

MY JOURNEY TOWARDS IDENTITY

ADVANCED DESIGN PRACTICE

JOURNAL 3

DATA VISUALISATIONS

ELISABETH LAMMERSCHMIDT
MASTER OF DESIGN (PART TIME)
FIRST SEMESTER
STUDENT ID 1124708

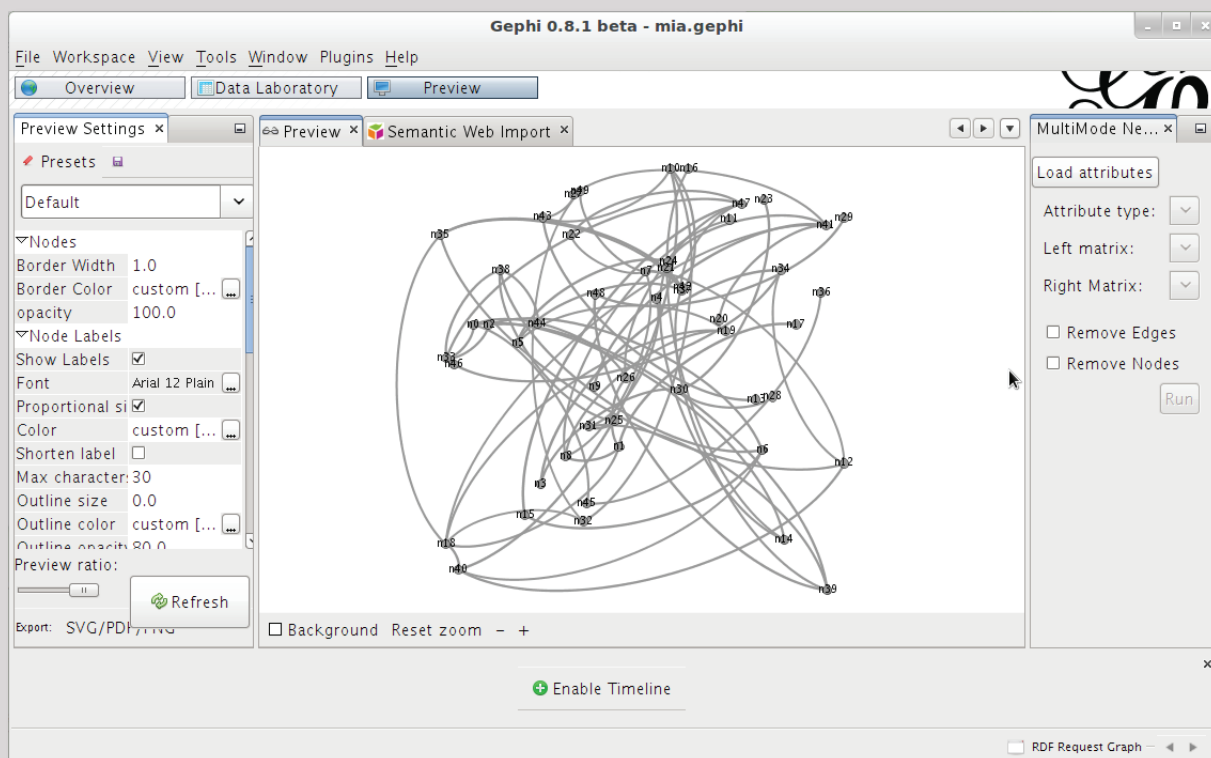


Data visualization and analysis tools						
Tool	Category	Multi-purpose visualization	Mapping	Platform	Skill level	Data stored or processed
Data Wrangler	Data cleaning	No	No	Browser	2	External server
Google Refine	Data cleaning	No	No	Browser	2	Local
R Project	Statistical analysis	Yes	With plugin	Linux, Mac OS X, Unix, Windows XP or later	4	Local
Google Fusion Tables	Visualization app/service	Yes	Yes	Browser	1	External server
Impure	Visualization app/service	Yes	No	Browser	3	Varies
Many Eyes	Visualization app/service	Yes	Limited	Browser	1	Public external server
Tableau Public	Visualization app/service	Yes	Yes	Windows	3	Public external server
VIDI	Visualization app/service	Yes	Yes	Browser	1	External server
Zoho Reports	Visualization app/service	Yes	No	Browser	2	External server
Choosel	Framework	Yes	Yes	Chrome, Firefox, Safari	4	Local or external server
Exhibit	Library	Yes	Yes	Code editor and browser	4	Local or external server
Google Chart Tools	Library and Visualization app/service	Yes	Yes	Code editor and browser	2	Local or external server
JavaScript InfoVis Toolkit	Library	Yes	No	Code editor and browser	4	Local or external server
Protovis	Library	Yes	Yes	Code editor and browser	4	Local or external server
Quantum GIS (QGIS)	GIS/mapping: Desktop	No	Yes	Linux, Unix, Mac OS X, Windows	4	Local
OpenHeatMap	GIS/mapping: Web	No	Yes	Browser	1	External server
OpenLayers	GIS/mapping: Web, Library	No	Yes	Code editor and browser	4	local or external server
OpenStreetMap	GIS/mapping: Web	No	Yes	Browser or desktops running Java	3	Local or external server

VISUALISATION SOFTWARE

The picture above shows all software I took into consideration of testing.

Gephi - Graph created from database (Test run)



Review by Kim Rees, Thu 15 July 2010 at 3:07 PM

http://infosthetics.com/archives/2010/07/review_gephi_graph_exploration_software.html

Overall, Gephi is a useful and interesting tool. It allows you to explore, create, and analyze network graphs in a fairly easy way. It offers many visualization options for any type of network and supports up to one million nodes and edges.

There are some plugins available for Gephi that extend the functionality. I used one called GeoLayout to make the Minard graph below.

The only thing keeping Gephi from being a professional grade tool is its bugginess and lack of documentation. If its development community can sustain it, Gephi should be able to improve and become a more robust software tool.

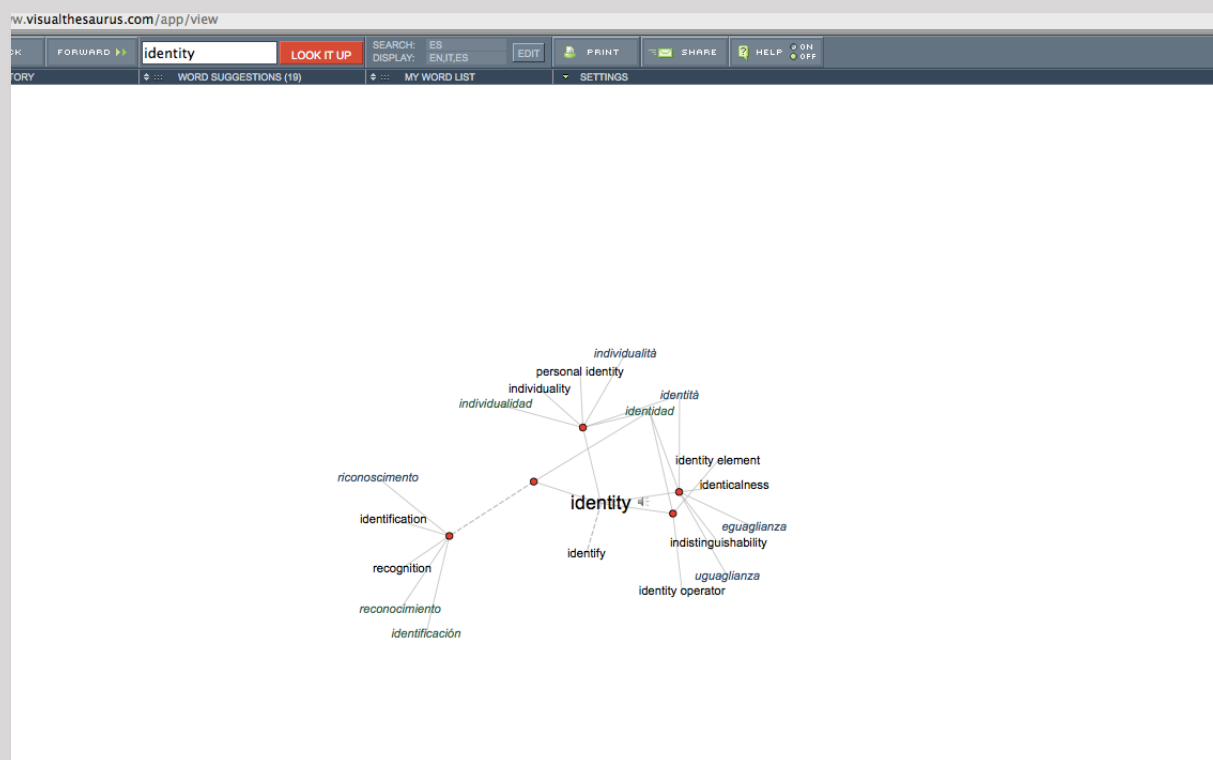
My personal experience

I found gephi a very powerful programme, but there are no tutorials so it takes quite a while to get used to it. There is no proper documentation and if problems occur you have to go to forums to find answers.

For my purposes it would have taken too long to get an efficient result. And this practice module is not about programming nor the use of visualisation tools.

These reasons were decisive for me to step back from gephi knowing that this might be the 'Photoshop' of visualisation tools, but too powerful and time consuming to learn.

Visual Thesaurus (Test run)



Review by Dictionary Software Reviews

<http://dictionary-software-review.toptenreviews.com/visual-thesaurus-review.html>

The Visual Thesaurus isn't like any other dictionary software in the review. There are 145,000 entries and all of them are linked together in one way or another. This might be a great tool for someone who is trying to increase their vocabulary because it shows the relationships between the words. The software has audio pronunciations and the parts of speech. You can also filter the words that will be displayed if you don't want to have certain content.

The help section consists of a button that you can turn on and then as you point to different parts of the program it will display a description. The program is very easy to install and to use and really doesn't have a learning curve.

There is also an online edition available that is only \$2.95 a month, or \$19.95 a year. The plus side to using the online edition is the access to vocabulary in Dutch, French, German, Italian and Spanish. A 14-day free trial is only available through the online edition.

My personal experience

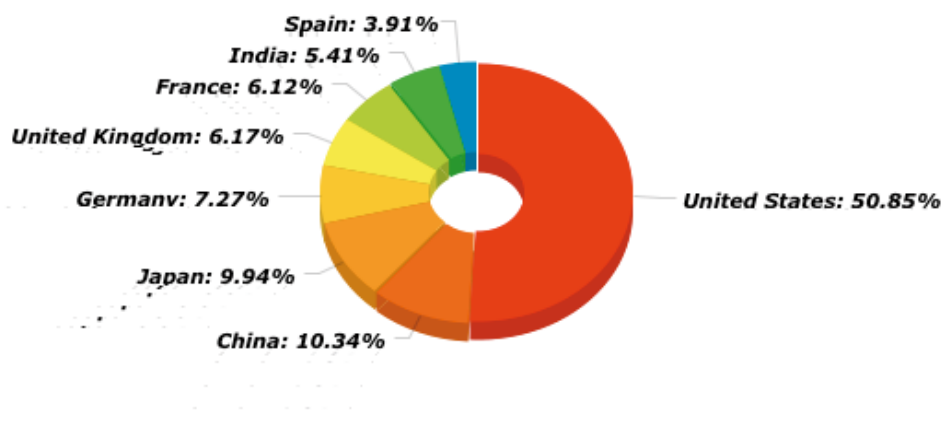
I found this programme quite interesting to visualise words and its connections it was fun to testing it, but it was not the right tools for me.

VISUALISATION SOFTWARE

AMCharts (Test run)

chart by amcharts.com

Visitors countries

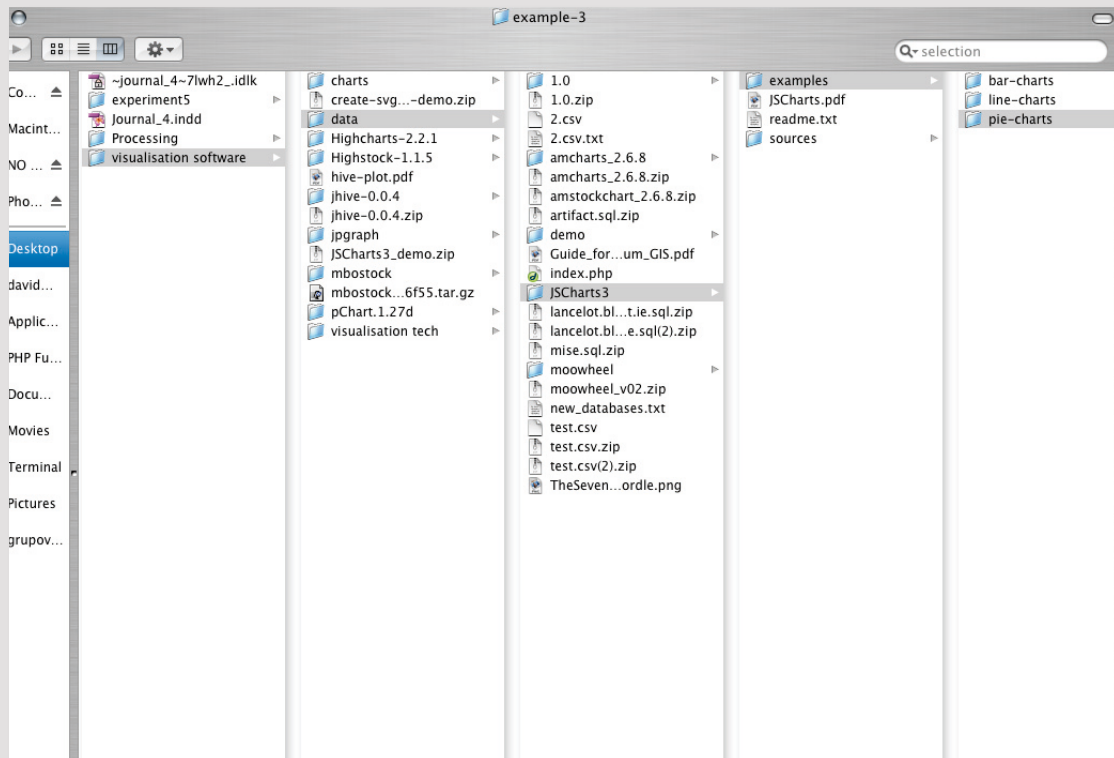


My personal experience

I found AmCharts quite a strange programme. And you can't really say its a proper programme with an interface either. AmCharts is actually a set of Flash charts for websites and web-based products. AmCharts can extract data from simple CSV or XML files, or read dynamic data generated with PHP, Java, Perl and many other programming languages.

This was again to complex, I was looking for a software with proper interface in which I can create and compare the data of my database.

Other software I tried (Test run)



My personal experience

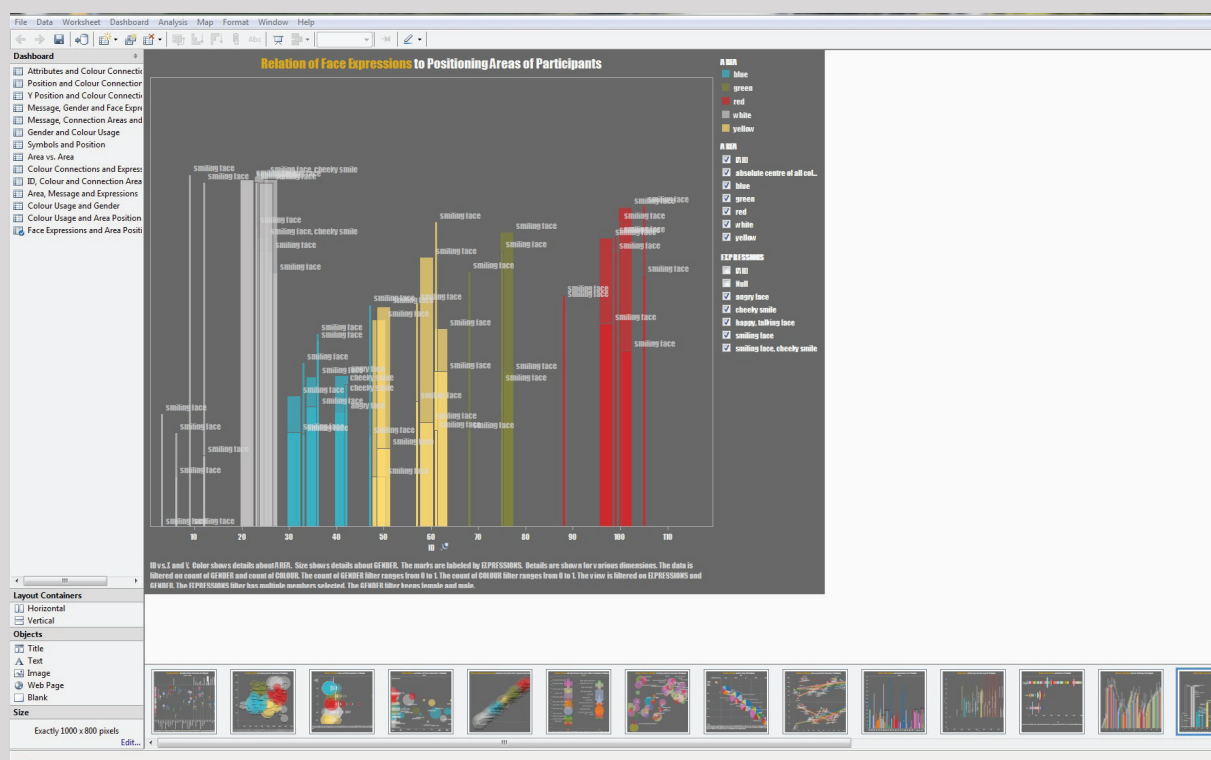
The screenshot above shows other visualisation tools I had a look at. Some of them I installed on my server and had test runs. Some I tried on their online platform.

Here is the list of all tools I tried:

- Gephi
- Visual Thesaurus
- Woordle
- Highcharts
- Highstock
- Jhive
- Jgraph
- JScharts
- Mbostock
- Pcharts
- Moowheel
- AmCharts
- AmStockcharts
- SimpleLiveCoding
- Processing
- Wondergraph (online tool)
- Many Eyes
- Tableau Public
- Picktochart
- Google Charts
- GGobi
- Google Spreadsheets Charts

VISUALISATION SOFTWARE

Tableau Public



My personal experience

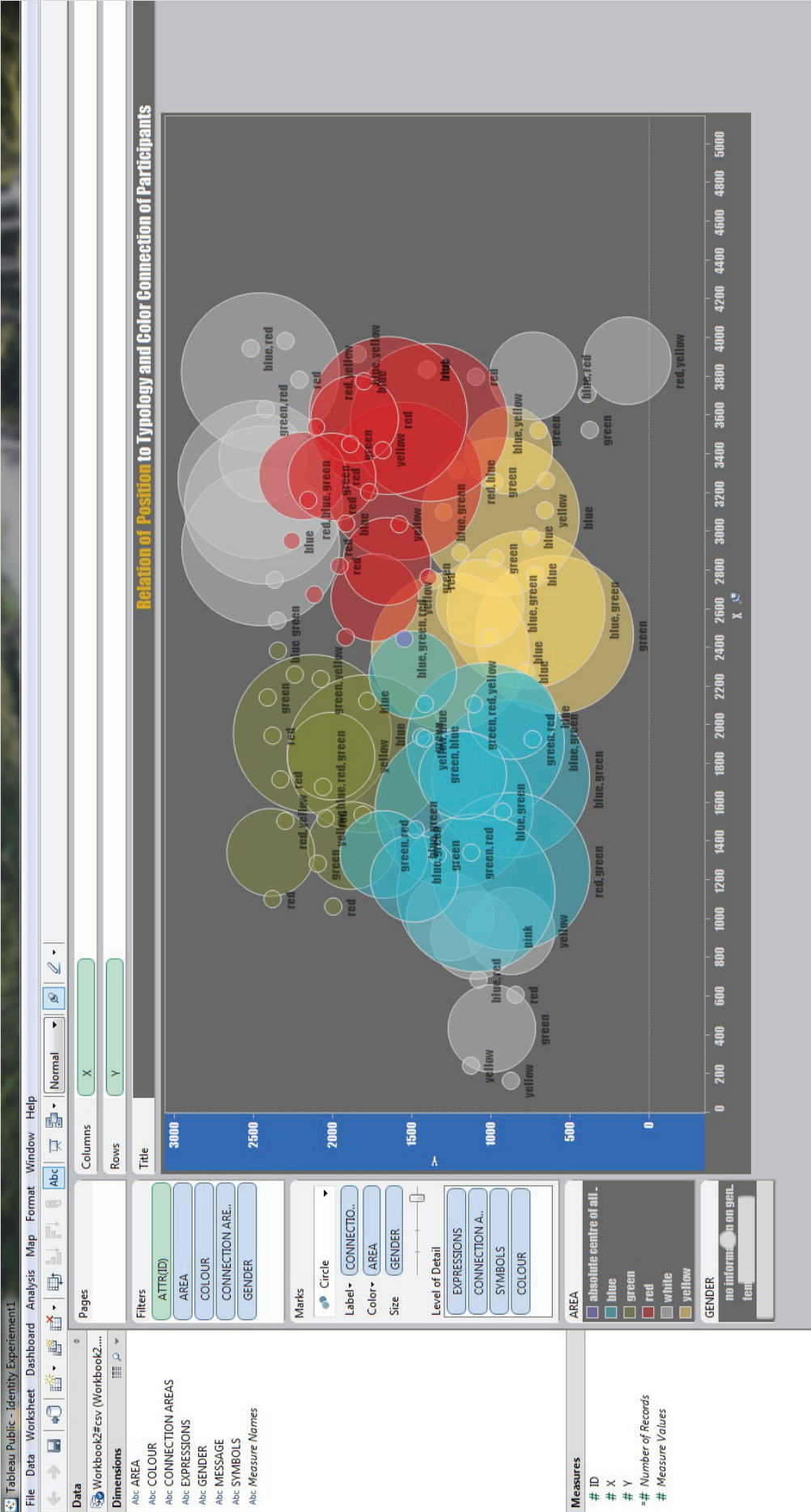
I decided to go with Tableau Public for various reasons:

pros:

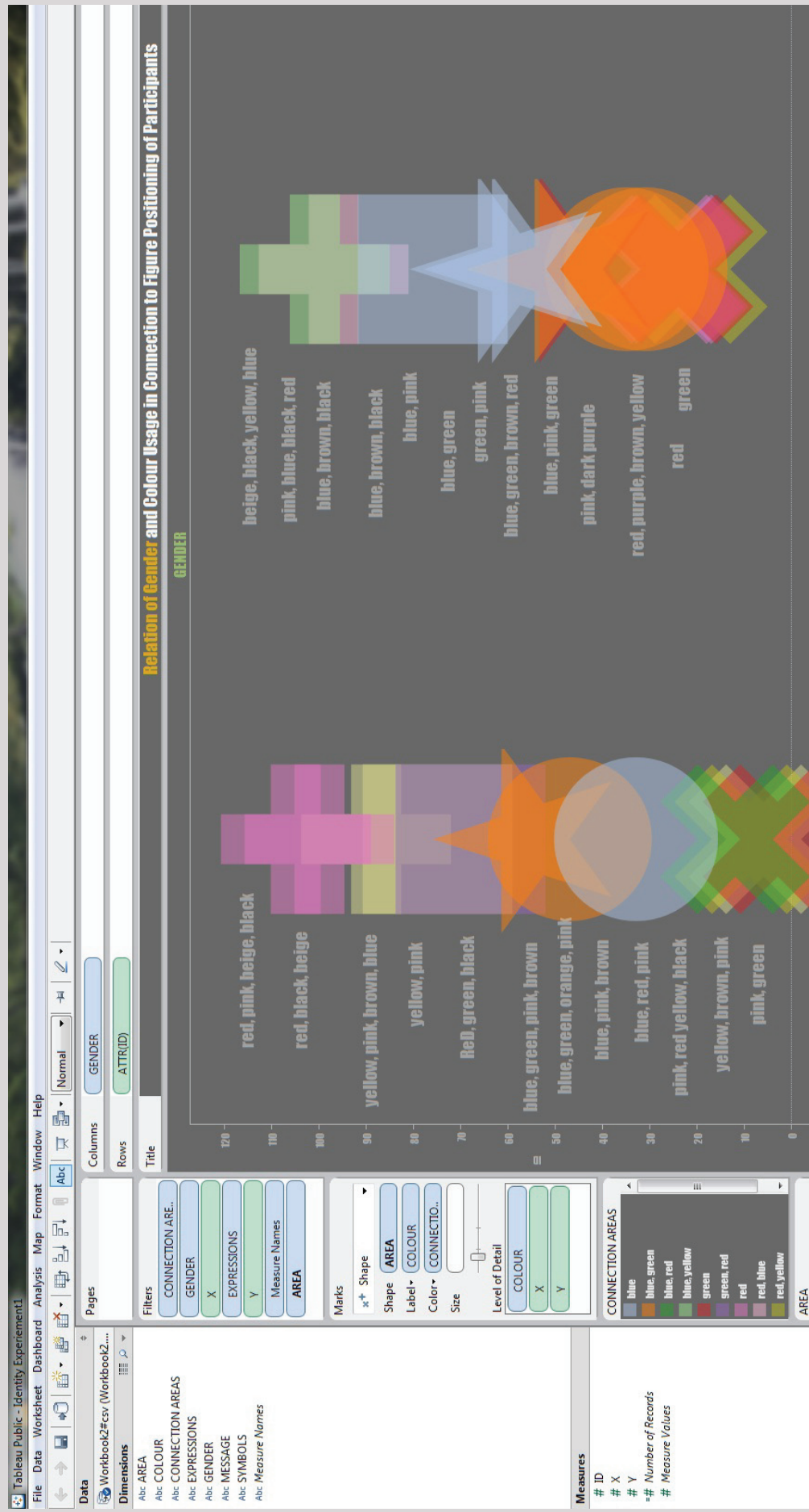
- perfect documentation
- user video tutorials to get familiar with software
- interactive charts with can be shown online
- buckets of features to compare or create graphs
- all data is connected/ read from a database
- easy to use

cons:

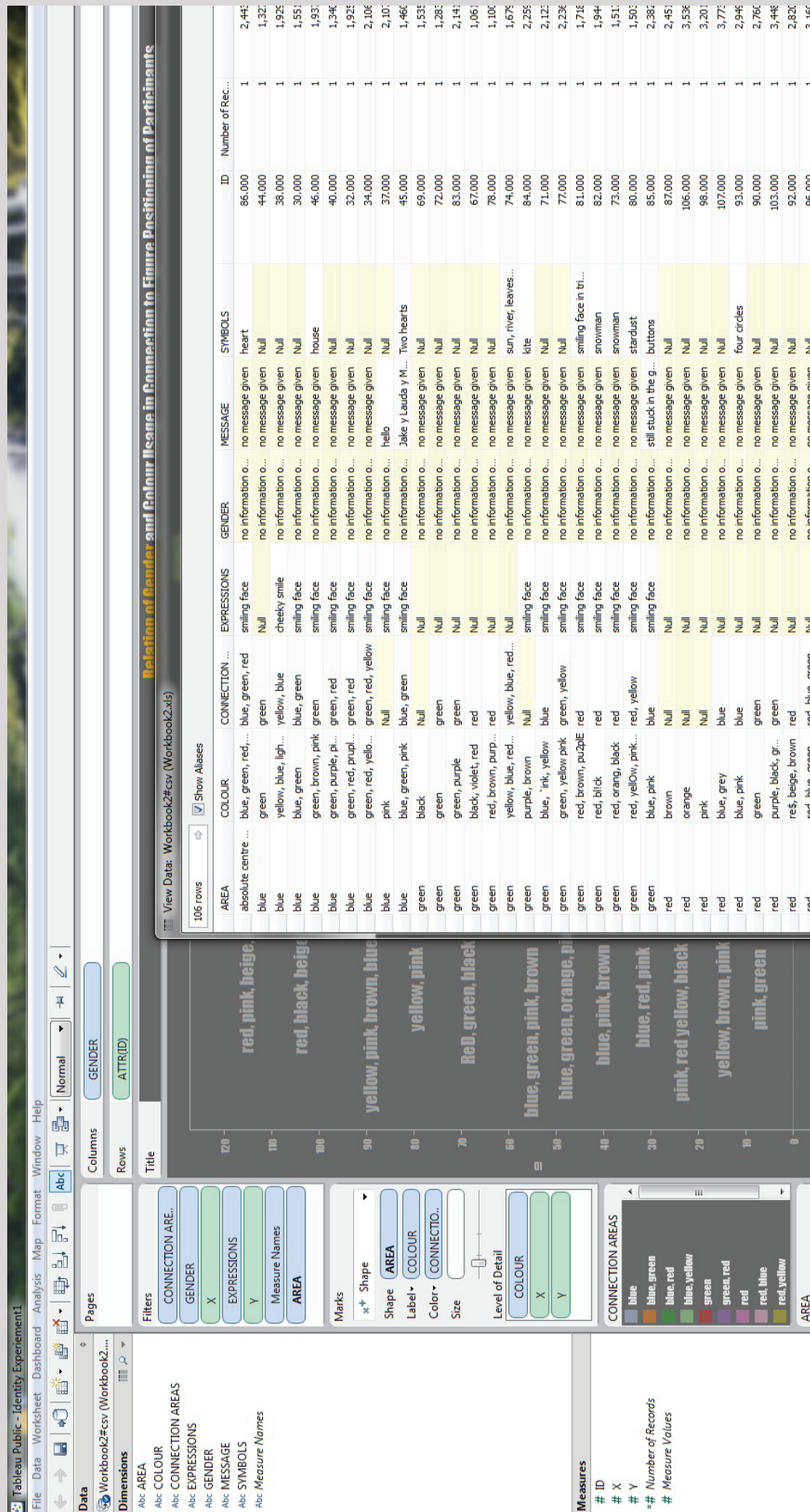
- data and worksheets are shared with the public
(this I wasn't to happy with in the beginning, but my data is not ground breaking at this stage, therefore I went with it after talking to Eve from the Family Resource Centre).



This is the interface of the tableau software, which I used to create the data visualisations. In order to work in this programme a database with sets of information is needed. I already created my database and could start working on a visualisation concept straight away. Please visit core database at: <http://www.kreators.net/experiment/index2.php>.



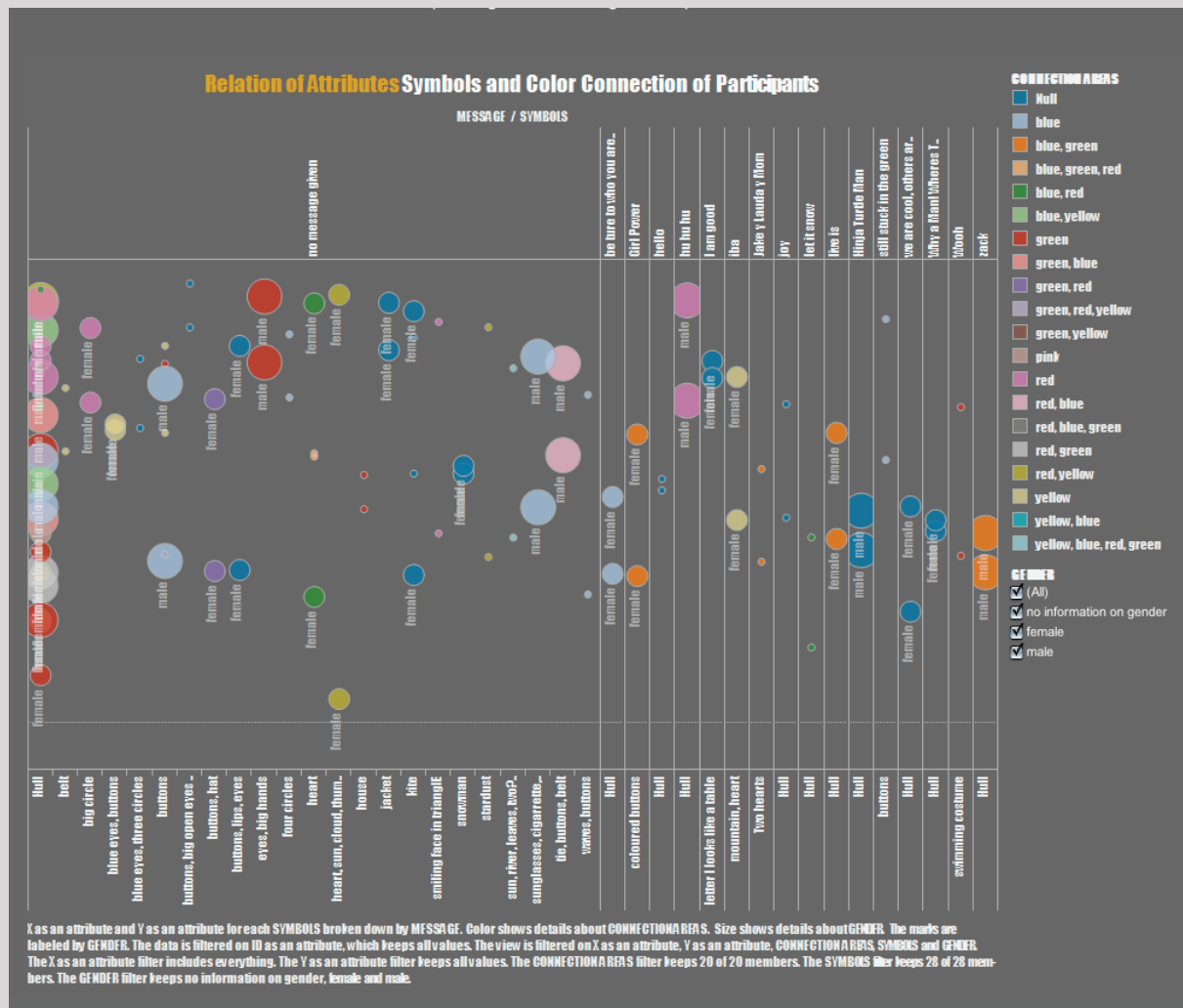
Data visualisations are created through columns, rows, filters, marks and level of detail of given information. It took me a while to understand the functions of the programme especially if you are looking for a specific result rather than a positive accidental happening.



In this picture we see the imported database with its information which is the bases on which the visualisations are created.

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited

Artefact 2



This artefact shows all participants, who left a message or/and a symbol on their personalised figure, whether they were male, female or left no information about their gender.

The colour of the connection area of each participant informs us about their typology.

I created interactive visualisations. Filters can be switched on and off by using a check box, to see the change in the visualisation immediately.

Please visit the visualisation on my website

www.kreators.net/experiment/test.html.

Please note: *This concept foresees, that all data information in combination is illustrating a picture of subconscious or predictive community behaviour/development which derives from the analysis of the first experiment in Journal 2.*

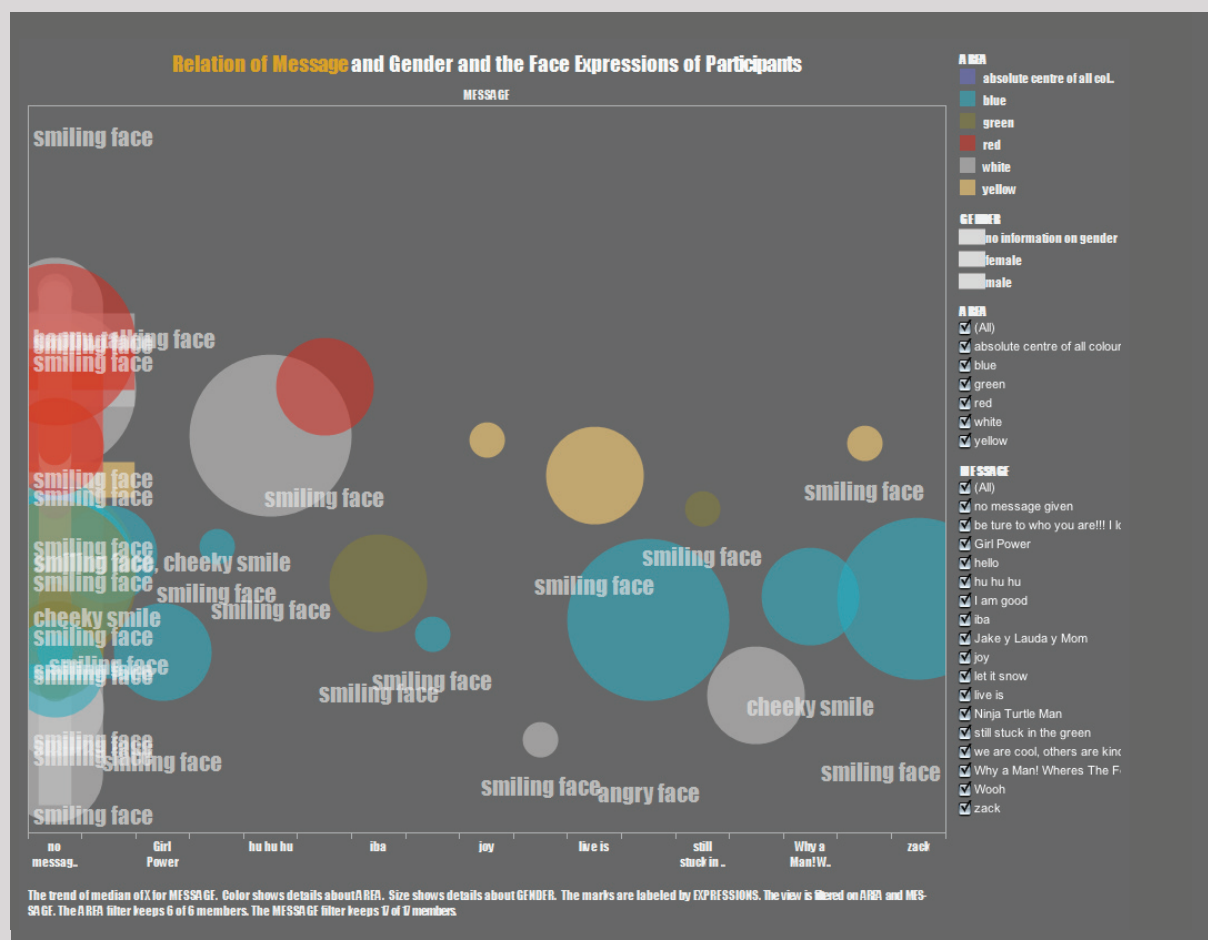
Concept of how the visualisation was developed in the software programme

X as an attribute and Y as an attribute for each symbols broken down by message. Color shows details about connection areas. Size shows details about gender. The marks are labeled by gender. The data is filtered on ID as an attribute, which keeps all values. The view is filtered on X as an attribute, Y as an attribute, connection areas, symbols and gender. The X as an attribute filter includes everything. The Y as an attribute keeps all values. The connection areas filter keeps 20 of 20 members. The symbols filter keeps 28 of 28 members. The gender filter keeps no information on gender, female and male.

*coloured words are filters and attributes applied to the database to create this visualisation

*coloured words are filters and attributes applied to the database to create this visualisation

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited Artefact 5



This artefact shows the position on the x coordinate of the people who left a message on their figure.

The size of the circles is created through their gender and the strength of their expressions. The colour gives indications which area the participants belong to.

This graph shows that members of the blue area did not only have the strongest emotional expression, they also revealed most about them in their messages written on their figure.

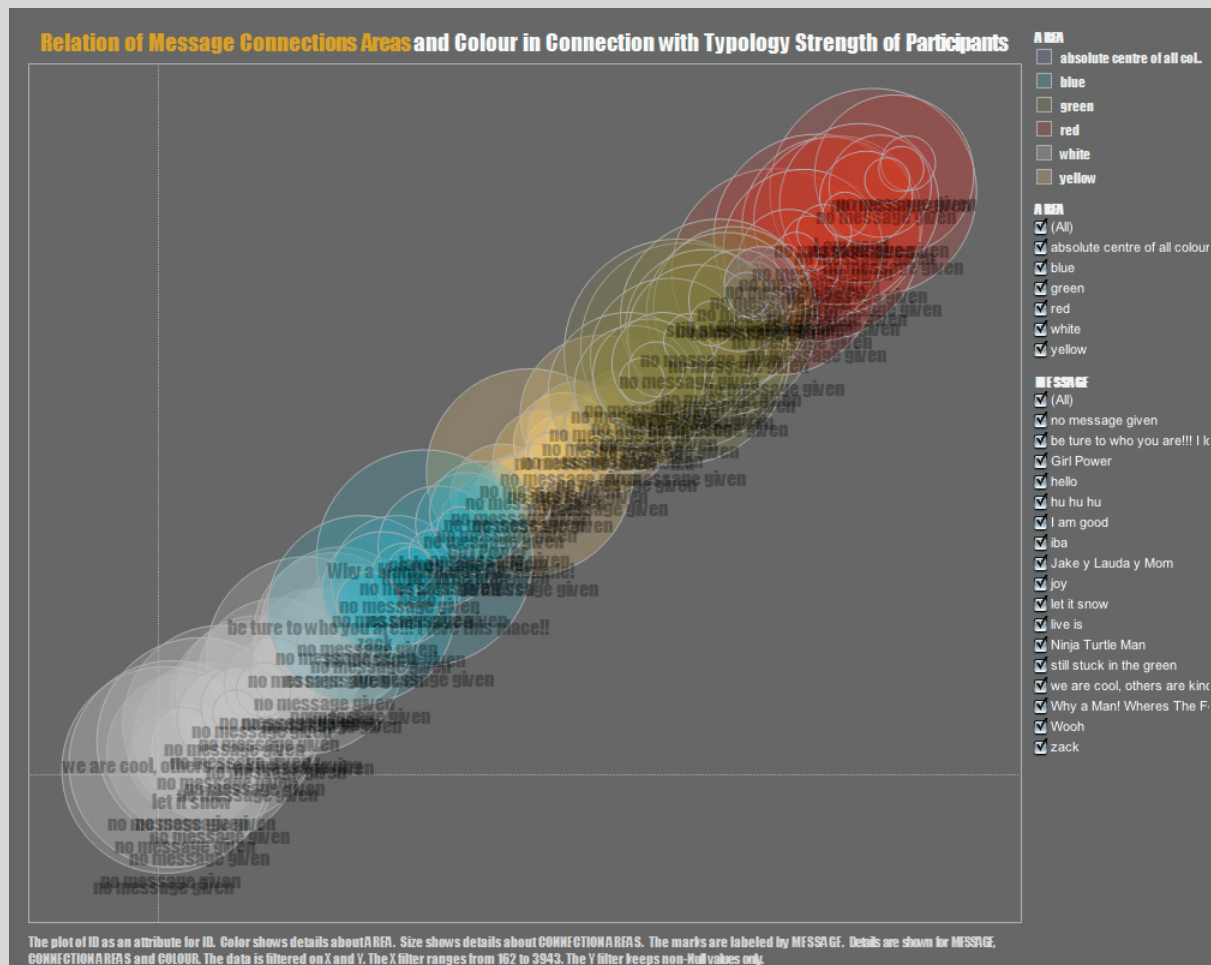
Concept of how the visualisation was developed in the software programme

The trend of median of X for Message. Colour shows details about area. Size shows details about gender. The marks are labeled by expressions. The view is filtered on area and message. The area filter keeps no members. The Message filter keeps no members.

*coloured words are filters and attributes applied to the database to create this visualisation

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited

Artefact 6



This artefact shows the strength of the areas filtered through message, connection area and colour including their positioning in the experiment. This artefact is very interesting and refers straight back to the first analysis of the experiment, in which I conclude that red is the strongest area, green and yellow are avoided in cooperation by the red area. Whereas the blue area is most important for the red area to fulfil tasks.

In this artefact red is the strongest area, followed by green, then yellow, blue and white. However there are as well progressions and overlapping into other areas visible, which are the result of the connection areas.

Concept of how the visualisation was developed in the software programme

The plot of ID as an attribute for ID. Colour shows details about area. Size shows details about connection area. The marks are labeled by message. Details are shown for message, connection areas and colour. The data is filtered on X and Y. The X filter ranges from 162 to 3943. The filter keeps non-Null values only.

*coloured words are filters and attributes applied to the database to create this visualisation

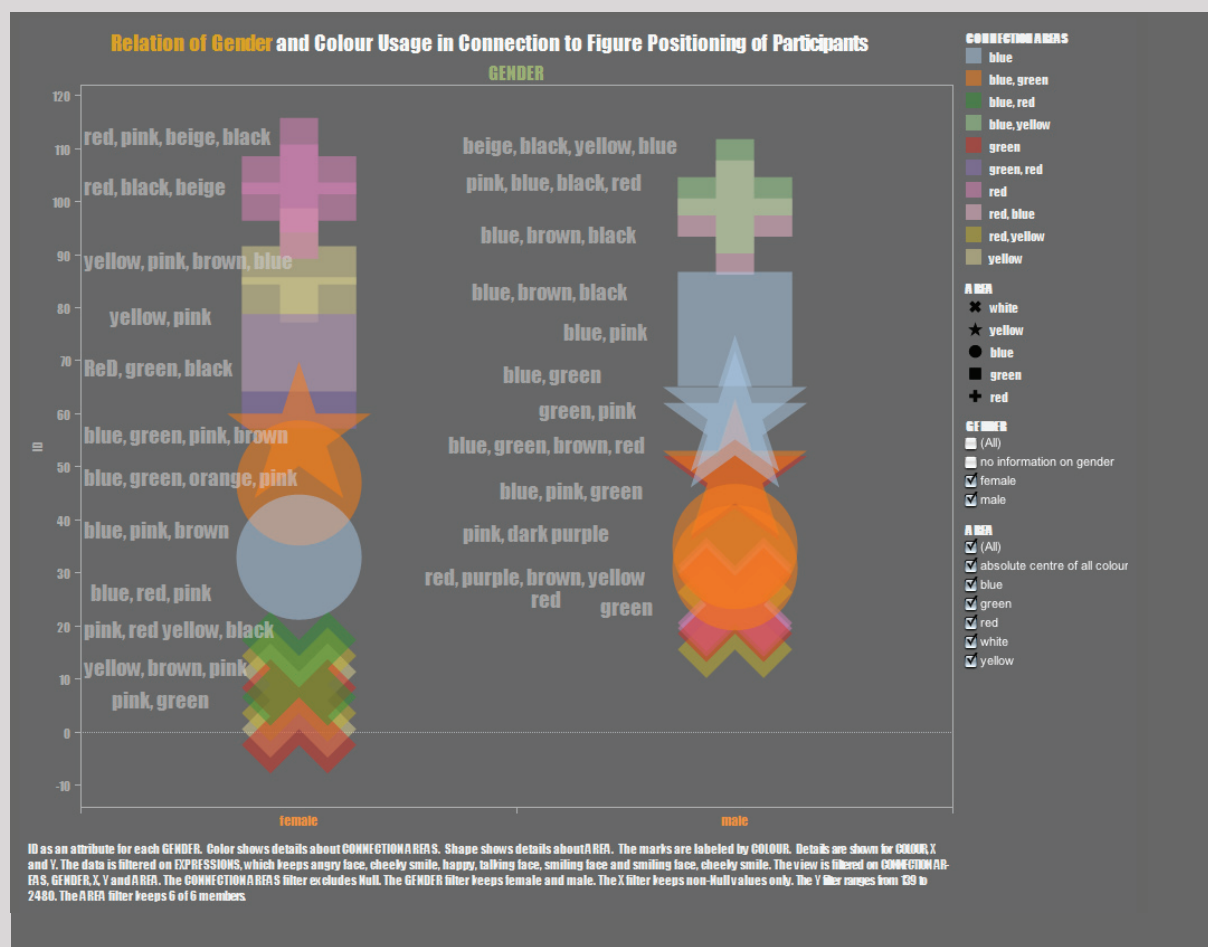
I created interactive visualisations. Filters can be switched on and off by using a check box, to see the change in the visualisation immediately.

Please visit the visualisation on my website

www.kreators.net/experiment/test.html.

Please note: *This concept foresees, that all data information in combination is illustrating a picture of subconscious or predictive community behaviour/ development which derives from the analysis of the first experiment in Journal 2.*

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited Artefact 7



This artefact shows the trend of positioning for male and female participants of the experiment. The positioning of the symbols are representing the areas red, green, blue, yellow and white and are filtered through the connection areas and the progression of individuals towards another area through their connection colours.

Overall this artefact illustrates that females of the blue, yellow, green and red area are merging into each other while the white area is more isolated. In contrast to this the males of the white, blue and yellow area are overlapping each other strongly, whereas the green and red area are more isolated in itself. Furthermore the colour expressions of male and female are different.

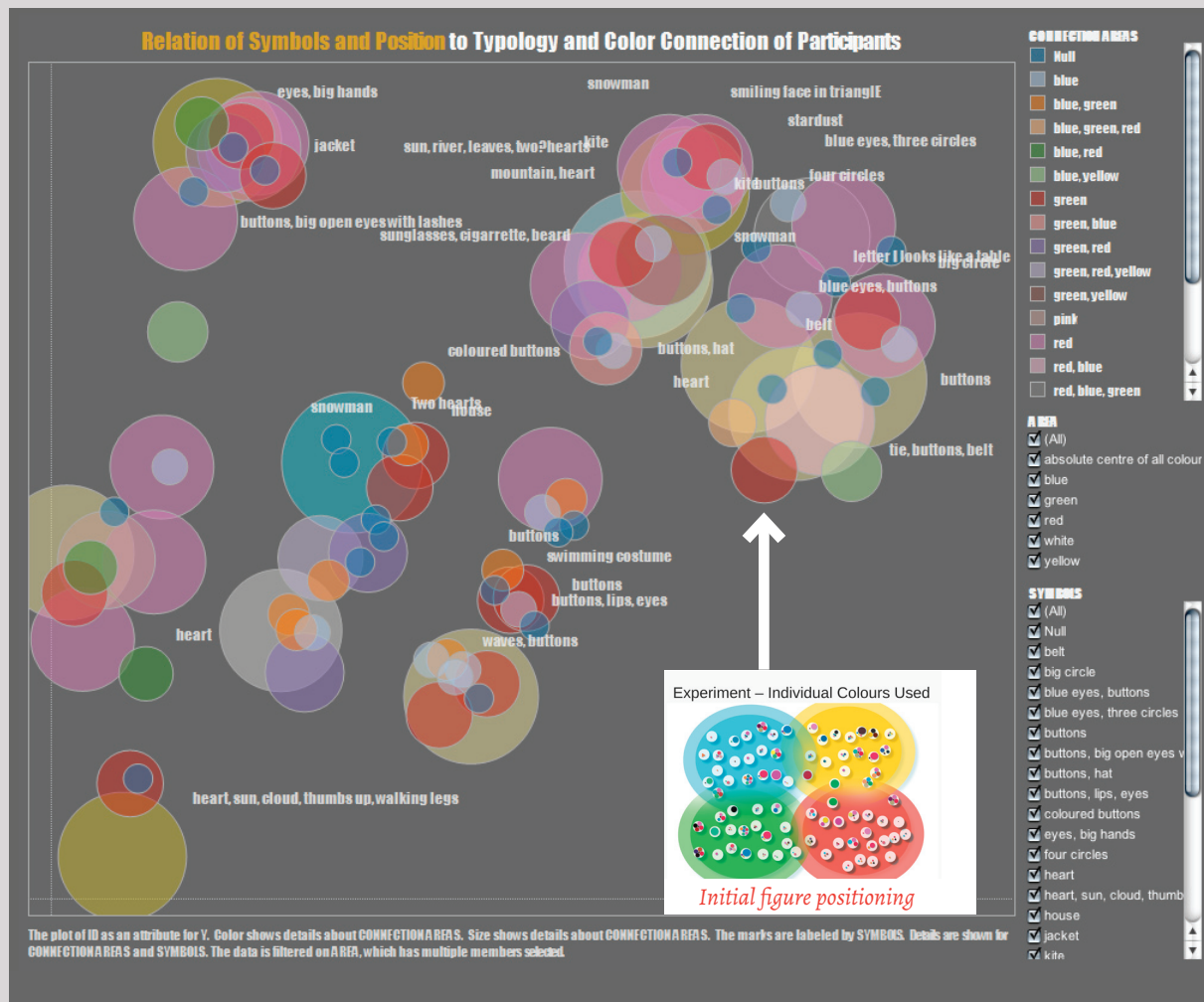
Concept of how the visualisation was developed in the software programme

ID is an attribute for each gender. Colour shows details about connection areas. Shape shows details about AREA. The marks are labeled by colour. Details are shown for colour, X and Y. The data is filtered on expressions, which has multiple members selected. The view is filtered on connection areas, gender, X, Y and area. The connection areas filter has multiple members selected. The gender filter keeps female and male. The X filter keeps non-Null values only. The Y filter ranges from 139 to 2480. The area filter keeps multiple members.

*coloured words are filters and attributes applied to the database to create this visualisation

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited

Artefact 8



This artefact shows the total positioning of figures as a plot rearranged in its transitions towards its connection areas, symbols deriving from its initial positioning in the original areas.

It shows as well that conscious positioning that is visible is deeply connected with subconscious behaviour expressed through colour, expression and message. Only all information will give a more authentic picture about individual identity.

I conclude that what is not shown, said or expressed by individuals is as important than what it represented directly.

Concept of how the visualisation was developed in the software programme

The plot of ID as an attribute for Y. Color shows details about connection areas. Size shows details about connection areas. The marks are labeled by symbols. Details are shown for connection areas and symbols. The data is filtered on area, which has multiple members selected.

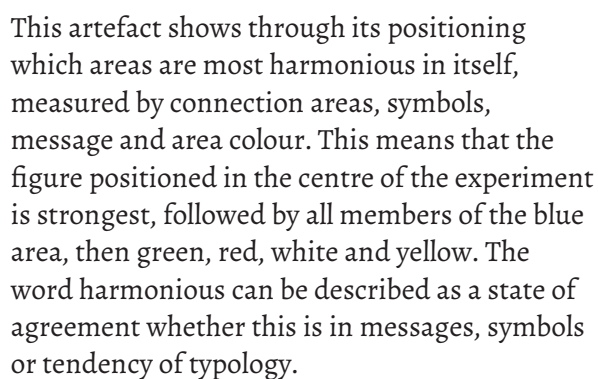
*coloured words are filters and attributes applied to the database to create this visualisation

I created interactive visualisations. Filters can be switched on and off by using a check box, to see the change in the visualisation immediately.

Please visit the visualisation on my website

www.kreators.net/experiment/test.html.

Please note: *This concept foresees, that all data information in combination is illustrating a picture of subconscious or predictive community behaviour/ development which derives from the analysis of the first experiment in Journal 2.*

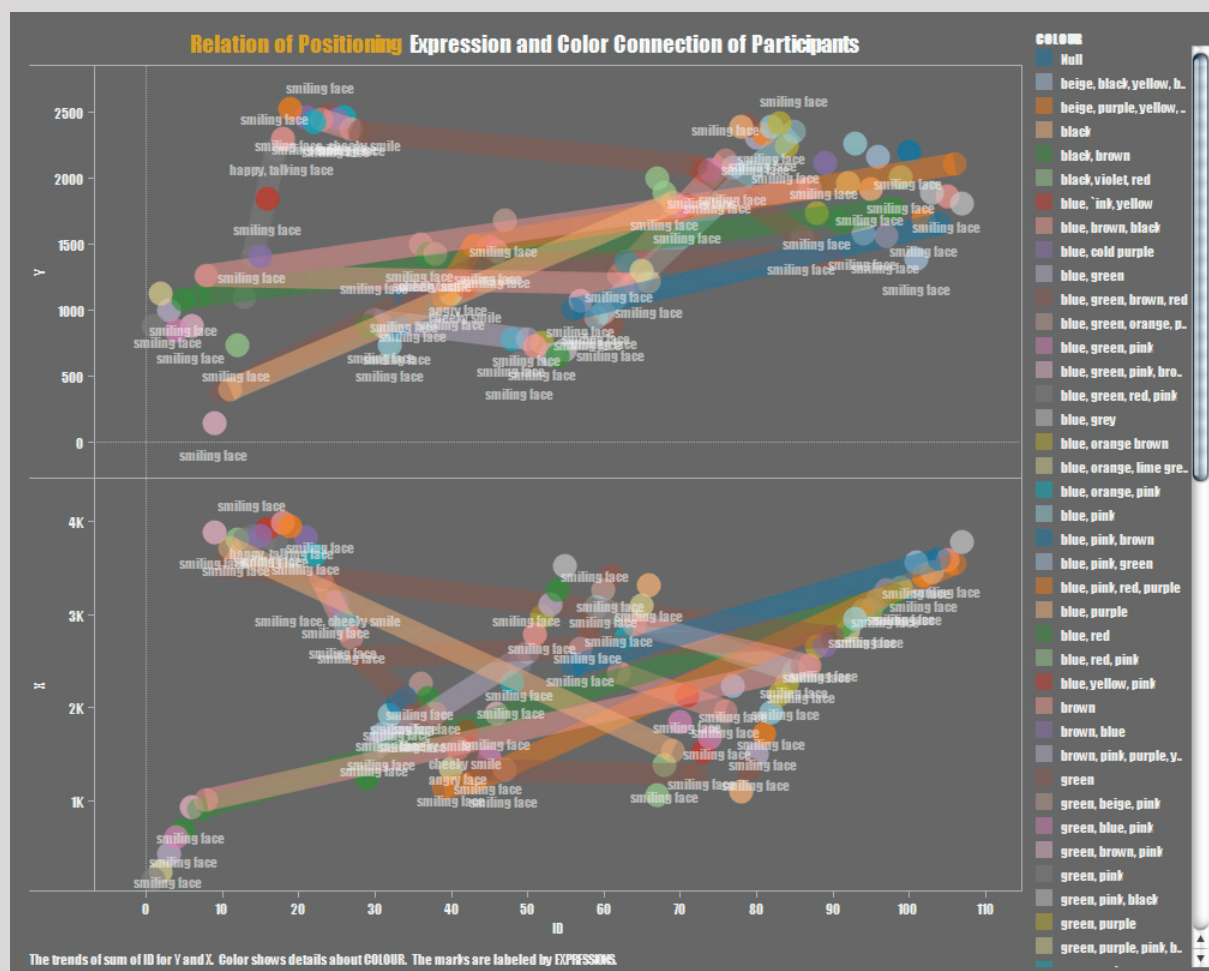


Symbols broken down by area vs. area. Color shows details about connection areas. Size shows sum of Y. The marks are labeled by symbols. Details are shown for message, symbols and colour. The data is filtered on Y, which keeps all values. The view is filtered on X, area and symbols. The X filter keeps all values. The area filter keeps multiple members. The symbols filter keeps multiple members.

*coloured words are filters and attributes applied to the database to create this visualisation

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited

Artefact 9



This artefact shows, how the movement of figures in the X and Y coordinates is most likely to be anticipated.

This result is based on the colour connections of each figure and the strength of its expression. The above picture shows as well that the movement for both coordinates is **not** identical. Therefore it is possible that figures could change direction to express a different typology of their identity in the future (*multi-layered identities and their expressions*).

This result illustrates an already manifested subconscious movement of identity representation, which is not yet visible and therefore a hidden trend (*at this point in time*), that will spark changes in group dynamics and leads to an adaptation of expressed identity at a later stage.

Concept of how the visualisation was developed in the software programme

The trends of sum of ID for Y and X. Color shows detail about colour. The marks are labeled by expressions.

*coloured words are filters and attributes applied to the database to create this visualisation

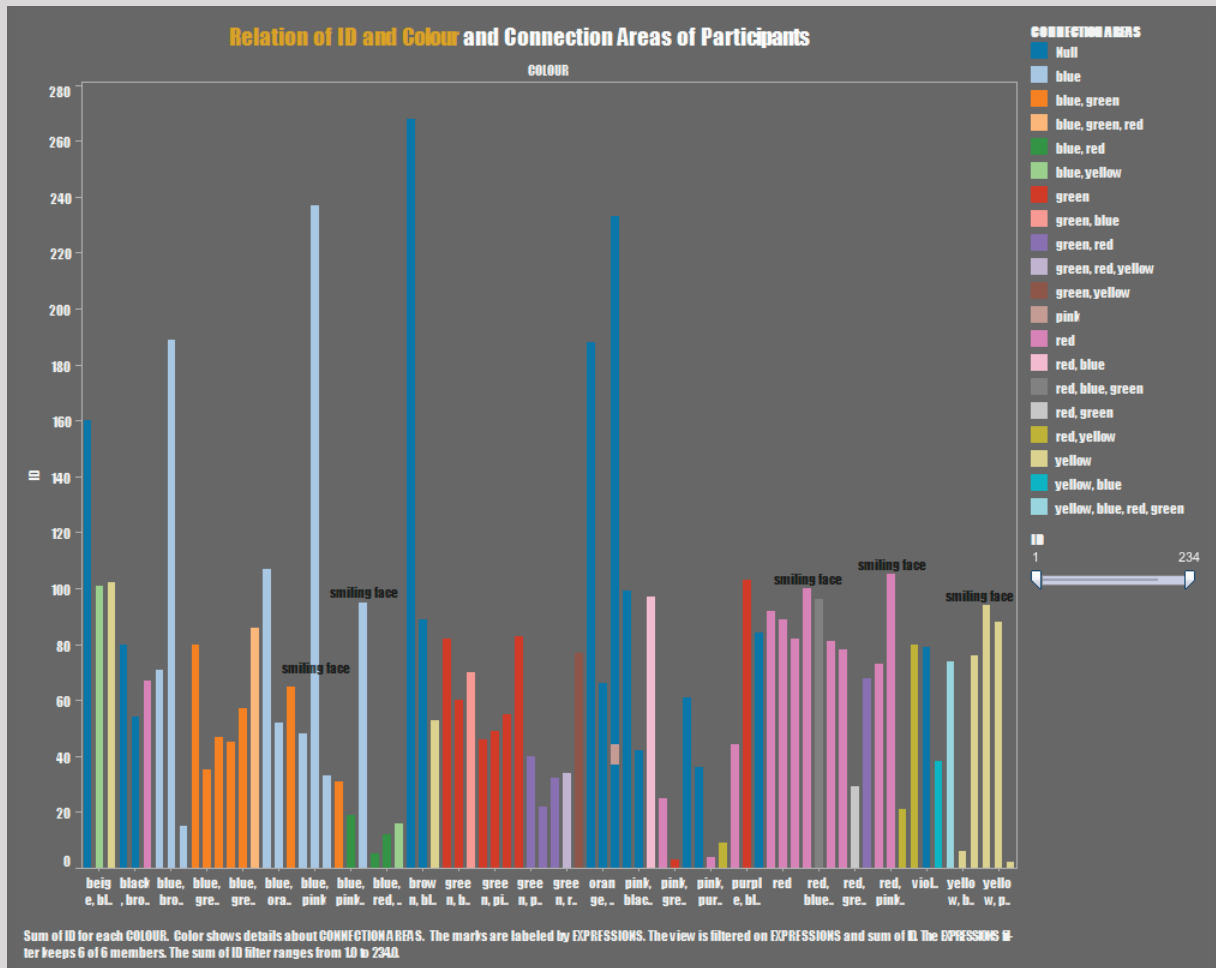
I created interactive visualisations. Filters can be switched on and off by using a check box, to see the change in the visualisation immediately.

Please visit the visualisation on my website

www.kreators.net/experiment/test.html.

Please note: *This concept foresees, that all data information in combination is illustrating a picture of subconscious or predictive community behaviour/development which derives from the analysis of the first experiment in Journal 2.*

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited
Artefact 9a (not taken into analysis)



This artefact shows the trend of connection colours used by figures in each area. It shows as well the most popular colour combinations used multiple times.

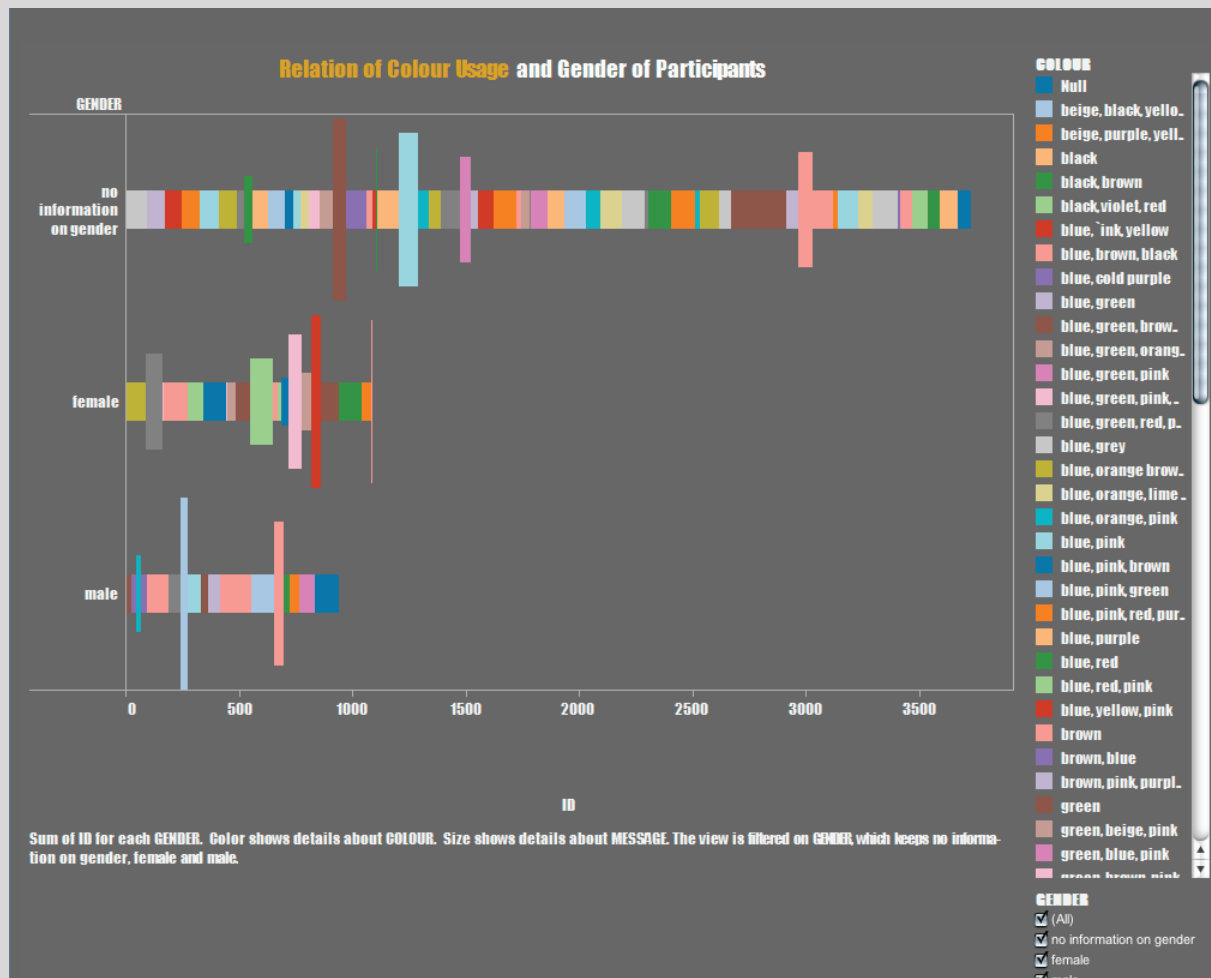
Concept of how the visualisation was developed in the software programme

Sum of ID for each colour. Colour shows details about connection areas. The marks are labeled by expressions. The view is filtered on expressions and sum of ID. The expressions filter keeps multiple members. The sum of ID filters ranges from 10 to 2340.

*coloured words are filters and attributes applied to the database to create this visualisation

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited

Artefact 10



This artefact shows the colours used to personalise the figures in the experiment. We can see that female used different colours than the male and submitted more messages than the male counterpart.

Concept of how the visualisation was developed in the software programme

Sum of ID for each gender. Colour shows details about connection areas. Size shows details about message. The view is filtered on gender, which keeps no information on gender, female and male.

*coloured words are filters and attributes applied to the database to create this visualisation

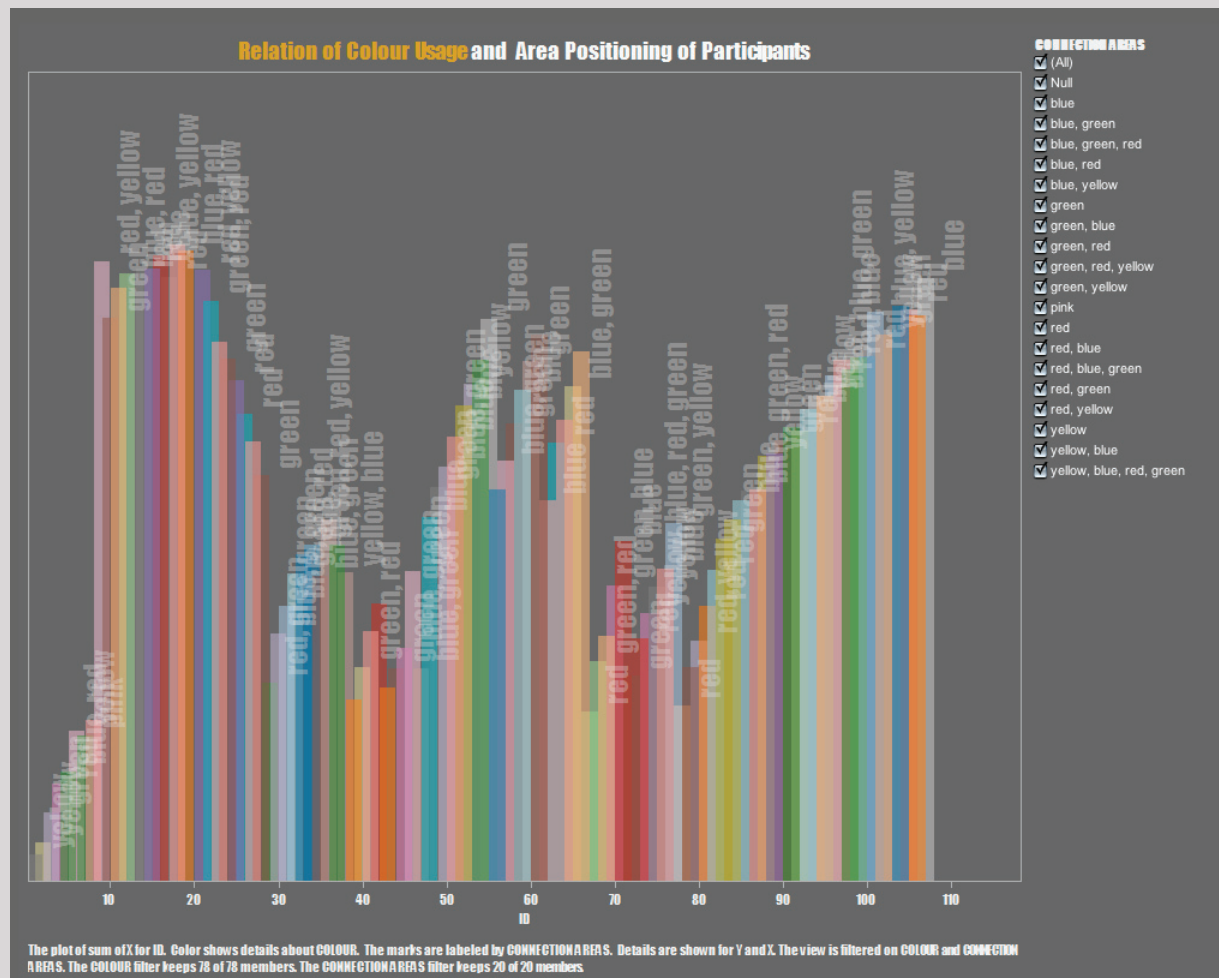
I created interactive visualisations. Filters can be switched on and off by using a check box, to see the change in the visualisation immediately.

Please visit the visualisation on my website

www.kreators.net/experiment/test.html.

Please note: *This concept foresees, that all data information in combination is illustrating a picture of subconscious or predictive community behaviour/ development which derives from the analysis of the first experiment in Journal 2.*

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited Artefact 11



This artefact shows participants usage of colours, which were identified as connection areas, regardless where the figure was positioned initially. The most popular colour and colour combinations in the overall experiment are: 1. brown; 2. blue, pink, red and purple; 3. blue, yellow, pink; 4. pink, red, yellow, black; 5. blue, grey.

In colour psychology brown stands for:

- Stability: Reassuring and comforting, earthy and contained.
- Structure: It encourages orderliness and organization.
- Security: Safe and protective - a refuge from the chaos of the outside world and a sense of belonging.
- Natural and wholesome: related to the earth, nutrition, health and goodness.

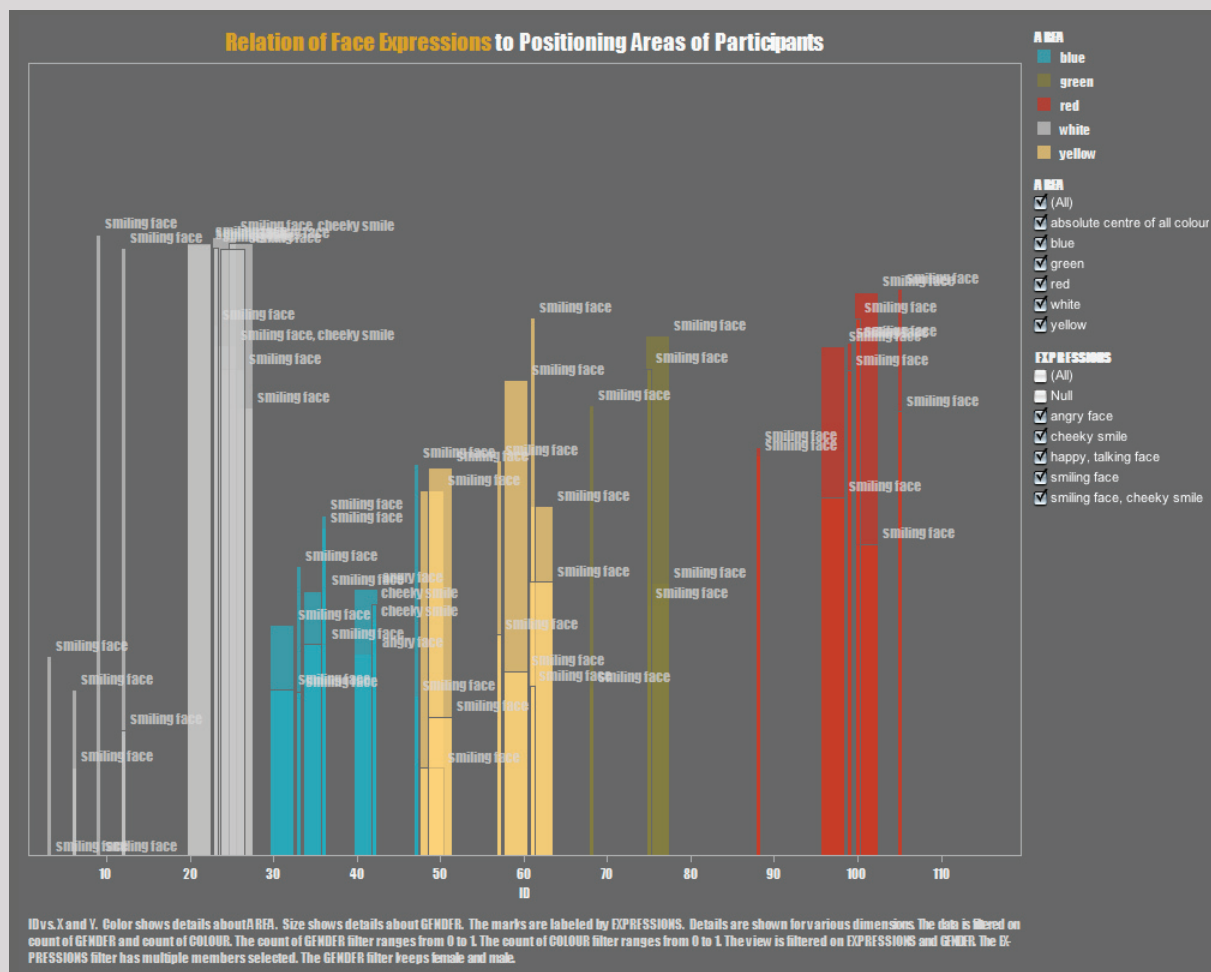
Concept of how the visualisation was developed in the software programme

Sum of ID for each gender. Colour shows details about connection areas. Size shows details about message. The view is filtered on gender, which keeps no information on gender, female and male.

*coloured words are filters and attributes applied to the database to create this visualisation

The Ballincollig Family Resource Centre experiment 'The Identity Wall' revisited

Artefact 12



This artefact shows all participants and the facial expressions of their figures. It is quite interesting to see that the white area is amongst those with the most used smiling faces, followed by the red and yellow area. Only few participants in the green area used facial expressions, while the blue area was the only area where angry faces could be found.

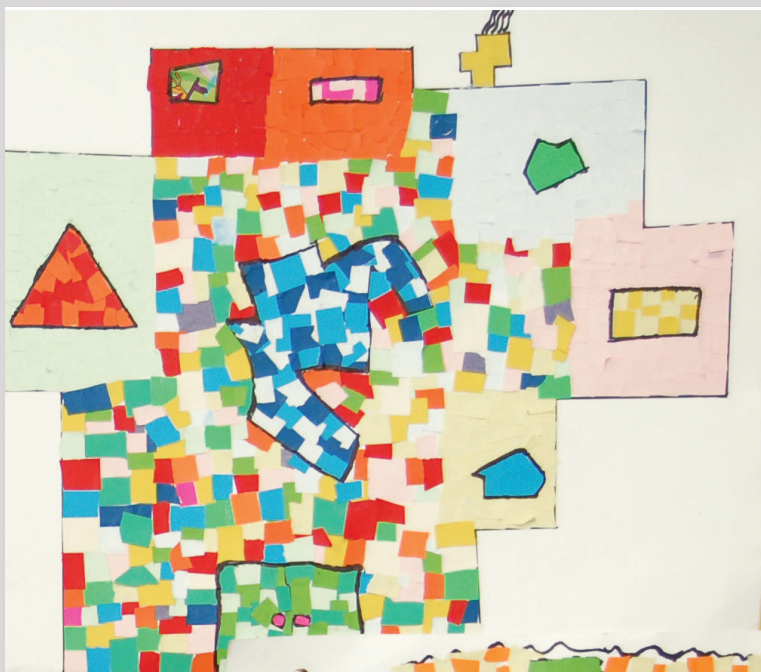
Concept of how the visualisation was developed in the software programme

ID vs. X and Y. Colour shows details about AREA. Size shows details GENDER. The marks are labeled by expressions. Details are shown for various dimensions. The data is filtered on count of gender and count of colour. The count of gender filter ranges from 0 to 1. The count of colour filter ranges from 0 to 1. The view is filtered on expression and gender. The expressions filter has multiple members selected. The gender filter keeps female and male.

*coloured words are filters and attributes applied to the database to create this visualisation

The students were asked to create an artwork visualising how they see themselves and their home.

(Individual identity work is very important for Irish Schools. It is not only to promote the Irish Language - essentially: What makes Ireland and the Irish people Irish? Is it the language, conventions, tradition, values, gaelic sports, communities, history, food?)



I know the Gaelscoil Uí Ríordáin very well as I did their website and trained the staff to maintain it. This school is incredibly creative in their approach and therefore very successful. Identity work starts here at a very young age and goes right through to the Leaving Certificate. I want to show you their Mission Statement in Irish and English.

Ráiteas Misiúin

Is Gaelscoil í Gaelscoil Uí Ríordáin a fhreastalaíonn ar riachtanais an pháiste mar bhall aonair den phobal áitiúil. Díritear ar fhorbairt iomlán an pháiste; forbairt spioradáltacht, morálach, soisialta, pearsanta agus fisiciúil. Cuirtear an churaclam i bhfeidhm in atmaisféar oideachasúil taitneamhach ag tabhairt aitheantas do gach éinne i slí gairmiúil.

Aidhmeanna

- * Ardchaighdeán oideachais trí Ghaeilge a chur ar fáil do scoláirí na scoile.
- * Suíomh taitneamhach a chruthú do na scoláirí ionas go mbainfidh siad sult, spórt agus tairbhe as na laethanta a chaitheann siad ar scoil.
- * Féin mhuinín na scoláirí a fhorbairt ionas go mbeidh siad lán do fhéinmhes agus do mhisneach.
- * Atmaisféar dearfach, sábhailte a chothú sa tslí go mbeidh pobal na scoile slán sábhálta.
- * Difríochtaí aonair a athint agus freastal cóir a dhéanamh ar na dúshláin ar fad.
- * Ardmheas ar an nGaeilge a fhorbairt i measc pobal na scoile agus sa cheanntar mórthimpeall.
- * Deiseanna a thabhairt ar fhorbairt iomlán a dhéanamh ar churaclam na bunscoile.
- * Eagsúlacht modhanna múinte a úsáid, rud a thabharfaidh réimse leathan eispéiris do na scoláirí.
- * Cluas na héisteachta a thabhairt do gach duine a oibríonn agus a fhreastalaíonn ar an scoil.

ARTWORK OF STUDENTS OF THE IRISH SCHOOL IN BALLINCOLLIG

The above pictures are from the Irish School in Ballincollig, where Irish is the first and English the second spoken language. I got in contact with one of the teachers who knew I was doing identity experiments for the Family Resource Centre. He gave me pictures of some relevant students artwork for me

to use in my journal and this journal only in order to analyse them. **I am not allowed to publish or use them otherwise the copyrights belong to the students and the Irish School of Ballincollig.** These works are relevant in the context that they derive from the Ballincollig Community, and some of these children could



Mission Statement

Gaelscoil Uí Ríordáin is an Irish primary school that attends to the needs of each child as an individual of the local community. The full development of the child is emphasised which include spiritual, moral, social, personal and physical development. The curriculum is approached in an enjoyable, educational atmosphere acknowledging every child educationally.

School Objectives

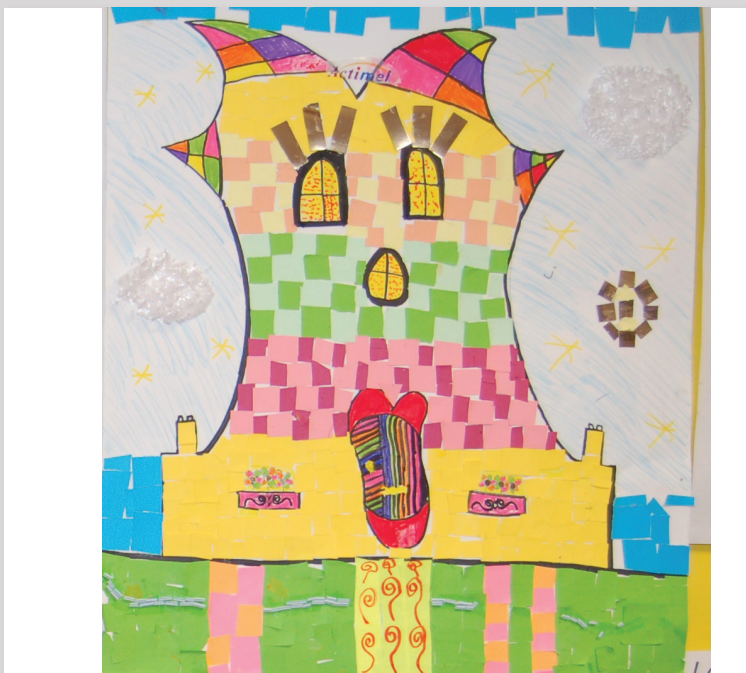
- * To provide a high standard of education for the pupils of the school through Irish.
- * To create an enjoyable environment for the pupils in order for them to enjoy and benefit from their school days.
- * To develop the pupils self-confidence so that they are full of self-respect and courage.
- * To create a positive and safe atmosphere so that the school community are safe and well.
- * To acknowledge individual differences and to provide for and attend justly to all the challenges.
- * To develop a high respect for Irish in the school community and in the locality.
- * To provide opportunities to fully develop the primary school curriculum.
- * To use a variety of teaching strategies and approaches, which will give the pupils a wide variety of experiences.
- * To listen to every individual both attending and working in the school.



have participated in the first experiment, as they are children to use the educational support provided by the Family Resource Centre.

The students were asked to create an artwork visualising how they see themselves and their home.

(Individual identity work is very important for Irish Schools. It is not only to promote the Irish Language - essentially: What makes Ireland and the Irish people Irish? Is it the language, conventions, tradition, values, gaelic sports, communities, history, food?)



Task One:

I sat down looked at the artwork and wrote down in 4 minutes the first thoughts coming into my head:

1. beautiful pieces of art
2. very creative
3. every single artwork is very unique
4. artwork is very expressive
5. artists seem to be strong personalities
6. artworks are telling stories
7. very colourful
8. attention to detail
9. some artwork is critical



**ARTWORK OF
STUDENTS OF THE
IRISH SCHOOL IN
BALLINCOLLIG**

The students were asked to create an artwork as portrait how they see themselves.



**ARTWORK OF
STUDENTS OF THE
IRISH SCHOOL IN
BALLINCOLLIG**

The artworks are illustrating how children perceive identity, their community and their world around them in a much more unfiltered fashion as adults do. I see above fact as a quality, adults can learn from. I think by listening and include more groups of children, teenagers and young adults into identity campaigns will lead to surprising results, as these groups are often highly creative as they haven't experienced the limitations of adult and working life. Sometimes their ideals and values, we discard as impossible or not practical enough might include some genius, which might lead to some outstanding solutions.



ARTWORK OF
STUDENTS OF THE
IRISH SCHOOL IN
BALLINCOLLIG

The students were asked to create an artwork of little textile people representing themselves.



ARTWORK OF
STUDENTS OF THE
IRISH SCHOOL IN
BALLINCOLLIG

The students were asked to create an abstract artwork picturing their emotions.



**ARTWORK OF
STUDENTS OF THE
IRISH SCHOOL IN
BALLINCOLLIG**

ELISABETH LAMMERSCHMIDT
MASTER OF DESIGN (PART TIME)
FIRST SEMESTER
STUDENT ID 1124708