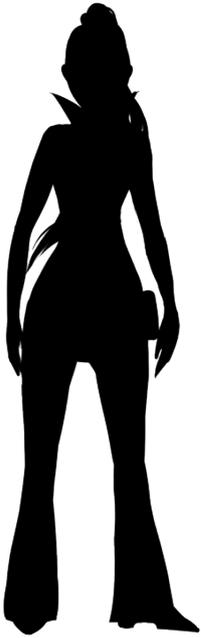
A new shape will be given for every page - they will be labeled from A to E. You may go back to analyze the shapes once again if you feel like it before making your choice which will appear after shape E.

Shape A



- female
- young adult
- independent
- adventurous
- confident

Shape B



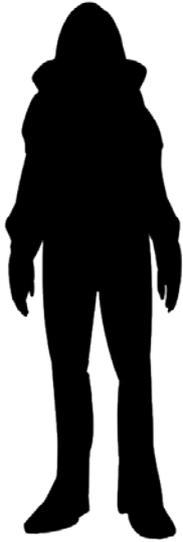
- female
- young adult
- independent
- adventurous
- confident

Shape C



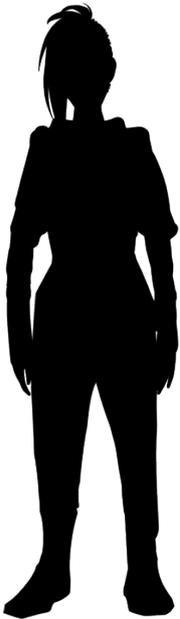
- female
- young adult
- independent
- adventurous
- confident

Shape D



- female
- young adult
- independent
- adventurous
- confident

Shape E



- female
- young adult
- independent
- adventurous
- confident

Choose the shape you thought were most accurate to the character profile description.

- A
- B
- C
- D
- E

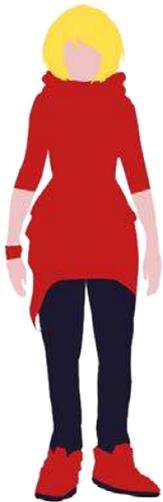
(Optional) Why did you choose this shape?

If you chose shape A choose one of the colour schemes you think suits the given character profile:

- female
- young adult
- independent
- adventurous
- confident

If you didn't choose shape A scroll past this section and move onto the next page.

A01



A02



A03



A04



A05



Choose the colour scheme you think suits the character profile the most.

- A01
- A02
- A03
- A04
- A05

(Optional) Why did you choose this colour scheme?

If you chose shape A and have given an answer out of the options for the colour schemes you may submit your filled out survey. -Thank you for your participation and patience!

If not - please continue.

If you chose shape B choose one of the colour schemes you think suits the given character profile:

-female

-young adult

-independent

-adventurous

-confident

If you didn't choose shape B scroll past this section and move onto the next page.

B01



B02



B03



B04



B05



Choose the colour scheme you think suits the character profile the most.

- B01
- B02
- B03

- B04
- B05

(Optional) Why did you choose this colour scheme?

If you chose shape B and have given an answer out of the options for the colour schemes you may submit your filled out survey. -Thank you for your participation and patience!

If not - please continue.

If you chose shape C choose one of the colour schemes you think suits the given character profile:

- female
- young adult
- independent
- adventurous
- confident

If you didn't choose shape C scroll past this section and move onto the next page.

C01



C02



C03



C04



C05



Choose the colour scheme you think suits the character profile the most.

- C01
- C02
- C03
- C04
- C05

(Optional) Why did you choose this colour scheme?

If you chose shape C and have given an answer out of the options for the colour

schemes you may submit your filled out survey. -Thank you for your participation and patience!
If not - please continue.

If you chose shape D choose one of the colour schemes you think suits the given character profile:

- female
- young adult
- independent
- adventurous
- confident

If you didn't choose shape D scroll past this section and move onto the next page.

D01



D02



D03



D04



D05



Choose the colour scheme you think suits the character profile the most.

- D01
- D02
- D03
- D04
- D05

(Optional) Why did you choose this colour scheme?

If you chose shape D and have given an answer out of the options for the colour schemes you may submit your filled out survey. -Thank you for your participation and patience!
If not - please continue.

If you chose shape E choose one of the colour schemes you think suits the given character profile:

- female
- young adult
- independent
- adventurous
- confident

E01



E02



E03



E04



E05



Choose the colour scheme you think suits the character profile the most.

- E01
- E02
- E03
- E04
- E05

(Optional) Why did you choose this colour scheme?

If you chose shape E and have given an answer out of the options for the colour schemes you may submit your filled out survey.

-Thank you for your participation and patience!