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Beer and semantics.
A corpus-driven multivariate study in
the sociolinguistics of culture

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Beer and semantics: A corpus-driven multivariate study in the sociolinguistics of culture.

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1. Introduction

Beer is one of the oldest and most beloved beverages in the world (Hampson 2008). According to the first records of brewing, beer was originally made in Mesopotamia over 8000 years ago (Hampson, 2008). Although, back then there was a religious side to it and beer was consumed in spiritual ceremonies to honour the gods. However, the enjoyment of drinking this infusion was even greeter and it soon became an everyday drink (Hampson 2008). Today the admiration is enormous and there is a beer for every occasion. The brewing industry has changed and nowadays produces beer in abundance and with the great trading- and exporting business it can reach more countries than ever before. This has resulted in a greater competition between the breweries and also for the hunt of the consumers. The vast popularity of the beverage makes it extremely important to choose a suitable name for each beer in order for it to attract as many customers as possible.

This study will look at the cognitively salient concepts and associations buried deep inside beer titles. It will also investigate whether the socio-cultural differences between American, English, Scottish, Irish and Welsh brands are important in the naming process.

The idea of the essay first originated from an analysis made by Geeraerts (1999) where he investigated the underlying patterns of Belgian beer names. His analysis is in addition the basis of this study.

2. Method

The main field of research in this essay is called *onomastics* which is a linguistic field in the study of names (Geeraerts, Grondelaers and Bakema 1994). Why do we name things the way we do and are they used differently in various cultures? (Gries 2003). To some people a proper name might have another meaning or another interpretation depending on their own

association to it (Dirven, Goossens, Putseys and Vorlat 1982). In this paper, onomastics is used for a study on Anglo-Saxon beer semantics.

323 beer names are selected from the authored work *The Beer Book* and are used as the corpus of this study. The first idea was to create a corpus with the big beer nations; Germany, Belgium, Czech Republic and England. However, this turned out to be difficult and incredibly time consuming. The lack of language proficiency in each language also made it extremely difficult to code and analyse each name and look for metaphors. In order for the study to contain better quality it was decided to only use the nations of which the language skills were extensive. Therefore, the corpus consists of Anglo-Saxon beers.

In a corpus-driven method applied for name giving the data consists of randomly picked American beer and beers from the British Isles. They have been manually coded within a range of different socio-cultural and semantic factors in order to investigate what elements are important in naming a beer.

In the corpus-driven method, metaphoric studies obtain a large part of the data. A catalogue of beer names is collected and each name is analysed for hidden patterns, so called conceptual metaphors. The metaphors are inside the name and by analysing the meaning of them subjective associations will emerge.

In assigning multivariable statistics to the data, it will help identify the underlying patterns in the records that are not distinguished without the statistics. The statistics determines how strong the correlations are between certain features and helps to predict the probability of the connection to happen again. The statistics take into consideration of how much data there is, in this case how many beer names there are, and what the chances are of receiving the same results again even if the data were to be more extensive. The two linguists that started working with multivariable statistics were Geeraerts (1994) and Gries (2003), and many linguists nowadays have kept on to their tradition and are dependent and devoted to it.

This investigation will primarily discuss the multivariable statistics of how factors act towards one another and the probability of the correlations to not be simply by chance. Correspondence- and cluster analyses will together with logistic regression statistics show the patterns in Anglo-Saxon beer naming.

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3. Analysis

The data set consists of 323 beers which all have been manually analysed in a coding schema. Categories regarding sociolinguistics and cognitive linguistics helped design the schema in order for the examples to be analysed in an appropriate way to produce results.

Country

The first category is *country* which states where the beer originates from; the *US, England, Scotland, Wales* or *Ireland*. This category is the key to see if there are any cultural differences between the countries ways of choosing a suitable title for the beer.

Country+beer2

Here the countries are divided up into only two groups; *US* and *Brit* (stands for the British Isles). These two groups are then combined with the main types of beer. For example one feature will look like *US_Stout* and another as *Brit_Ale*.

Year made in

This describes what century the beer was first produced in. The idea behind this category is whether a certain century is more likely to be linked together with a specific category.

Year in title

This presents if it is important for the breweries to state the old or new history of the beer in the name.

Type of beer

The main types are used to group the different kinds of beer. The main types are *ale, lager, wheat, stout, barley wine, porter* and *fruit beers*. Beer types such as bitter, India pale ale, brown ale, Scottish, triple, amber, Irish red and Belgian strong are grouped together as *ales*. The group of *lager* consists of pilsner, bock, altbier and steinbeer. *Wheat, stout, barley wine, porter* and *fruit beers* each make up a type of their own.

Type of beer in title

This category demonstrates whether or not for certain beers the breweries think it is crucial for the type to be included in the title.

Geeraerts

In his analysis Geeraerts (1999) labels a beer with a literal name for Type1 and names that are figurative for Type2. Examples of Type1 names are as follows:

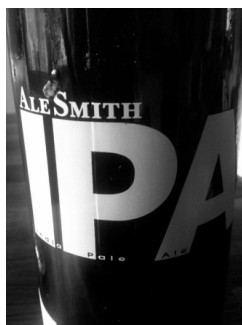
1 (a) McIlhenney's Irish Red



1 (b) Hopworks Organic IPA



1 (c) Alesmith IPA



1 (d) Victroy Prima Pils



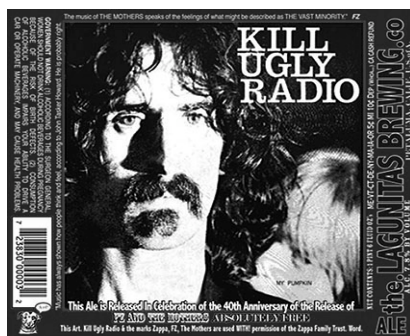
To quote Geeraerts (1999:263), these beers “consist of an identification of the firm producing the beer, and a specification of the type of beer involved”. This means that normally the name of the brewery is also the title of the beer and the informational elements of the beer such as type, whether it is produced in an organic way or refers to a geographical site is stated in the name. Type2, on the other hand, is more complex and

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metaphoric because the informational elements are not stated. “One could say perhaps that the type2 names attribute somewhat vague qualities to the beers, whereas type1 names describe rather clearly features (Geeraerts 1999:264)”. Type2 names are associated to something cognitively salient.

Examples of Type2 titles are as following:

2 (a) Kill Ugly Radio



2 (b) Boris the Crusher



2 (c) Old Rasputin



2 (d) Skullsplitter



It is clear from these examples that the names do not describe the beers in an informative style but in a metaphoric approach. As Geeraerts (1999:264) states the Type2 names describe the salient qualities of the beverage in a vague and cryptic manner. However, hearing the name of the

beer is an entirely different thing as to looking at the beer label. The label (the picture that presents the beer) has its own cognitively association and sometimes it is not the same as the ones of the name. Take for example *Boris the Crusher*. Here the mind automatically thinks of an enormous Russian man with great strength, possibly a wrestler or a boxer or even a dangerous KGB man. It is from the cognitive associations each person receive that the brain forms an opinion of which target group the beer aims for and how the beer tastes. But by looking at the picture of the label a new association arises. It is not a muscular Russian man, but instead a jumping frog. The frog symbolises the name of the brewery and not the beer itself. To make it clear, this essay will only analyse the semantic patterns of the name, not the label.

Organic and organic in title

The following two categories are *organic* and *organic in title*. These factors take part in the schema to see if the manufacturers think it is crucial to mention this element in the title.

Strength and alcoholic percentage

Strength is a subcategory of *alcoholic percentage*. In *strength* there are three different groups; *mild*, *medium* and *strong*. A *mild* beer is a beer with the percentage of 0-4, *medium* from 4-7 and *strong* ranging from 7 to infinite. *Alcoholic percentage* is the stated alcoholic content, the numbers that are printed on the beer. These two categories are important tools to investigate if the *strength* or the *alcoholic percentage* of a beer somehow associates to the conceptual metaphor in the title.

Colour

This contains the colour of the infusion and if it has an impact on the beer name. The shades of colour are divided up into the main features and in this essay they are *amber*, *brown*, *dark*, *gold* and *pale*.

Brewery name in title

The idea is to demonstrate if the brewery believes it is important enough to share its name in the beer name.

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Target group

Target group is a subjective category. This means that it is a category that may differ from person to person depending on the individual's own personal reflections to the conceptual metaphor in the name of the beer. The category's main idea is to label which gender group the manufacturers wish to direct the beer to.

Stereotypical features of *female* and *male* are applied for every beer name in the corpus and if the name fits the model then it is placed into that specific category. If the name does not have any stereotypical features it will go into the *mix* category. *Mix* functions as a rubbish bin; everything that is left over goes here.

Perfect examples of a dedication to *female* consumers in this essay will be *Raspberry Eisbock*, *Curieux* and *Pure Hoppiness*. *Skullspitter*, *Rogue Dead Guy Ale* and *Dragonstooth Stout* are typical cases that are produced for the *male* sex. Examples of beers that cannot be placed in a stereotypical gender-box, but placed in *mix*, are *Victroy Prima Pils*, *Ten Pin Porter* and *Old Speckled Hen*. More examples of beer names belonging to specific gender groups are found below in table 1.

Table 1. Target groups and its beers

| Gender: | Name of beer: |
|---------|--|
| Female | Golden Delicious Iceni Boadicea Chariot Ale Celtic Queen Summer Lightning Meantime Chocolate Festina Pech Red Poppy Ale |
| Male | Essex Boys Bitter Hogs Back Bitter Sharp's Doom Bar Ghost Ale Stallion Left Hand Black Jack Porter Speedway Stout |
| Mix | Yellowtail Pale Ale Michelob Ultra Guinness Original White Dwarf Star Brew Triple Wheat Ale Butte Creek Organic Porter Oatmeal Stout |

Brewery situated and brewery situated in title

The next two categories are *brewery situated* and *brewery situated in title*. Their purpose is to analyse whether it is important for a brewery to mention the geographical place of where the beer is being manufactured.

Topic of discourse

ToD, *source domain* and *salient* are the final and most important categories in the coding schema. *ToD* is the abbreviation for *topic of discourse*, which describes what topic the name of the beer features. There are 11 different factors in this category: *founder* (the name of the brewery is included), *adventure* (sports is included here), *animal*, *food*, *geographical*, *history* (historical figure added), *nature*, *religion*, *local* (local identity and local history), *trad* (traditional methods of producing, traditional culture and

folklore) and *misc* (everything else). In the table below, examples of each factor is given.

Table 2. Topic of discourse

| Factor: | Examples of beers: |
|--------------|--|
| Founder | Brooklyn Black Chocolate Stout, Shiner Hefeweizen, Icení Boadicea Chariot Ale, Meantime Chocolate, Sharp's Doom Bar, Guinness Original, Hopworks Organic IPA, Alesmith IPA, Victroy Prima Pils |
| Adventure | Flaming Stone Beer, Speedway Stout, Pipeline Porter |
| History | Mida's Touch, Shakespeare Stout, Celtic Queen, Old Rasputin |
| Local | Workie Ticket, Sneck Lifter, Michelob Ultra |
| Food | Wicket Strawberry Blonde, Caramel Bock, Golden Delicious, Festina Pech, Oatmeal Stout |
| Trad | Old Empire, Winter Warlock, Ghost Ale, White Dwarf |
| Geographical | Bitch Creek ESB, Russian Imperial Stout, Essex Boys Bitter, Hogs Back Bitter, McIlhenney's Irish Red |
| Nature | Small Craft Warning, Burning River Pale Ale, Red Poppy Ale |
| Religion | Monkman's Slaughter, Bishop's Finger, Messiah Bold |
| Animal | Old Growler, Double Dragon, Stallion Yellowtail Pale Ale, Sidepocket For a Toad |
| Misc | Battle Axe, Tanglefoot, Arrogant Bastard Ale, Star Brew Triple Wheat Ale, Kill Ugly Radio, Boris the Crusher, Skullspitter |

Source domain

In Cognitive Linguistics, there is something called a conceptual metaphor. A metaphor is a figurative expression in language which is applied when a concept is temporarily switched to a concept with basically the same meaning (Schmid and Ungerer 2006). When an expression of this kind has been used for a long period of time and unconsciously becomes a part of the language itself, then it is called a conceptual metaphor (Schmid and Ungerer 2006). The practisers of the language no longer think about the figurative meaning the expression once held but takes it for granted because it is part of the everyday language. In order to understand the conceptual metaphor, two concepts are applied; source domain and target domain. The source domain is concrete and based on a sensory experience

whereas the target domain is typically a person or object for which the metaphor is aimed at (Schmidt, Ungerer 2006). A famous example of a conceptual metaphor is *Time is money* and here *time* acts as the *target domain* and *money* as the *source domain* (Schmidt, Ungerer 2006).

In this study, the target domain is always the same, a beer. However, the source domain changes from title to title depending on both a subjective notion and of course the meaning of the name.

In the *source domain* category there are 11 factors. In Table 3 below, examples to each factor is given. As in the category of *ToD*, *sports* are added to *adventure*, *food* is in the same factor as *pleasure*, *strong bodily effects* with *force* as is *macho* and *historical figure* is in the group of *trad* (traditional methods and traditional culture).

Table 3. Source Domain

| Factor: | Examples of beers: |
|-------------|---|
| Pleasure | Golden Delicious, Summerhill Stout, Meantime Chocolate, Oatmeal Stout |
| Prestigious | Geordie Pride, Molly Malone Ale, Celtic Queen, Festina Pech, Red Poppy Ale, McIlhenney's Irish Red, Victroy Prima Pils |
| Adventure | Spitfire, Pipeline Porter, Sharp's Doom Bar, Ghost Ale, Stallion, Speedway Stout, Yellowtail Pale Ale, Hopworks Organic IPA, Old Rasputin |
| Animal | Hogs Back Bitter, Beartown Kodiak Gold |
| Force | Tsunami Stout, Tommy Knocker Butt Head Buck, Kill Ugly Radio, Boris the Crusher, Skullspitter |
| Humour | Duck Breath Bitter, Arrogant Bastard Ale, Michelob Ultra, White Dwarf |
| Local | Carolina Blonde, Highlander, Essex Boys Bitter, Star Brew Triple Wheat Ale, Sidepocket for a Toad |
| Trad | Samuel Smith's Old Brewery Bitter, Darwin's Evolution, Icení Boadicea Chariot Ale, Alesmith IPA, Messiah Bold |
| Religion | St Austel IPA, Belhaven St Andrews Ale, Onnegang Abbey Ale |
| Pride | Schiehallion, Kiltlifter, Guinness Original, London Pride |
| Nature | New Holland Black Tulip, Old Woody, Butte Creek Organic Porter |

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Since many of the factors from this category also are used and analysed in the following category *salient* it was necessary to add a number 2 to *source domain* elements in order to distinguish them apart. This is seen in Figure 2.

Salient

The last category in the coding schema is *salient*. Something that is salient is important, clear and distinct. For example, if there is a table in a room and the only thing lying on it is a piece of white paper, then that piece of paper is salient because it stands out among everything else. That paper has a prominent feature which its neighbours do not have.

Saliency is here applied to the source domain in a subjective way, which means that it is the distinct feeling in the source domain that is analysed. To make it clear, this category looks at the source domain of the conceptual metaphor and by analysing the source the prominent feature can be identified. This prominent feature is here called *salient*.

The beer name *Golden Delicious* is presented under *food* in the category of *ToD*. Many people know that Golden Delicious is an apple and therefore it goes under the topic of *food*. In *source domain* the name is recognized as *pleasure* for the reason that an apple is sweet and tasty. Therefore, the brewery wishes to transfer the sweet feeling of pleasure when eating an apple into the beer name. In *salient* the source domain is identified as the prominent feature of *wealth*, because golden is something luxurious.

In this essay there are 9 different characteristics of saliency and they are shown together with examples in Table 4.

To make a distinction between the *source domain* factors and this factor, a number 3 has been added to each *salient* feature. This is shown in Figure 1, Figure 3 and Table 5.

Table 4. Salient

| Factor: | Examples of beers: |
|-------------|--|
| Dangerous | Arctic Devil Barley Wine, Old Rasputin, Sharp's Doom Bar, Ghost Ale, Arrogant Bastard Ale, Kill Ugly Radio, Boris the Crusher, Old Rasputin, Skullspitter |
| Adventure | Mac & Jack's African Amber, Hazed & Infused, Adventure, White Dwarf |
| Force | Abita Turbodog, Green Peppercorn Triple, Stallion, Speedway Stout |
| Pure | Avery Salvation, Bell's Two Hearted Ale, Red Poppy Ale, Oatmeal Stout |
| Pride | Jeremiah's Red Ale, McIlhenney's Irish Red, Essex Boys Bitter, Yellowtail Pale Ale, Michelob Ultra, Star Brew Triple Wheat Ale, Butte Creek Organic Porter, Hopworks Organic IPA, Alesmith IPA, Victroy Prima Pils |
| Humour | Kiltlifter, Wasatch Polygami Porter, Hogs Back Bitter, Sidepocket For a Toad, Tanglefoot |
| Pleasure | Festina Pech, Blackwatch Cream Porter, Meantime Chocolate |
| Prestigious | Middle Ages Grail Ale, Sweetwater Festive Ale, Messiah Bold |
| Wealth | Golden Monkey, Black Gold, Golden Delicious, Badger First Gold, Crouch Vale Brewer's Gold |

4. Results

By adding the manually coded schema to the statistical software program R, some results were found. Four results were very significant and stood out among the other analyses. However, among the other analyses a few results were found interesting and definitely worth mentioning, therefore they are as well presented. Many analyses were made and only the ones with the best results are featured in this essay. As a direct result of this many of the categories from the coding schema are not demonstrated. The majority of the analyses include the factor *target group* and shows how beer names act in relation to the considered consumer. Below, the results are presented and analysed. The first result is a correspondence analysis featuring the relationship between *salient* and *target group*.

4.1 Salience and target group

In Figure 1(see below), the target groups *mix*, *male* and *female* are analysed with the *salient features* of the conceptual metaphor. As is seen in the figure the target groups are apart and form three circles. *Male* is noticeably connected with the salient elements of *dangerous3* and *force3*, *female* with *pleasure3* and *mix* with *pride3*, *wealth3* and *humour3*. In between the circles of *female* and *mix*, there are the elements of *pure3*, *prestigious3* and *adventure3*. These three factors have no obvious link to either of the formations but they can be used for both; although *pure3* leans slightly more towards the *mixed* target group area. The results of this figure show that beers can easily be assembled into groups of which consumers they are made for simply by looking at the metaphoric salience of the name. For example, *Festina Pech*, a name which in a subjective perspective has the essential feature of *pleasure*, is exceptionally likely to be directed towards the female sex. *Old Rasputin* has a *dangerous* salience and is principally regarded to be consumed by males.

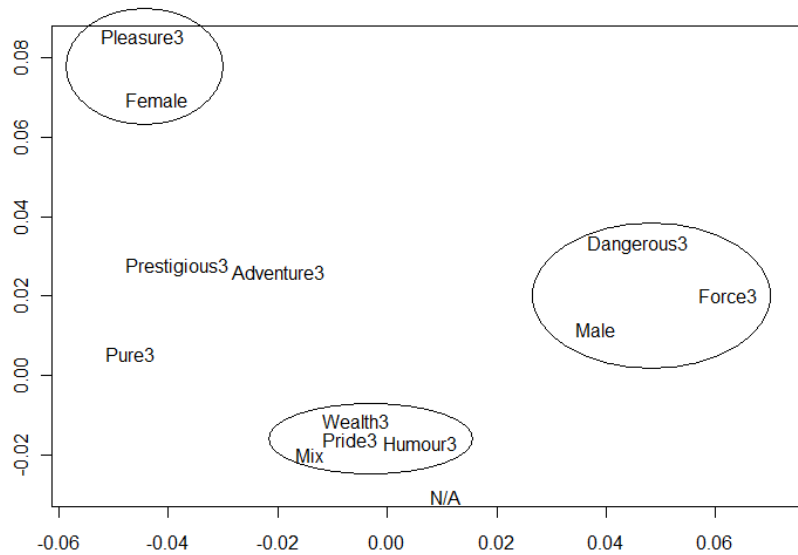
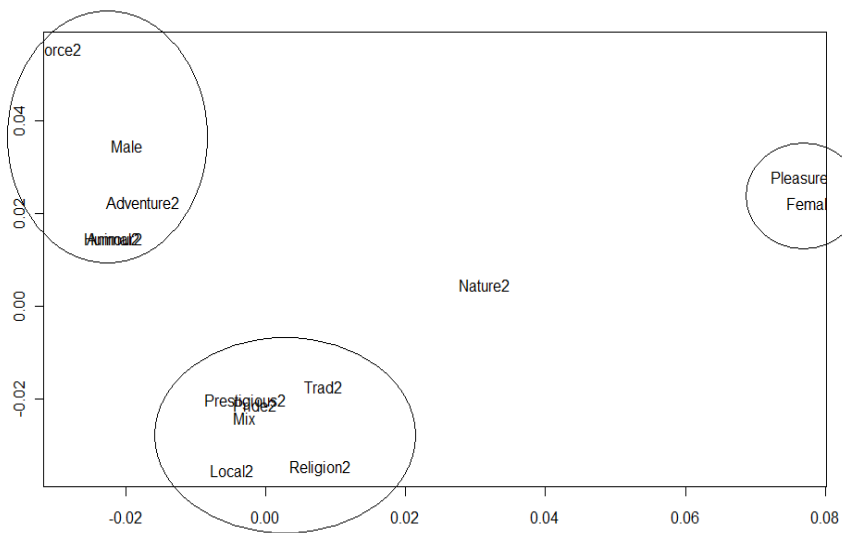


Figure 1. Correspondance analysis of the relationship between a salient feature in the conceptual metaphor of the beer title and target group
 4.2 Source domain and target group

In the following figure, the relationship of *source domains* and *target groups* is analysed. Once again, the target groups are extremely far apart and form own clusters of importance. *Female* is grouped together with *pleasure2*, *male* with *force2*, *adventure2*, *animal2* and *humour2* and finally *mix* forms an independent group with *trad2*, *prestigious2*, *pride2*, *local2* and *religion2*. In the middle of the figure is *nature2* and that middle position demonstrates that it can belong to all the groups because it has no distinct connection to only one consumer set. This figure shows that the source domain of a single beer name is highly significant and can clearly state who the beer is supposed to be indulged by. This means that a brewery chooses the names carefully so that the target group will be curious about that specific alcoholic drink. In the end, it is all about great marketing and representing the beer in the best manner for the brewery. Nevertheless, culture and language play important roles in the name giving process. Especially because of the cognitive associations to the name, seeing as it is from the associations the target group is selected.



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Figure 2. Correspondence analysis of how the source domains of the beer title are connected to the target groups

4.3 Cluster analysis of salience and target group

The third analysis is a hierarchical clustering based on a multiscale bootstrap re-sampling (Divjak 2011) and is presented below in Figure 3. The bootstrapping is a way to determine the confidence of the cluster and it mixes the data countless times and explores how often a similar cluster is produced. Based on the results of the bootstrapping it calculates a confidence number that shows how likely it is for the same cluster to appear over and over again (Divjak 2011). It clusters the columns in the data and in this case looks at the bond between the *target groups* and the *salient features* of the conceptual metaphor in the name of the beer. As is seen, the tree in the figure divides up into three main branches and the features in each branch are more similar to each other than the other elements. The long line between the two branches in the middle means that there is a distinct difference between the two and the higher the number is the more accurate the clustering is.

The red numbers seen in the figure are called AU values and the green values are called BP values. If clusters have 95% in AU value then it is strongly supported by the data (Divjak 2011). The first branch in Figure 3 presents *pride3* to be distinct from everything else. The second branch shows *pure3* as the dominant element and with the strongest support from the data. It is divided up into four smaller branches that are not as highly supported as *pure3* is. The third major branch is the one of *dangerous3* and *humour3*. This cluster has 94% of the AU value which is slightly less than required but still noteworthy for the analysis.

These clusters demonstrate the similarity and dissimilarity of *salience* in accordance to *target group*. The analysis shows that the salience behind a beer name is important in accordance to which gender set it is fabricated for. In this figure *pride3* is extremely distinct and different to any of the other salient features. *Dangerous3* and *humour3* are very similar and are applied for a specific target group whereas *pure3* is in a cluster together with the rest of the salient elements. Subsequently, these distinct characteristics tell us that if we know the salient element of a name we can identify for whom the beer is made for.

Even though the culture in each of the Anglo-Saxon countries differ to some extent it is made clear from this analysis that *pride*, *dangerous* and

humour are highly dominant in the field of beer semantics. The reason why these elements have a colossal part could be that the Anglo-Saxon culture portrays itself in this way and therefore cognitively puts the characteristics of the natives in the names of the beers. This brings us back to *onomastics*, because we choose names that are suitable to its intention and in applying it to an Anglo-Saxon beer it is highly likely that the natives will respond well.

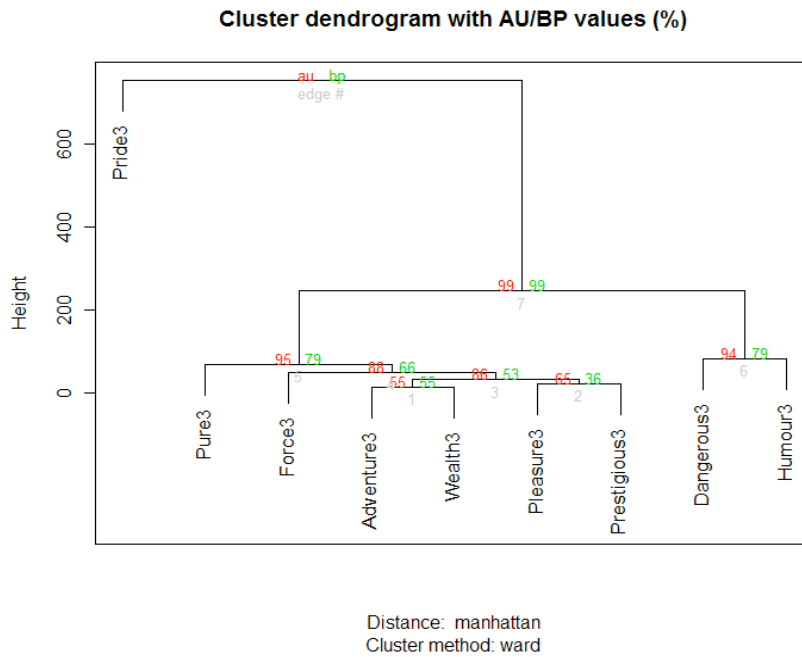


Figure 3. Cluster analysis of the behaviour between salient and target group

4.5 Logistic regression

To predict if an example will belong to one feature or another, logistic regression is used. In order to do this statistical analysis a response variable is a necessity. A response variable is a factor that has two variables and these two elements are compared to selected factors to see what the prediction might be. In Table 5 on page 18, the response variables, the two things that are compared, are *male* and *female*; both from the factor *target*

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group. *Male* and *female* are analysed and compared with the help of the following factors; *type of beer*, *strength* and *salient*.

All the examples of beer that are produced for the *mix* category in target group have been deleted. In the original data set there are 323 beer names, now 140 names remain. 106 of these are *male* beer titles and 34 names are *female*. In analysing if it is possible to predict what beer belongs to which consumer gender categories of *type of beer*, *strength* and *salient* are included in the study.

When there is a minus or a plus sign in the first column, *estimate*, it represents the two factors from the target group in an alphabetical order. The minus sign stands for the factor that comes first in the alphabetical order which in the table below is *female* and the plus sign stands for *male*. *Estimate* is the most crucial column in this analysis since these numbers predict how strong the correlation is between the different factors. The column represent how A versus B behaves; for example how *male* correlates to *force* or how *female* associates to *barley wine* and the further away from 0,000 as possible the better the results are. Of course, a great result in *estimate* does not automatically make the prediction any good. It all depends on how many variables there is in each factor and if there is enough data to predict the same pattern.

The last column *Pr*, the probability score, is where the percentage of how accurate the probability is, the lower percentage the better. If something has 0,001 it means that if the analysis were to be made a hundred times then the probability of this prediction to be wrong would happen once. Finally, the stars to the right of the table represent a high probability for the prediction to be true. The more stars a row receives, the more likely it is for the assumptions to be correct.

The results of Table 5 show that *lager* seems to be more oriented to females. This is a very strong prediction, especially in *estimate* where the numbers are as high as -3.0587. In *Pr* the percentage of the probability of this prediction to not be correct is 1.47%.

The second result according to the statistics is that the metaphoric salience of *dangerous* is most likely to be directed to males. The percentage shows that there is a 3.12% chance that this prediction is wrong and that it has a strong prediction of 2.6483 in *estimate*.

The final result is names with notably distinct *humorous* aspects are expected to be consumed by men. The probability that the statistics are correct is 3.6460 in *estimate* and the probability score of this analysis to be wrong is 3.73%.

Table 5. Logistic regression analysis of the prediction of classifying beer names to gender

| Coefficients: | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|----------|------------|---------|----------|
| (Intercept) | -0.1127 | 1.0374 | -0.109 | 0.9135 |
| Type_of_Beer2Barley_Wine | -1.5894 | 1.5175 | -1.047 | 0.2949 |
| Type_of_Beer2Fruit | -21.9245 | 4956.2297 | -0.004 | 0.9965 |
| Type_of_Beer2Lager | -3.0587 | 1.2533 | -2.441 | 0.0147 * |
| Type_of_Beer2Porter | 36.0720 | 5710.3966 | 0.006 | 0.9950 |
| Type_of_Beer2Stout | 0.3226 | 1.0005 | 0.322 | 0.7471 |
| Type_of_Beer2Wheat | 16.8971 | 5966.1572 | 0.003 | 0.9977 |
| Strengthmild | 0.2818 | 1.4302 | 0.197 | 0.8438 |
| Strengthstrong | 0.1310 | 0.7953 | 0.165 | 0.8692 |
| SalientDangerous3 | 2.6483 | 1.2294 | 2.154 | 0.0312 * |
| SalientForce3 | 20.4663 | 4975.9316 | 0.004 | 0.9967 |
| SalientHumour3 | 3.6460 | 1.7512 | 2.082 | 0.0373 * |
| SalientN/A | 20.6438 | 6256.9079 | 0.003 | 0.9974 |
| SalientPleasure3 | -0.7081 | 1.3522 | -0.524 | 0.6005 |
| SalientPrestigious3 | -18.2790 | 3881.1018 | -0.005 | 0.9962 |
| SalientPride3 | 1.6033 | 1.1122 | 1.442 | 0.1494 |
| SalientPure3 | -35.1721 | 8437.4204 | -0.004 | 0.9967 |
| SalientWealth3 | 1.1356 | 1.5436 | 0.736 | 0.4619 |

C: 0.922

R²: 0.655

4.5 Additional analyses

4.5.1. Topic of discourse of Anglo-Saxon beer names

In addition there are a couple of results worth mentioning. It seems as if the US, England, Scotland, Wales and Ireland chooses the names of the beers relatively similar and has done so over the past 300 hundred years. Despite the cultural differences between the countries the ritual of naming the beverage is related. However, titles that have the topic of *food*, *adventure*, *local*, *geographical* and *nature* are more likely to be related to *American* beers whereas *founder*, *animal*, *trad* and *religion* are slightly more common in names whose origin are from *England*. Beers from the 21st century are slightly more familiar in the USA than the other countries. Beers from *Ireland* seem to be more related to beers made in the *1800s* and *Welsh* names are more common among beers produced in the *1900s*. *Scottish*

names on the other hand, tend to identify tremendously with *history*, and *animal* topics are also frequent.

In accordance with the results from Figure 4 (see below) we see that there are no distinct differences between topics in the Anglo-Saxon countries. The topics form a group in the middle of the figure and are related to most of the nations. Why the cultural differences are not important in beer naming is very interesting. Is it because the Brits took the knowledge of brewing on the Mayflower and brought it to America? Is it therefore the countries has the same naming process? Because it is a traditional process that states back long before America was settled by the Brits? The questions are many, but one thing that is for sure is that the tendency to name a beer in a similar manner is interesting and worth mentioning.

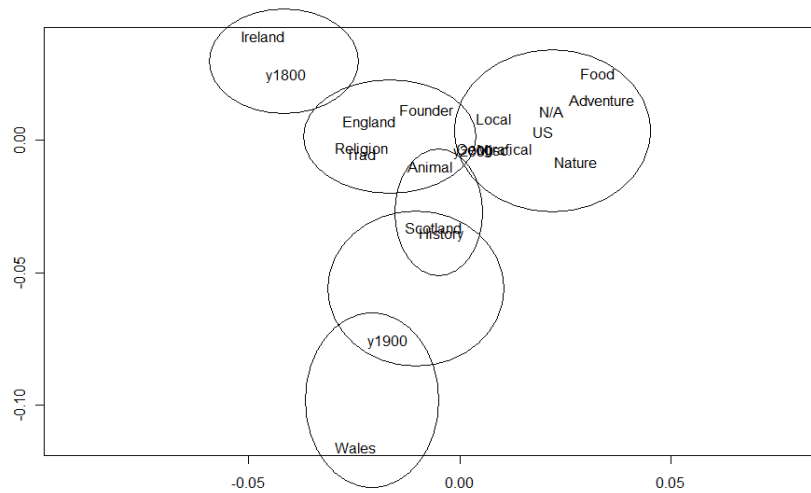


Figure 4 Correspondence analysis of country, year and topic of discourse

4.5.2. Anglo-Saxon name habits

The second analysis worth bringing up is Figure 5 on page 21. As in Figure 3, this is also a hierarchical clustering based on a multiscale bootstrap re-

sampling (Divjak 2011). Once more the data is mixed to see how many times the identical cluster is produced.

The idea behind this analysis is whether or not Anglo-Saxon countries choose names in a similar or dissimilar way by comparing them to selected factors, in this case *target group* and *salience*.

The factor that is clustered is *country+beer2* and it consists of the USA and the British Isles combined with the main type of beer. There are five features in the figure and they all have names corresponding to both the nation and the type of beer; for example *US_Lager* and *Brit_Ale*. Scotland, England, Wales and Ireland are gathered under *Brit* because otherwise the numbers of the data would be too small, the results too weak and too many factors for this type of analysis. Features with too small numbers in the data also had to be removed so that the results would be stronger and more comprehensive; therefore only one element represents the British Isles.

There are two main clusters in the tree. The branch to the left consist of *US_Stout* and divides up into *US_Lager* and *US_Porter*. The branch to the right consists of *Brit_Ale* and *US_Ale*. *Country+beer2* is clustered with *target group* and *salient* and the result of this exploration is that *Brit_Ale* and *US_Ale* are 100% similar in their name habits. The confidence number of 100 means that the cluster is most definite and that this recurrence is not made by chance but out of certainty. This is by far the most interesting cluster in the figure and it shows that in an analysis with the salient features of the metaphor and the target groups, British ales and American ales are identical in the naming ritual. The lack of variation between the two is remarkable as it shows that the existing cultural differences do not apply to naming a beer.

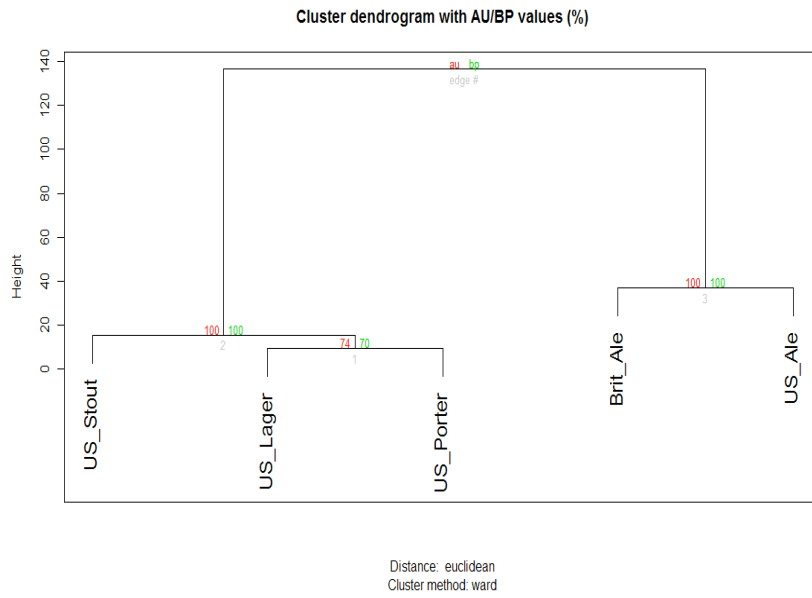


Figure 5. Cluster analysis of country-beer, salience and target group

4.5.3. The final analysis

Beer, in general, is considered to be a manly beverage and is therefore often believed to be high in alcoholic percentage so that it will be mainly attracted to men. Furthermore, beer made especially for females is often marketed as mild and smooth, however, the analysis below exposes that this is not the truth. The strength of the beer is surprisingly not a crucial element in the naming and it also appears not to have much to do with which consumer group it is produced for. In other words, if a beer is mainly created for the female gender it can be mild, medium or strong. There is no clear dividing although *medium* leans a bit more towards the *mixed* set than the others and *mild* is not related to the *male* set. Figure 6 below presents the results.

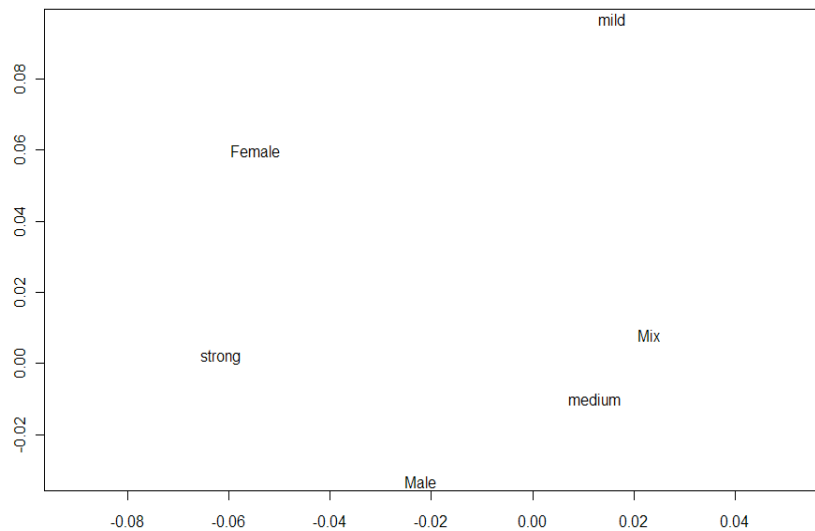


Figure 6. Correspondence analysis of strength and target group

5. Summary

To sum up, the results of the multivariable studies show that it is possible to distinguish which gender a beer is made for by looking at the underlying patterns in the name. This applies especially to *salience* and *source domain*. The conceptual metaphor in the name presents a notion of what the characteristics of the beer are like and with the consumers own associations of the metaphor they establish an opinion on whether or not it is appealing.

The results illustrate that a name with an approach to the salient feature of the conceptual metaphor *pleasure* will most definitely be produced for *females*. Females are somehow more attracted towards this sensation, whereas *males* have a strong tendency to names with a *dangerous* salience to it. What is more, a metaphoric salience of *humour* and *force* also seem to be significant for *male* beer names.

As with the salient feature, the *source domain* also clearly states to whom the beer is mainly made for. Purely by exploring the conceptual

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metaphoric patterns in the name, and by analysing how the patterns behave over and over, again we can present to which gender the beer is generated for.

Furthermore, the results from the analysis show that alcoholic percentage of the beverage is not a necessary factor in order to understand to whom the beer is considered for. Therefore, a beer manufactured mainly for the female sex can be mild, medium or strong and according to the semantic patterns the alcoholic strength does not matter. What is more, the multivariable statistics also show that female drinkers are very likely to drink *lager*.

Additionally, from the results of the statistics it is obvious that the socio-cultural differences between USA, England, Scotland, Wales and Ireland are not an essential element in the process of naming a beer. Instead these Anglo-Saxon nations choose titles in a similar method and have done so over the past 300 years. Even ales from the British Isles have identical name habits in comparison to ales from America.

Why women tend to be attracted to names with the notion of *pleasure* and men to *dangerous*, *humoristic* and *forceful* names are not something this semantic essay can answer; or why Anglo-Saxon countries select titles in a similar manner. Instead these are questions for sociolinguists to investigate. This paper can only by the help of a corpus-driven method explain the semantic patterns behind the beer names. It is of course possible that with a more extensive corpus the results from the statistics would vary and perhaps some factors would become more significant than what they are in this study. But by looking at different semantic and socio-cultural factors some tendencies of occurrences in the statistics can be found and analysed, and questions can be raised.

In comparison to Geeraert's (1999) study of Belgian beer names this essay differs a lot. The differences between the two studies can possibly be because of the different cultures of the countries analysed. It seems that *humour* is not an important factor for Belgian beers, while it is a crucial factor for Anglo-Saxon beer names. Does this say anything about the cultural differences? Why is humour such an elementary characteristic to Anglo-Saxon beer? For Belgian beers *religion* is a very important topic. Why does this not apply to the US and the British Isles? It is believed that Americans are heavily spiritual but still it is not a topic they want their beers to have. Why is this? Is it a trademark of the inhabitants or is it possibly capitalist marketing behind everything?

The differences can also be of how the studies have been carried out and what factors and questions have been asked. Geeraerts divided the Belgian beer names up into two categories depending on the figurative or non figurative features the names contained. In this essay more factors have been added to look at the beer names on a larger scale and to look deep for underlying patterns. Especially target group has a huge role in this study, whereas in Geeraert's it is not brought up. Could this be that perhaps Belgian beer names are not directed to specific consumer groups? Or could it be that Geeraerts himself did not find this specific factor important?

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<http://www.ord.se/oversattning/Engelska-pro/>

Oxford English Dictionary

<http://oxforddictionaries.com/>

```

> library(MASS)
> library(pvclust)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.45)... Done.
Bootstrap (r = 0.55)... Done.
Bootstrap (r = 0.64)... Done.
Bootstrap (r = 0.73)... Done.
Bootstrap (r = 0.82)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.09)... Done.
Bootstrap (r = 1.18)... Done.
Bootstrap (r = 1.27)... Done.
Bootstrap (r = 1.36)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.43)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.71)... Done.
Bootstrap (r = 0.86)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.14)... Done.
Bootstrap (r = 1.29)... Done.
Bootstrap (r = 1.29)... Done.
Warning message:
In a$P[] <- c(1, bp[r == 1]) :
number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In a$P[] <- c(1, bp[r == 1]) :
number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In a$P[] <- c(1, bp[r == 1]) :
number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In a$P[] <- c(1, bp[r == 1]) :
number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
>
> library(MASS)

```



```

: 3
      four,eight: 14      4,8      : 14      N/A :60      Seaside
: 6
      four,five : 13      4,5      : 13      Pale :84      Town
:141
      (Other) :201      (Other):209
      ToD      Source_Domain      Salient
Founder :116 Prestigious2 :59 Pride3 :135
Animal : 35 Adventure2 :58 Humour3 : 43
Misc. : 35 Local_identity2:42 Dangerous3: 40
Geografical : 32 Pride2 :27 N/A : 22
Nature : 19 Pleasure2 :22 Pure3 : 21
Historical_fig: 16 Animal2 :18 Pleasure3 : 16
(Other) : 70 (Other) :97 (Other) : 46
> table(data$ToD)

      Adventure      Animal      Folklore      Food      Founder      Geografical      Historical_fig
History Local_Dialect Local_Identity
9      2      35      7      11      116      32      16
      9      3
      Misc.      Nature      Prestigious      Religion      Sports      Trad_Culture      Trad_Methods
35      19      5      9      6      6      3
> table(data$Year2)

      N/A y1700 y1750 y1800 y1850 y1900 y1950 y2000
83      4      3      14      30      8      10      171
> data <- read.table(file.choose(), header=T)
> summary(data)
      Country      Year_Made_In      Year2      Year3      Year_in_Title      Type_of_Beer      Type_of_Beer2
Type_of_Beer_in_Title Geeraerts      Organic
England :123 N/A : 83 y2000 :171 N/A : 83 No :321 Bitter :109 Ale :215 No :194
Type1: 83 No :307
Ireland : 6 y1988 : 18 N/A : 83 y1700: 7 Yes: 2 Ale : 44 Barley_Wine: 11 Yes:129
Type2:240 Yes: 16
Scotland: 25 y1996 : 16 y1850 : 30 y1800: 44 Stout : 26 Fruit : 9
US :163 y1995 : 15 y1800 : 14 y1900: 18 IPA : 25 Lager : 22
Wales : 6 y1992 : 12 y1950 : 10 y2000:171 Porter : 24 Porter : 24
      y2002 : 11 y1900 : 8 Wheat : 16 Stout : 26
      (Other):168 (Other): 7 (Other): 79 Wheat : 16
      Organic_in_Title      Strongness      Alcoholic_Percentage      Alcoholic_Percentage.1      Colour      Brewery_Name_in_Title
Target_Group      Brewery_Situated
No :312 medium:244 four : 32 5 : 29 Amber:50 No :198
Female: 34 City : 81
Yes: 11 mild : 24 five : 29 4 : 24 Brown:21 Yes:125 Male
:106 Countryside: 86
      strong: 55 four,two : 18 4,2 : 18 Dark :84 Mix
:183 Isle : 6
      five,five : 16 5,5 : 16 Gold :24
Mountain : 3
      four,eight: 14 4,8 : 14 N/A :60
Seaside : 6
      four,five : 13 4,5 : 13 Pale :84
Town :141
      (Other) :201      (Other):209
      ToD      ToD2      Source_Domain      Salient
No :287 Founder :116 Founder :116 Prestigious2 :60 Pride3 :135
Yes: 36 Animal : 35 Misc. : 36 Adventure2 :58 Humour3 : 43
      Misc. : 35 Animal : 35 Local_identity2:42 Dangerous3: 40
      Geografical : 32 Geografical: 32 Pride2 :27 N/A : 22
      Nature : 19 History : 27 Pleasure2 :22 Pure3 : 21
      Historical_fig: 16 Nature : 19 Animal2 :18 Pleasure3 : 16
      (Other) : 70 (Other) : 58 (Other) :96 (Other) : 46
> table(data$ToD)

      Adventure      Animal      Folklore      Food      Founder      Geografical      Historical_fig
History Local_Dialect Local_Identity
9      2      35      7      11      116      32      16
      9      3
      Misc.      Nature      Prestigious      Religion      Sports      Trad_Culture      Trad_Methods
35      19      5      9      6      6      3
> table(data$ToD2)

      Adventure      Animal      Food      Founder      Geografical      History      Local      Misc.      Nature
Religion 9 Trad 35 11 116 32 27 13 36 19
9 16
> table(data$Year3)

      N/A y1700 y1800 y1900 y2000
83      7      44      18      171
> LogReg_glm <- glm(Response_Variable ~ Variable1 + Variable2 + Variable3, data = data, family = "binomial")
Error in eval(expr, envir, enclos) : object 'Response_Variable' not found
> LogReg_glm <- glm(Geeraerts ~ Country + Year3 + Type_of_Beer2 + Strongness + ToD2 + Target_Group + Colour,
data = data, family = "binomial")
> summary(LogReg_glm)

Call:
glm(formula = Geeraerts ~ Country + Year3 + Type_of_Beer2 + Strongness +

```

```
ToD2 + Target_Group + Colour, family = "binomial", data = data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|----------|----------|---------|---------|---------|
| -2.23236 | -0.21244 | 0.00006 | 0.39501 | 1.78426 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|-----------|------------|---------|----------|
| (Intercept) | 19.57772 | 3448.99146 | 0.006 | 0.9955 |
| CountryIreland | -1.49542 | 1.39699 | -1.070 | 0.2844 |
| CountryScotland | -0.46351 | 0.80295 | -0.577 | 0.5638 |
| CountryUS | -0.81557 | 0.54447 | -1.498 | 0.1342 |
| CountryWales | -2.38865 | 2.18448 | -1.093 | 0.2742 |
| Year3y1700 | -0.59133 | 1.11955 | -0.528 | 0.5974 |
| Year3y1800 | -0.78010 | 0.70425 | -1.108 | 0.2680 |
| Year3y1900 | -0.93722 | 1.19488 | -0.784 | 0.4328 |
| Year3y2000 | 0.20246 | 0.48030 | 0.422 | 0.6734 |
| Type_of_Beer2Barley_Wine | 0.94245 | 1.38982 | 0.678 | 0.4977 |
| Type_of_Beer2Fruit | -0.41886 | 1.06165 | -0.395 | 0.6932 |
| Type_of_Beer2Lager | -0.12620 | 0.68301 | -0.185 | 0.8534 |
| Type_of_Beer2Porter | -1.86477 | 0.96921 | -1.924 | 0.0544 . |
| Type_of_Beer2Stout | -1.63219 | 0.94265 | -1.731 | 0.0834 . |
| Type_of_Beer2Wheat | -2.32992 | 1.16040 | -2.008 | 0.0447 * |
| Strongnessmild | -1.54376 | 0.80238 | -1.924 | 0.0544 . |
| Strongnessstrong | 0.28643 | 0.66090 | 0.433 | 0.6647 |
| ToD2Animal | 0.19992 | 3837.32994 | 0.000 | 1.0000 |
| ToD2Food | -18.13740 | 3448.99145 | -0.005 | 0.9958 |
| ToD2Founder | -20.16939 | 3448.99135 | -0.006 | 0.9953 |
| ToD2Geografical | -18.88794 | 3448.99136 | -0.005 | 0.9956 |
| ToD2History | 0.67736 | 3890.50565 | 0.000 | 0.9999 |
| ToD2Local | -16.96069 | 3448.99150 | -0.005 | 0.9961 |
| ToD2Misc. | -0.24643 | 3821.97374 | 0.000 | 0.9999 |
| ToD2Nature | 0.32146 | 4127.52248 | 0.000 | 0.9999 |
| ToD2Religion | -0.91375 | 4883.37966 | 0.000 | 0.9999 |
| ToD2Trad | -17.24150 | 3448.99151 | -0.005 | 0.9960 |
| Target_GroupMale | 1.62553 | 0.81036 | 2.006 | 0.0449 * |
| Target_GroupMix | 0.76791 | 0.73279 | 1.048 | 0.2947 |
| ColourBrown | 0.18354 | 0.84956 | 0.216 | 0.8290 |
| ColourDark | 1.38881 | 0.76754 | 1.809 | 0.0704 . |
| ColourGold | -0.62082 | 0.89640 | -0.693 | 0.4886 |
| ColourN/A | -0.09666 | 0.66495 | -0.145 | 0.8844 |
| ColourPale | 0.11676 | 0.56921 | 0.205 | 0.8375 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 368.13 on 322 degrees of freedom
Residual deviance: 186.92 on 289 degrees of freedom
AIC: 254.92

Number of Fisher Scoring iterations: 18

```
> LogReg_glm <- glm(Geeraerts ~ Country + Year3 + Type_of_Beer2 + Strongness + Target_Group + Colour, data =  
data, family = "binomial")  
> summary(LogReg_glm)
```

```
Call:  
glm(formula = Geeraerts ~ Country + Year3 + Type_of_Beer2 + Strongness +  
Target_Group + Colour, family = "binomial", data = data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|---------|---------|--------|--------|--------|
| -2.4546 | -0.5452 | 0.5198 | 0.7325 | 1.5176 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|-----------|------------|---------|------------|
| (Intercept) | 0.970182 | 0.699696 | 1.387 | 0.16557 |
| CountryIreland | -1.595206 | 1.031575 | -1.546 | 0.12201 |
| CountryScotland | -0.412282 | 0.639716 | -0.644 | 0.51927 |
| CountryUS | -0.671290 | 0.432194 | -1.553 | 0.12037 |
| CountryWales | -1.313195 | 1.017119 | -1.291 | 0.19667 |
| Year3y1700 | -1.274509 | 0.931239 | -1.369 | 0.17112 |
| Year3y1800 | -0.971563 | 0.550886 | -1.764 | 0.07779 . |
| Year3y1900 | 0.041101 | 0.729870 | 0.056 | 0.95509 |
| Year3y2000 | 0.548841 | 0.378840 | 1.449 | 0.14741 |
| Type_of_Beer2Barley_Wine | 0.701524 | 1.195991 | 0.587 | 0.55750 |
| Type_of_Beer2Fruit | -1.388451 | 0.881312 | -1.575 | 0.11516 |
| Type_of_Beer2Lager | -0.248760 | 0.569210 | -0.437 | 0.66209 |
| Type_of_Beer2Porter | -0.814640 | 0.754953 | -1.079 | 0.28056 |
| Type_of_Beer2Stout | -1.147794 | 0.770473 | -1.490 | 0.13630 |
| Type_of_Beer2Wheat | -1.653287 | 0.625907 | -2.641 | 0.00826 ** |
| Strongnessmild | -0.849922 | 0.536381 | -1.585 | 0.11307 |
| Strongnessstrong | 0.471302 | 0.512795 | 0.919 | 0.35805 |
| Target_GroupMale | 1.002486 | 0.580221 | 1.728 | 0.08403 . |
| Target_GroupMix | -0.003117 | 0.522109 | -0.006 | 0.99524 |
| ColourBrown | 0.632251 | 0.650894 | 0.971 | 0.33137 |
| ColourDark | 1.193303 | 0.648760 | 1.839 | 0.06586 . |


```
ColourGold      0.683921  0.686791  0.996  0.31934
ColourN/A       0.082792  0.501032  0.165  0.86875
ColourPale      0.408419  0.457617  0.892  0.37213
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
Null deviance: 368.13 on 322 degrees of freedom
Residual deviance: 309.91 on 299 degrees of freedom
AIC: 357.91
```

Number of Fisher Scoring iterations: 5

```
> LogReg_glm <- glm(Geeraerts ~ Year3 + Type_of_Beer2 + Strongness + Target_Group + Colour, data = data, family
= "binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Geeraerts ~ Year3 + Type_of_Beer2 + Strongness +
Target_Group + Colour, family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4316 -0.5191  0.5310  0.7471  1.4582
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      0.50009   0.61292   0.816  0.41455
Year3y1700     -1.22350   0.87648  -1.396  0.16274
Year3y1800     -0.79297   0.49082  -1.616  0.10618
Year3y1900     -0.10526   0.69751  -0.151  0.88005
Year3y2000      0.54965   0.37212   1.477  0.13966
Type_of_Beer2Barley_Wine  0.89996   1.19678   0.752  0.45206
Type_of_Beer2Fruit  -1.55373   0.86402  -1.798  0.07214 .
Type_of_Beer2Lager  -0.47546   0.54083  -0.879  0.37932
Type_of_Beer2Porter -1.02248   0.73296  -1.395  0.16301
Type_of_Beer2Stout  -1.40062   0.72979  -1.919  0.05496 .
Type_of_Beer2Wheat  -1.78149   0.61346  -2.904  0.00368 **
Strongnessmild   -0.59380   0.51206  -1.160  0.24620
Strongnessstrong  0.30483   0.49633   0.614  0.53910
Target_GroupMale  1.02896   0.56482   1.822  0.06849 .
Target_GroupMix   0.08386   0.50817   0.165  0.86892
ColourBrown       0.64248   0.64962   0.989  0.32266
ColourDark        1.21934   0.63361   1.924  0.05430 .
ColourGold        0.69167   0.63778   1.084  0.27814
ColourN/A         0.19172   0.48517   0.395  0.69273
ColourPale        0.35871   0.45440   0.789  0.42987
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
Null deviance: 368.13 on 322 degrees of freedom
Residual deviance: 315.30 on 303 degrees of freedom
AIC: 355.3
```

Number of Fisher Scoring iterations: 5

```
> LogReg_glm <- glm(Geeraerts ~ Year3 + Type_of_Beer2 + Target_Group + Colour, data = data, family =
"binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Geeraerts ~ Year3 + Type_of_Beer2 + Target_Group +
Colour, family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4227 -0.5821  0.5354  0.7442  1.5013
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      0.64160   0.58249   1.101  0.27069
Year3y1700     -1.38858   0.85352  -1.627  0.10376
Year3y1800     -1.00178   0.45591  -2.197  0.02800 *
Year3y1900     -0.31706   0.67783  -0.468  0.63996
Year3y2000      0.43701   0.35134   1.244  0.21356
Type_of_Beer2Barley_Wine  1.28213   1.11060   1.154  0.24831
Type_of_Beer2Fruit  -1.60270   0.85531  -1.874  0.06095 .
Type_of_Beer2Lager  -0.44574   0.53930  -0.827  0.40851
Type_of_Beer2Porter -1.04633   0.72246  -1.448  0.14754
Type_of_Beer2Stout  -1.35041   0.72287  -1.868  0.06175 .
Type_of_Beer2Wheat  -1.71391   0.60908  -2.814  0.00489 **
Target_GroupMale  1.02039   0.56207   1.815  0.06946 .
Target_GroupMix   0.06369   0.50515   0.126  0.89967
ColourBrown       0.55608   0.64794   0.858  0.39077
ColourDark        1.20982   0.62714   1.929  0.05372 .
```

```
ColourGold      0.69187    0.63986    1.081    0.27957
ColourN/A       0.12097    0.47802    0.253    0.80022
ColourPale      0.27332    0.44766    0.611    0.54149
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
Null deviance: 368.13 on 322 degrees of freedom
Residual deviance: 317.06 on 305 degrees of freedom
AIC: 353.06
```

Number of Fisher Scoring iterations: 5

```
> LogReg_glm <- glm(Geeraerts ~ Year3 * Type_of_Beer2 + Target_Group + Colour, data = data, family =
"binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Geeraerts ~ Year3 * Type_of_Beer2 + Target_Group +
    Colour, family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.42406 -0.00021  0.52038  0.74393  1.79738
```

Coefficients: (9 not defined because of singularities)

| | Estimate | Std. Error | z value | Pr(> z) |
|-------------------------------------|-----------|------------|---------|----------|
| (Intercept) | 0.53942 | 0.63262 | 0.853 | 0.3938 |
| Year3y1700 | -0.98012 | 0.93473 | -1.049 | 0.2944 |
| Year3y1800 | -0.57696 | 0.54045 | -1.068 | 0.2857 |
| Year3y1900 | 0.40000 | 0.89552 | 0.447 | 0.6551 |
| Year3y2000 | 0.49912 | 0.45270 | 1.103 | 0.2702 |
| Type_of_Beer2Barley_Wine | 16.92197 | 3956.18036 | 0.004 | 0.9966 |
| Type_of_Beer2Fruit | -18.17719 | 2795.73240 | -0.007 | 0.9948 |
| Type_of_Beer2Lager | 0.47251 | 1.20642 | 0.392 | 0.6953 |
| Type_of_Beer2Porter | -1.19260 | 0.91697 | -1.301 | 0.1934 |
| Type_of_Beer2Stout | 0.16336 | 1.22943 | 0.133 | 0.8943 |
| Type_of_Beer2Wheat | -2.24536 | 1.19248 | -1.883 | 0.0597 |
| Target_GroupMale | 0.91632 | 0.58982 | 1.554 | 0.1203 |
| Target_GroupMix | -0.03621 | 0.53057 | -0.068 | 0.9456 |
| ColourBrown | 0.54624 | 0.65049 | 0.840 | 0.4011 |
| ColourDark | 1.26450 | 0.64552 | 1.959 | 0.0501 |
| ColourGold | 0.54130 | 0.63829 | 0.848 | 0.3964 |
| ColourN/A | 0.14089 | 0.49398 | 0.285 | 0.7755 |
| ColourPale | 0.34855 | 0.46813 | 0.745 | 0.4565 |
| Year3y1700:Type_of_Beer2Barley_Wine | NA | NA | NA | NA |
| Year3y1800:Type_of_Beer2Barley_Wine | 0.22035 | 4820.62096 | 0.000 | 1.0000 |
| Year3y1900:Type_of_Beer2Barley_Wine | -17.98105 | 3956.18065 | -0.005 | 0.9964 |
| Year3y2000:Type_of_Beer2Barley_Wine | -0.95166 | 4295.55086 | 0.000 | 0.9998 |
| Year3y1700:Type_of_Beer2Fruit | NA | NA | NA | NA |
| Year3y1800:Type_of_Beer2Fruit | 0.30011 | 3954.97171 | 0.000 | 0.9999 |
| Year3y1900:Type_of_Beer2Fruit | NA | NA | NA | NA |
| Year3y2000:Type_of_Beer2Fruit | 17.37933 | 2795.73254 | 0.006 | 0.9950 |
| Year3y1700:Type_of_Beer2Lager | NA | NA | NA | NA |
| Year3y1800:Type_of_Beer2Lager | -17.98304 | 2797.36205 | -0.006 | 0.9949 |
| Year3y1900:Type_of_Beer2Lager | NA | NA | NA | NA |
| Year3y2000:Type_of_Beer2Lager | -0.86658 | 1.37386 | -0.631 | 0.5282 |
| Year3y1700:Type_of_Beer2Porter | NA | NA | NA | NA |
| Year3y1800:Type_of_Beer2Porter | NA | NA | NA | NA |
| Year3y1900:Type_of_Beer2Porter | 16.59096 | 3956.18049 | 0.004 | 0.9967 |
| Year3y2000:Type_of_Beer2Porter | 0.38136 | 1.15538 | 0.330 | 0.7413 |
| Year3y1700:Type_of_Beer2Stout | -18.51702 | 3956.18058 | -0.005 | 0.9963 |
| Year3y1800:Type_of_Beer2Stout | -19.46238 | 2737.34581 | -0.007 | 0.9943 |
| Year3y1900:Type_of_Beer2Stout | NA | NA | NA | NA |
| Year3y2000:Type_of_Beer2Stout | -1.83429 | 1.33799 | -1.371 | 0.1704 |
| Year3y1700:Type_of_Beer2Wheat | NA | NA | NA | NA |
| Year3y1800:Type_of_Beer2Wheat | -15.38784 | 3956.18054 | -0.004 | 0.9969 |
| Year3y1900:Type_of_Beer2Wheat | -16.57246 | 2797.44230 | -0.006 | 0.9953 |
| Year3y2000:Type_of_Beer2Wheat | 1.27779 | 1.41060 | 0.906 | 0.3650 |

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
Null deviance: 368.13 on 322 degrees of freedom
Residual deviance: 297.44 on 290 degrees of freedom
AIC: 363.44
```

Number of Fisher Scoring iterations: 16

```
> LogReg_glm <- glm(Geeraerts ~ Year3 + Type_of_Beer2 * Target_Group + Colour, data = data, family =
"binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Geeraerts ~ Year3 + Type_of_Beer2 * Target_Group +
    Colour, family = "binomial", data = data)
```

Deviance Residuals:
 Min 1Q Median 3Q Max
 -2.2791 -0.4936 0.5211 0.7271 1.6107

Coefficients: (2 not defined because of singularities)

| | Estimate | Std. Error | z value | Pr(> z) |
|---|----------|------------|---------|----------|
| (Intercept) | 0.8783 | 0.6903 | 1.272 | 0.2033 |
| Year3y1700 | -1.3444 | 0.8621 | -1.559 | 0.1189 |
| Year3y1800 | -1.0056 | 0.4648 | -2.164 | 0.0305 * |
| Year3y1900 | -0.3083 | 0.6799 | -0.453 | 0.6502 |
| Year3y2000 | 0.3772 | 0.3574 | 1.055 | 0.2913 |
| Type_of_Beer2Barley_Wine | 14.7063 | 1657.1193 | 0.009 | 0.9929 |
| Type_of_Beer2Fruit | -2.2334 | 1.0440 | -2.139 | 0.0324 * |
| Type_of_Beer2Lager | -1.5520 | 1.4286 | -1.086 | 0.2773 |
| Type_of_Beer2Porter | -0.7261 | 0.8477 | -0.856 | 0.3917 |
| Type_of_Beer2Stout | 14.3184 | 1690.4354 | 0.008 | 0.9932 |
| Type_of_Beer2Wheat | -17.7615 | 2399.5448 | -0.007 | 0.9941 |
| Target_GroupMale | 0.7330 | 0.7052 | 1.039 | 0.2986 |
| Target_GroupMix | -0.1974 | 0.6504 | -0.303 | 0.7616 |
| ColourBrown | 0.5896 | 0.6515 | 0.905 | 0.3655 |
| ColourDark | 1.1911 | 0.6317 | 1.886 | 0.0593 . |
| ColourGold | 0.7526 | 0.6480 | 1.162 | 0.2454 |
| ColourN/A | 0.1721 | 0.4859 | 0.354 | 0.7231 |
| ColourPale | 0.3171 | 0.4542 | 0.698 | 0.4850 |
| Type_of_Beer2Barley_Wine:Target_GroupMale | 0.3523 | 2217.4513 | 0.000 | 0.9999 |
| Type_of_Beer2Fruit:Target_GroupMale | NA | NA | NA | NA |
| Type_of_Beer2Lager:Target_GroupMale | 15.6689 | 1681.2355 | 0.009 | 0.9926 |
| Type_of_Beer2Porter:Target_GroupMale | -0.6622 | 1.1169 | -0.593 | 0.5533 |
| Type_of_Beer2Stout:Target_GroupMale | -15.4383 | 1690.4356 | -0.009 | 0.9927 |
| Type_of_Beer2Wheat:Target_GroupMale | 32.0220 | 3393.4688 | 0.009 | 0.9925 |
| Type_of_Beer2Barley_Wine:Target_GroupMix | -13.7502 | 1657.1197 | -0.008 | 0.9934 |
| Type_of_Beer2Fruit:Target_GroupMix | 17.7414 | 2399.5450 | 0.007 | 0.9941 |
| Type_of_Beer2Lager:Target_GroupMix | 1.2461 | 1.5435 | 0.807 | 0.4195 |
| Type_of_Beer2Porter:Target_GroupMix | NA | NA | NA | NA |
| Type_of_Beer2Stout:Target_GroupMix | -15.9713 | 1690.4355 | -0.009 | 0.9925 |
| Type_of_Beer2Wheat:Target_GroupMix | 16.0487 | 2399.5449 | 0.007 | 0.9947 |

 Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 368.13 on 322 degrees of freedom
 Residual deviance: 309.08 on 295 degrees of freedom
 AIC: 365.08

Number of Fisher Scoring iterations: 15

```
> LogReg_glm <- glm(Geeraerts ~ Year3 + Type_of_Beer2 + Target_Group + Colour, data = data, family = "binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Geeraerts ~ Year3 + Type_of_Beer2 + Target_Group + Colour, family = "binomial", data = data)
```

Deviance Residuals:
 Min 1Q Median 3Q Max
 -2.4227 -0.5821 0.5354 0.7442 1.5013

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|----------|------------|---------|------------|
| (Intercept) | 0.64160 | 0.58249 | 1.101 | 0.27069 |
| Year3y1700 | -1.38858 | 0.85352 | -1.627 | 0.10376 |
| Year3y1800 | -1.00178 | 0.45591 | -2.197 | 0.02800 * |
| Year3y1900 | -0.31706 | 0.67783 | -0.468 | 0.63996 |
| Year3y2000 | 0.43701 | 0.35134 | 1.244 | 0.21356 |
| Type_of_Beer2Barley_Wine | 1.28213 | 1.11060 | 1.154 | 0.24831 |
| Type_of_Beer2Fruit | -1.60270 | 0.85531 | -1.874 | 0.06095 . |
| Type_of_Beer2Lager | -0.44574 | 0.53930 | -0.827 | 0.40851 |
| Type_of_Beer2Porter | -1.04633 | 0.72246 | -1.448 | 0.14754 |
| Type_of_Beer2Stout | -1.35041 | 0.72287 | -1.868 | 0.06175 . |
| Type_of_Beer2Wheat | -1.71391 | 0.60908 | -2.814 | 0.00489 ** |
| Target_GroupMale | 1.02039 | 0.56207 | 1.815 | 0.06946 . |
| Target_GroupMix | 0.06369 | 0.50515 | 0.126 | 0.89967 |
| ColourBrown | 0.55608 | 0.64794 | 0.858 | 0.39077 |
| ColourDark | 1.20982 | 0.62714 | 1.929 | 0.05372 . |
| ColourGold | 0.69187 | 0.63986 | 1.081 | 0.27957 |
| ColourN/A | 0.12097 | 0.47802 | 0.253 | 0.80022 |
| ColourPale | 0.27332 | 0.44766 | 0.611 | 0.54149 |

 Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 368.13 on 322 degrees of freedom
 Residual deviance: 317.06 on 305 degrees of freedom
 AIC: 353.06

Number of Fisher Scoring iterations: 5

```
> LogReg_lrm <- lrm(Geeraerts ~ Year3 + Type_of_Beer2 + Target_Group + Colour, data = data, x=T, y=T)
> LogReg_lrm
```

Logistic Regression Model

```
lrm(formula = Geeraerts ~ Year3 + Type_of_Beer2 + Target_Group +
     Colour, data = data, x = T, y = T)
```

Frequencies of Responses

```
Type1 Type2
 83    240
```

| | Obs | Max Deriv | Model L.R. | d.f. | P | C | Dxy | Gamma | Tau-a | R2 |
|-------|-----|-----------|------------|------|---|-------|-------|-------|-------|-------|
| Brier | 323 | 2e-11 | 51.07 | 17 | 0 | 0.726 | 0.452 | 0.459 | 0.173 | 0.215 |

| | Coef | S.E. | Wald Z | P |
|---------------------------|----------|--------|--------|--------|
| Intercept | 0.64160 | 0.5825 | 1.10 | 0.2707 |
| Year3=y1700 | -1.38858 | 0.8535 | -1.63 | 0.1038 |
| Year3=y1800 | -1.00178 | 0.4559 | -2.20 | 0.0280 |
| Year3=y1900 | -0.31706 | 0.6778 | -0.47 | 0.6400 |
| Year3=y2000 | 0.43701 | 0.3513 | 1.24 | 0.2136 |
| Type_of_Beer2=Barley_Wine | 1.28213 | 1.1106 | 1.15 | 0.2483 |
| Type_of_Beer2=Fruit | -1.60270 | 0.8553 | -1.87 | 0.0610 |
| Type_of_Beer2=Lager | -0.44574 | 0.5393 | -0.83 | 0.4085 |
| Type_of_Beer2=Porter | -1.04633 | 0.7225 | -1.45 | 0.1475 |
| Type_of_Beer2=Stout | -1.35041 | 0.7229 | -1.87 | 0.0617 |
| Type_of_Beer2=Wheat | -1.71391 | 0.6091 | -2.81 | 0.0049 |
| Target_Group=Male | 1.02039 | 0.5621 | 1.82 | 0.0695 |
| Target_Group=Mix | 0.06369 | 0.5052 | 0.13 | 0.8997 |
| Colour=Brown | 0.55608 | 0.6479 | 0.86 | 0.3908 |
| Colour=Dark | 1.20982 | 0.6271 | 1.93 | 0.0537 |
| Colour=Gold | 0.69187 | 0.6399 | 1.08 | 0.2796 |
| Colour=N/A | 0.12097 | 0.4780 | 0.25 | 0.8002 |
| Colour=Pale | 0.27332 | 0.4477 | 0.61 | 0.5415 |

```
> LogReg_glm <- glm(Country ~ Year3 + Type_of_Beer2 + Target_Group + Colour, data = data, family = "binomial")
> summary(data)
```

| Country | Year Made In | Year2 | Year3 | Year_in Title | Type_of_Beer | Type_of_Beer2 |
|---------------------------|--------------------|----------------------|------------------------|----------------|-----------------------|-----------------|
| Type_of_Beer_in Title | Geeraerts | Organic | | | | |
| England :123 | N/A : 83 | y2000 :171 | N/A : 83 | No :321 | Bitter :109 | Ale :215 |
| No :307 | | | | | | No :194 |
| Ireland : 6 | y1988 : 18 | N/A : 83 | y1700: 7 | Yes: 2 | Ale : 44 | Barley_Wine: 11 |
| Yes:129 | | | | | | |
| Type2:240 | Yes: 16 | | | | | |
| Scotland: 25 | y1996 : 16 | y1850 : 30 | y1800: 44 | | Stout : 26 | Fruit : 9 |
| US :163 | y1995 : 15 | y1800 : 14 | y1900: 18 | | IPA : 25 | Lager : 22 |
| Wales : 6 | y1992 : 12 | y1950 : 10 | y2000:171 | | Porter : 24 | Porter : 24 |
| | y2002 : 11 | y1900 : 8 | | | Wheat : 16 | Stout : 26 |
| | (Other):168 | (Other): 7 | | | (Other): 79 | Wheat : 16 |
| Organic_in Title | Strongness | Alcoholic_Percentage | Alcoholic_Percentage.1 | Colour | Brewery_Name_in Title | |
| Target_Group | Brewery_Situated | | | | | |
| No :312 | medium:244 | four : 32 | 5 : 29 | Amber:50 | No :198 | |
| Female: 34 | City : 81 | | | | | |
| Yes: 11 | mild : 24 | five : 29 | 4 : 24 | Brown:21 | Yes:125 | Male |
| :106 | Countryside: 86 | | | | | |
| | strong: 55 | four,two : 18 | 4,2 : 18 | Dark :84 | | Mix |
| :183 | Isle : 6 | | | | | |
| | | five,five : 16 | 5,5 : 16 | Gold :24 | | |
| Mountain : 3 | | | | | | |
| | | four,eight: 14 | 4,8 : 14 | N/A :60 | | |
| Seaside : 6 | | | | | | |
| | | four,five : 13 | 4,5 : 13 | Pale :84 | | |
| Town :141 | | | | | | |
| | | (Other) :201 | (Other):209 | | | |
| Brewery_Situated_in Title | ToD | ToD2 | Source_Domain | Salient | | |
| No :287 | Founder :116 | Founder :116 | Prestigious2 :60 | Pride3 :135 | | |
| Yes: 36 | Animal : 35 | Misc. : 36 | Adventure2 :58 | Humour3 : 43 | | |
| | Misc. : 35 | Animal : 35 | Local_identity2:42 | Dangerous3: 40 | | |
| | Geografical : 32 | Geografical: 32 | Pride2 :27 | N/A : 22 | | |
| | Nature : 19 | History : 27 | Pleasure2 :22 | Pure3 : 21 | | |
| | Historical_fig: 16 | Nature : 19 | Animal2 :18 | Pleasure3 : 16 | | |
| | (Other) : 70 | (Other) : 58 | (Other) :96 | (Other) : 46 | | |

```
> LogReg_glm <- glm(Country ~ Year3 + Type_of_Beer2 + Target_Group + Colour + Salient, data = data, family =
"binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Year3 + Type_of_Beer2 + Target_Group +
     Colour + Salient, family = "binomial", data = data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|---------|---------|--------|--------|--------|
| -2.5167 | -0.7142 | 0.3313 | 0.6918 | 2.1944 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|----------|------------|---------|--------------|
| (Intercept) | 0.49223 | 1.00854 | 0.488 | 0.6255 |
| Year3y1700 | -0.74724 | 0.97364 | -0.767 | 0.4428 |
| Year3y1800 | -3.65670 | 0.64098 | -5.705 | 1.16e-08 *** |
| Year3y1900 | -0.68895 | 0.72924 | -0.945 | 0.3448 |
| Year3y2000 | -0.99847 | 0.39554 | -2.524 | 0.0116 * |
| Type_of_Beer2Barley_Wine | 0.56162 | 0.84450 | 0.665 | 0.5060 |
| Type_of_Beer2Fruit | 1.68672 | 1.27232 | 1.326 | 0.1849 |
| Type_of_Beer2Lager | 17.59182 | 758.98036 | 0.023 | 0.9815 |
| Type_of_Beer2Porter | -0.42077 | 0.71345 | -0.590 | 0.5553 |
| Type_of_Beer2Stout | 0.24759 | 0.79452 | 0.312 | 0.7553 |
| Type_of_Beer2Wheat | 1.88413 | 0.95880 | 1.965 | 0.0494 * |
| Target_GroupMale | 0.03376 | 0.71084 | 0.047 | 0.9621 |
| Target_GroupMix | -0.71319 | 0.67695 | -1.054 | 0.2921 |
| ColourBrown | 0.19560 | 0.67295 | 0.291 | 0.7713 |
| ColourDark | 1.25779 | 0.62014 | 2.028 | 0.0425 * |
| ColourGold | -0.22945 | 0.64187 | -0.357 | 0.7207 |
| ColourN/A | -0.93279 | 0.48288 | -1.932 | 0.0534 . |
| ColourPale | 0.15300 | 0.48354 | 0.316 | 0.7517 |
| SalientDangerous3 | 0.84391 | 0.94471 | 0.893 | 0.3717 |
| SalientForce3 | -0.23125 | 1.11142 | -0.208 | 0.8352 |
| SalientHumour3 | 1.12915 | 0.91431 | 1.235 | 0.2168 |
| SalientN/A | 0.16908 | 1.00239 | 0.169 | 0.8660 |
| SalientPleasure3 | 0.33589 | 1.09293 | 0.307 | 0.7586 |
| SalientPrestigious3 | 1.79364 | 1.28257 | 1.398 | 0.1620 |
| SalientPride3 | 1.57887 | 0.85709 | 1.842 | 0.0655 . |
| SalientPure3 | 1.83938 | 1.07904 | 1.705 | 0.0883 . |
| SalientWealth3 | 0.03691 | 1.10174 | 0.034 | 0.9733 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 429.24 on 322 degrees of freedom
Residual deviance: 285.24 on 296 degrees of freedom
AIC: 339.24

Number of Fisher Scoring iterations: 16

```
> LogReg_glm <- glm(Country ~ Year3 *Salient+ Type_of_Beer2 + Target_Group + Colour , data = data, family =
"binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Year3 * Salient + Type_of_Beer2 + Target_Group +
    Colour, family = "binomial", data = data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|----------|----------|---------|---------|---------|
| -2.30989 | -0.56471 | 0.00008 | 0.68754 | 2.02635 |

Coefficients: (10 not defined because of singularities)

| | Estimate | Std. Error | z value | Pr(> z) |
|------------------------------|------------|------------|---------|----------|
| (Intercept) | 2.006e+01 | 4.351e+03 | 0.005 | 0.9963 |
| Year3y1700 | -7.239e-01 | 1.670e+00 | -0.433 | 0.6647 |
| Year3y1800 | -1.748e+00 | 1.094e+04 | 0.000 | 0.9999 |
| Year3y1900 | 3.738e+01 | 1.094e+04 | 0.003 | 0.9973 |
| Year3y2000 | -6.968e+01 | 6.743e+03 | -0.010 | 0.9918 |
| SalientDangerous3 | -1.761e+01 | 4.351e+03 | -0.004 | 0.9968 |
| SalientForce3 | -1.842e+01 | 4.351e+03 | -0.004 | 0.9966 |
| SalientHumour3 | -1.830e+01 | 4.351e+03 | -0.004 | 0.9966 |
| SalientN/A | -1.853e+01 | 4.351e+03 | -0.004 | 0.9966 |
| SalientPleasure3 | -1.198e+00 | 6.556e+03 | 0.000 | 0.9999 |
| SalientPrestigious3 | -2.360e-01 | 6.628e+03 | 0.000 | 1.0000 |
| SalientPride3 | -1.782e+01 | 4.351e+03 | -0.004 | 0.9967 |
| SalientPure3 | -1.726e+01 | 4.351e+03 | -0.004 | 0.9968 |
| SalientWealth3 | -3.572e+01 | 4.802e+03 | -0.007 | 0.9941 |
| Type_of_Beer2Barley_Wine | 3.344e-01 | 8.566e-01 | 0.390 | 0.6962 |
| Type_of_Beer2Fruit | 1.663e+01 | 2.729e+03 | 0.006 | 0.9951 |
| Type_of_Beer2Lager | 1.900e+01 | 2.073e+03 | 0.009 | 0.9927 |
| Type_of_Beer2Porter | -5.230e-01 | 8.009e-01 | -0.653 | 0.5137 |
| Type_of_Beer2Stout | -1.597e-01 | 8.969e-01 | -0.178 | 0.8587 |
| Type_of_Beer2Wheat | 3.324e+01 | 2.874e+03 | 0.012 | 0.9908 |
| Target_GroupMale | -5.632e-01 | 8.606e-01 | -0.654 | 0.5128 |
| Target_GroupMix | -1.340e+00 | 8.301e-01 | -1.615 | 0.1064 |
| ColourBrown | 3.351e-02 | 7.098e-01 | 0.047 | 0.9623 |
| ColourDark | 1.294e+00 | 7.416e-01 | 1.745 | 0.0810 . |
| ColourGold | -8.126e-01 | 7.309e-01 | -1.112 | 0.2662 |
| ColourN/A | -1.120e+00 | 5.182e-01 | -2.162 | 0.0306 * |
| ColourPale | -5.776e-03 | 5.295e-01 | -0.011 | 0.9913 |
| Year3y1700:SalientDangerous3 | NA | NA | NA | NA |
| Year3y1800:SalientDangerous3 | -1.996e+01 | 1.159e+04 | -0.002 | 0.9986 |
| Year3y1900:SalientDangerous3 | -1.994e+01 | 1.235e+04 | -0.002 | 0.9987 |
| Year3y2000:SalientDangerous3 | 6.832e+01 | 6.743e+03 | 0.010 | 0.9919 |

| | | | | |
|--------------------------------|------------|-----------|--------|--------|
| Year3y1700:SalientForce3 | -1.802e+01 | 1.075e+04 | -0.002 | 0.9987 |
| Year3y1800:SalientForce3 | -1.940e+01 | 1.198e+04 | -0.002 | 0.9987 |
| Year3y1900:SalientForce3 | -5.728e+01 | 1.294e+04 | -0.004 | 0.9965 |
| Year3y2000:SalientForce3 | 6.851e+01 | 6.743e+03 | 0.010 | 0.9919 |
| Year3y1700:SalientHumour3 | NA | NA | NA | NA |
| Year3y1800:SalientHumour3 | -1.880e+01 | 1.301e+04 | -0.001 | 0.9988 |
| Year3y1900:SalientHumour3 | -5.737e+01 | 1.534e+04 | -0.004 | 0.9970 |
| Year3y2000:SalientHumour3 | 6.954e+01 | 6.743e+03 | 0.010 | 0.9918 |
| Year3y1700:SalientN/A | -3.042e-02 | 2.588e+00 | -0.012 | 0.9906 |
| Year3y1800:SalientN/A | -1.821e+01 | 1.203e+04 | -0.002 | 0.9988 |
| Year3y1900:SalientN/A | -5.602e+01 | 1.534e+04 | -0.004 | 0.9971 |
| Year3y2000:SalientN/A | 6.870e+01 | 6.743e+03 | 0.010 | 0.9919 |
| Year3y1700:SalientPleasure3 | -1.664e+01 | 4.904e+03 | -0.003 | 0.9973 |
| Year3y1800:SalientPleasure3 | -5.183e+01 | 1.283e+04 | -0.004 | 0.9968 |
| Year3y1900:SalientPleasure3 | NA | NA | NA | NA |
| Year3y2000:SalientPleasure3 | 5.082e+01 | 8.338e+03 | 0.006 | 0.9951 |
| Year3y1700:SalientPrestigious3 | NA | NA | NA | NA |
| Year3y1800:SalientPrestigious3 | -1.577e+01 | 1.203e+04 | -0.001 | 0.9990 |
| Year3y1900:SalientPrestigious3 | NA | NA | NA | NA |
| Year3y2000:SalientPrestigious3 | 5.032e+01 | 8.394e+03 | 0.006 | 0.9952 |
| Year3y1700:SalientPride3 | NA | NA | NA | NA |
| Year3y1800:SalientPride3 | -5.469e-01 | 1.094e+04 | 0.000 | 1.0000 |
| Year3y1900:SalientPride3 | -3.686e+01 | 1.094e+04 | -0.003 | 0.9973 |
| Year3y2000:SalientPride3 | 6.927e+01 | 6.743e+03 | 0.010 | 0.9918 |
| Year3y1700:SalientPure3 | NA | NA | NA | NA |
| Year3y1800:SalientPure3 | -5.140e+01 | 1.587e+04 | -0.003 | 0.9974 |
| Year3y1900:SalientPure3 | -5.841e+01 | 1.534e+04 | -0.004 | 0.9970 |
| Year3y2000:SalientPure3 | 8.590e+01 | 7.298e+03 | 0.012 | 0.9906 |
| Year3y1700:SalientWealth3 | NA | NA | NA | NA |
| Year3y1800:SalientWealth3 | NA | NA | NA | NA |
| Year3y1900:SalientWealth3 | NA | NA | NA | NA |
| Year3y2000:SalientWealth3 | 8.558e+01 | 7.606e+03 | 0.011 | 0.9910 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 429.24 on 322 degrees of freedom
Residual deviance: 241.54 on 270 degrees of freedom
AIC: 347.54

Number of Fisher Scoring iterations: 18

```
> LogReg_glm <- glm(Country ~ Year3 +Salient+ Type_of_Beer2 + Target_Group + Colour , data = data, family =
"binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Year3 + Salient + Type_of_Beer2 + Target_Group +
    Colour, family = "binomial", data = data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|---------|---------|--------|--------|--------|
| -2.5167 | -0.7142 | 0.3313 | 0.6918 | 2.1944 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|----------|------------|---------|--------------|
| (Intercept) | 0.49223 | 1.00854 | 0.488 | 0.6255 |
| Year3y1700 | -0.74724 | 0.97364 | -0.767 | 0.4428 |
| Year3y1800 | -3.65670 | 0.64098 | -5.705 | 1.16e-08 *** |
| Year3y1900 | -0.68895 | 0.72924 | -0.945 | 0.3448 |
| Year3y2000 | -0.99847 | 0.39554 | -2.524 | 0.0116 * |
| SalientDangerous3 | 0.84391 | 0.94471 | 0.893 | 0.3717 |
| SalientForce3 | -0.23125 | 1.11142 | -0.208 | 0.8352 |
| SalientHumour3 | 1.12915 | 0.91431 | 1.235 | 0.2168 |
| SalientN/A | 0.16908 | 1.00239 | 0.169 | 0.8660 |
| SalientPleasure3 | 0.33589 | 1.09293 | 0.307 | 0.7586 |
| SalientPrestigious3 | 1.79364 | 1.28257 | 1.398 | 0.1620 |
| SalientPride3 | 1.57887 | 0.85709 | 1.842 | 0.0655 . |
| SalientPure3 | 1.83938 | 1.07904 | 1.705 | 0.0883 . |
| SalientWealth3 | 0.03691 | 1.10174 | 0.034 | 0.9733 |
| Type_of_Beer2Barley_Wine | 0.56162 | 0.84450 | 0.665 | 0.5060 |
| Type_of_Beer2Fruit | 1.68672 | 1.27232 | 1.326 | 0.1849 |
| Type_of_Beer2Lager | 17.59182 | 758.98036 | 0.023 | 0.9815 |
| Type_of_Beer2Porter | -0.42077 | 0.71345 | -0.590 | 0.5553 |
| Type_of_Beer2Stout | 0.24759 | 0.79452 | 0.312 | 0.7553 |
| Type_of_Beer2Wheat | 1.88413 | 0.95880 | 1.965 | 0.0494 * |
| Target_GroupMale | 0.03376 | 0.71084 | 0.047 | 0.9621 |
| Target_GroupMix | -0.71319 | 0.67695 | -1.054 | 0.2921 |
| ColourBrown | 0.19560 | 0.67295 | 0.291 | 0.7713 |
| ColourDark | 1.25779 | 0.62014 | 2.028 | 0.0425 * |
| ColourGold | -0.22945 | 0.64187 | -0.357 | 0.7207 |
| ColourN/A | -0.93279 | 0.48288 | -1.932 | 0.0534 . |
| ColourPale | 0.15300 | 0.48354 | 0.316 | 0.7517 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 429.24 on 322 degrees of freedom
 Residual deviance: 285.24 on 296 degrees of freedom
 AIC: 339.24

Number of Fisher Scoring iterations: 16

```
> LogReg_glm <- glm(Country ~ Year3 +Salient+ Type_of_Beer2 + Colour , data = data, family = "binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Year3 + Salient + Type_of_Beer2 + Colour,
     family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.6166 -0.7443  0.3420  0.6639  2.0728
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      0.14592   0.90797   0.161  0.8723
Year3y1700     -0.94789   0.94245  -1.006  0.3145
Year3y1800     -3.71550   0.63379  -5.862 4.56e-09 ***
Year3y1900     -0.88722   0.71318  -1.244  0.2135
Year3y2000     -1.09984   0.39177  -2.807  0.0050 **
SalientDangerous3  1.14204   0.94716   1.206  0.2279
SalientForce3    0.13582   1.09330   0.124  0.9011
SalientHumour3   1.11822   0.92389   1.210  0.2261
SalientN/A       0.18807   1.00888   0.186  0.8521
SalientPleasure3  0.36769   1.11423   0.330  0.7414
SalientPrestigious3 1.71634   1.28094   1.340  0.1803
SalientPride3    1.54748   0.87194   1.775  0.0759 .
SalientPure3     1.71068   1.09597   1.561  0.1186
SalientWealth3   0.06424   1.10628   0.058  0.9537
Type_of_Beer2Barley_Wine 0.52100   0.85083   0.612  0.5403
Type_of_Beer2Fruit  2.05266   1.19527   1.717  0.0859 .
Type_of_Beer2Lager 17.52933  756.08866  0.023  0.9815
Type_of_Beer2Porter -0.47580   0.69746  -0.682  0.4951
Type_of_Beer2Stout  0.24825   0.78790   0.315  0.7527
Type_of_Beer2Wheat  1.70572   0.95157   1.793  0.0730 .
ColourBrown      0.16549   0.66363   0.249  0.8031
ColourDark       1.28545   0.61261   2.098  0.0359 *
ColourGold      -0.17080   0.63175  -0.270  0.7869
ColourN/A       -0.93662   0.47943  -1.954  0.0507 .
ColourPale       0.13288   0.47680   0.279  0.7805
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 429.24 on 322 degrees of freedom
 Residual deviance: 290.34 on 298 degrees of freedom
 AIC: 340.34

Number of Fisher Scoring iterations: 16

```
> summary(data)
      Country      Year_Made_In      Year2      Year3      Year_in_Title      Type_of_Beer      Type_of_Beer2
Type_of_Beer_in_Title Geeraerts      Organic
England :123  N/A      : 83  y2000 :171  N/A : 83  No :321      Bitter :109  Ale      :215  No :194
Type1: 83  No :307
Ireland : 6  y1988 : 18  N/A : 83  y1700: 7  Yes: 2      Ale : 44  Barley_Wine: 11  Yes:129
Type2:240  Yes: 16
Scotland: 25  y1996 : 16  y1850 : 30  y1800: 44      Stout : 26  Fruit : 9
US :163  y1995 : 15  y1800 : 14  y1900: 18      IPA : 25  Lager : 22
Wales : 6  y1992 : 12  y1950 : 10  y2000:171      Porter : 24  Porter : 24
      y2002 : 11  y1900 : 8      Wheat : 16  Stout : 26
      (Other):168  (Other): 7      (Other): 79  Wheat : 16
Organic_in_Title Strongness      Alcoholic_Percentage Alcoholic_Percentage.1      Colour      Brewery_Name_in_Title
Target_Group      Brewery_Situated
No :312      medium:244      four : 32      5 : 29      Amber:50      No :198
Female: 34      City : 81
Yes: 11      mild : 24      five : 29      4 : 24      Brown:21      Yes:125      Male
:106      Countryside: 86
      strong: 55      four,two : 18      4,2 : 18      Dark :84      Mix
:183      Isle : 6
      five,five : 16      5,5 : 16      Gold :24
Mountain : 3
      four,eight: 14      4,8 : 14      N/A :60
Seaside : 6
      four,five : 13      4,5 : 13      Pale :84
Town :141
      (Other) :201      (Other):209
Brewery_Situated_in_Title      ToD      ToD2      Source_Domain      Salient
No :287      Founder :116      Founder :116      Prestigious2 :60      Pride3 :135
Yes: 36      Animal : 35      Misc. : 36      Adventure2 :58      Humour3 : 43
      Misc. : 35      Animal : 35      Local_identity2:42      Dangerous3: 40
      Geografical : 32      Geografical: 32      Pride2 :27      N/A : 22
```

```

Nature      : 19  History      : 27  Pleasure2   :22  Pure3       : 21
Historical_fig: 16  Nature      : 19  Animal2     :18  Pleasure3   : 16
(Other)     : 70  (Other)    : 58  (Other)     :96  (Other)     : 46
> data <- read.table(file.choose(), header=T)
> summary(data)
  Country Country.1 Year_Made_In Year2 Year3 Year_in_Title Type_of_Beer
Type_of_Beer2 Type_of_Beer_in_Title Geeraerts
England :123  England:160  N/A      : 83  y2000 :171  N/A      : 83  No :321  Bitter :109  Ale
:215  No :194
Ireland : 6  US      :163  y1988  : 18  N/A      : 83  y1700: 7  Yes: 2  Ale : 44  Barley_Wine:
11  Yes:129  Type2:240
Scotland: 25  y1996  : 16  y1850  : 30  y1800: 44  Stout : 26  Fruit :
9  US      :163  y1995  : 15  y1800  : 14  y1900: 18  IPA : 25  Lager :
22  Wales  : 6  y1992  : 12  y1950  : 10  y2000:171  Porter : 24  Porter :
24  y2002  : 11  y1900  : 8  Wheat : 16  Stout :
26  (Other):168  (Other): 7  (Other): 79  Wheat :
16  Organic  Organic_in_Title Strongness Alcoholic_Percentage Alcoholic_Percentage.1 Colour
Brewery_Name_in_Title Target_Group Brewery_Situated
No :307  No :312  medium:244  four : 32  5 : 29  Amber:50  No :198
Female: 34  City : 81  mild : 24  five : 29  4 : 24  Brown:21  Yes:125
Male :106  Countryside: 86  strong: 55  four,two : 18  4,2 : 18  Dark :84
Mix :183  Isle : 6  five,five : 16  5,5 : 16  Gold :24
Mountain : 3  four,eight: 14  4,8 : 14  N/A :60
Seaside : 6  four,five : 13  4,5 : 13  Pale :84
Town :141  (Other) :201  (Other):209
Brewery_Situated_in_Title ToD ToD2 Source_Domain Salient
No :287  Founder :116  Founder :116  Prestigious2 :60  Pride3 :135
Yes: 36  Animal : 35  Misc. : 36  Adventure2 :58  Humour3 : 43
Misc. : 35  Animal : 35  Local_identity2:42  Dangerous3: 40
Geografical : 32  Geografical: 32  Pride2 :27  N/A : 22
Nature : 19  History : 27  Pleasure2 :22  Pure3 : 21
Historical_fig: 16  Nature : 19  Animal2 :18  Pleasure3 : 16
(Other) : 70  (Other) : 58  (Other) :96  (Other) : 46
> LogReg_glm <- glm(Country.1 ~ Year3 +Salient+ Type_of_Beer2 + Colour , data = data, family = "binomial")
> LogReg_glm <- glm(Country ~ Salient + Strongness + Target_Group + ToD2 + Type_of_Beer2 + Colour , data = data,
family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> LogReg_glm <- glm(Country ~ + Strongness + Target_Group + ToD2 + Type_of_Beer2 + Colour , data = data, family
= "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> LogReg_glm <- glm(Country ~ Strongness + Target_Group + ToD2 + Type_of_Beer2 + Colour , data = data, family =
"binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)

Call:
glm(formula = Country ~ Strongness + Target_Group + ToD2 + Type_of_Beer2 +
Colour, family = "binomial", data = data)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.04372 -0.69217  0.00012  0.78954  2.49525

Coefficients:
(Intercept)                0.15895    1.15247    0.138 0.890301
Strongnessmild             -3.02325    0.91270   -3.312 0.000925 ***
Strongnessstrong          18.23053   856.67886   0.021 0.983022
Target_GroupMale           0.03249    0.62780    0.052 0.958726
Target_GroupMix           -0.48560    0.59315   -0.819 0.412970
ToD2Animal                 0.48197    1.06989    0.450 0.652360
ToD2Food                   -0.01382    1.39441   -0.010 0.992091
ToD2Founder                0.26133    0.99198    0.263 0.792213
ToD2Geografical           0.60720    1.06858    0.568 0.569875
ToD2History                0.34300    1.08418    0.316 0.751725
ToD2Local                  -0.42233    1.20788   -0.350 0.726604
ToD2Misc.                  0.05419    1.06170    0.051 0.959292
ToD2Nature                 1.51903    1.20331    1.262 0.206814
ToD2Religion              -1.33272    1.30362   -1.022 0.306625
ToD2Trad                   -0.89276    1.15639   -0.772 0.440101
Type_of_Beer2Barley_Wine -16.81378   856.67914  -0.020 0.984341
Type_of_Beer2Fruit         1.94110    1.09977    1.765 0.077562 .
Type_of_Beer2Lager        18.52147  1225.38400   0.015 0.987941
Type_of_Beer2Porter        0.76633    0.67236    1.140 0.254384

```


| | | | | |
|--------------------|----------|---------|--------|-------------|
| Type_of_Beer2Stout | 0.55040 | 0.75418 | 0.730 | 0.465515 |
| Type_of_Beer2Wheat | 1.73463 | 0.86163 | 2.013 | 0.044094 * |
| ColourBrown | 0.08697 | 0.62091 | 0.140 | 0.888611 |
| ColourDark | 0.51640 | 0.57291 | 0.901 | 0.367394 |
| ColourGold | -0.57884 | 0.58901 | -0.983 | 0.325738 |
| ColourN/A | -1.52841 | 0.52063 | -2.936 | 0.003328 ** |
| ColourPale | 0.47856 | 0.49322 | 0.970 | 0.331902 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 429.24 on 322 degrees of freedom
Residual deviance: 277.74 on 297 degrees of freedom
AIC: 329.74

Number of Fisher Scoring iterations: 17

```
> LogReg_glm <- glm(Country ~ Strongness + Target_Group + Type_of_Beer2 + Colour , data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Strongness + Target_Group + Type_of_Beer2 + Colour, family = "binomial", data = data)
```

Deviance Residuals:

| | | | | |
|----------|----------|---------|---------|---------|
| Min | 1Q | Median | 3Q | Max |
| -2.11480 | -0.73830 | 0.00012 | 0.86429 | 2.48350 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|-----------|------------|---------|------------|
| (Intercept) | 0.42835 | 0.61049 | 0.702 | 0.48290 |
| Strongnessmild | -2.84161 | 0.89240 | -3.184 | 0.00145 ** |
| Strongnessstrong | 18.32279 | 869.44471 | 0.021 | 0.98319 |
| Target_GroupMale | -0.08651 | 0.58591 | -0.148 | 0.88262 |
| Target_GroupMix | -0.46993 | 0.55587 | -0.845 | 0.39790 |
| Type_of_Beer2Barley_Wine | -17.22574 | 869.44496 | -0.020 | 0.98419 |
| Type_of_Beer2Fruit | 1.79679 | 1.08050 | 1.663 | 0.09633 . |
| Type_of_Beer2Lager | 18.57340 | 1231.83390 | 0.015 | 0.98797 |
| Type_of_Beer2Porter | 0.68747 | 0.64199 | 1.071 | 0.28424 |
| Type_of_Beer2Stout | 0.55001 | 0.72375 | 0.760 | 0.44728 |
| Type_of_Beer2Wheat | 1.76363 | 0.83158 | 2.121 | 0.03394 * |
| ColourBrown | 0.16672 | 0.59187 | 0.282 | 0.77818 |
| ColourDark | 0.45044 | 0.53621 | 0.840 | 0.40089 |
| ColourGold | -0.53726 | 0.55225 | -0.973 | 0.33062 |
| ColourN/A | -1.50242 | 0.50095 | -2.999 | 0.00271 ** |
| ColourPale | 0.40113 | 0.46205 | 0.868 | 0.38531 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 429.24 on 322 degrees of freedom
Residual deviance: 290.50 on 307 degrees of freedom
AIC: 322.5

Number of Fisher Scoring iterations: 17

```
> LogReg_glm <- glm(Country ~ Strongness + Type_of_Beer2 + Colour , data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Strongness + Type_of_Beer2 + Colour, family = "binomial", data = data)
```

Deviance Residuals:

| | | | | |
|----------|----------|---------|---------|---------|
| Min | 1Q | Median | 3Q | Max |
| -2.13027 | -0.67544 | 0.00011 | 0.91537 | 2.57600 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|----------|------------|---------|------------|
| (Intercept) | 0.1296 | 0.3389 | 0.382 | 0.70216 |
| Strongnessmild | -2.8657 | 0.8862 | -3.234 | 0.00122 ** |
| Strongnessstrong | 18.3373 | 877.2727 | 0.021 | 0.98332 |
| Type_of_Beer2Barley_Wine | -17.3002 | 877.2730 | -0.020 | 0.98427 |
| Type_of_Beer2Fruit | 2.0698 | 0.9989 | 2.072 | 0.03826 * |
| Type_of_Beer2Lager | 18.4943 | 1232.7760 | 0.015 | 0.98803 |
| Type_of_Beer2Porter | 0.6163 | 0.6349 | 0.971 | 0.33173 |
| Type_of_Beer2Stout | 0.4454 | 0.7150 | 0.623 | 0.53337 |
| Type_of_Beer2Wheat | 1.6456 | 0.8229 | 2.000 | 0.04553 * |
| ColourBrown | 0.1428 | 0.5896 | 0.242 | 0.80868 |
| ColourDark | 0.5237 | 0.5300 | 0.988 | 0.32317 |
| ColourGold | -0.5449 | 0.5484 | -0.994 | 0.32037 |

```
ColourN/A          -1.4913      0.4988  -2.989  0.00279 **
ColourPale         0.3847      0.4604   0.836  0.40338
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
Null deviance: 429.24 on 322 degrees of freedom
Residual deviance: 292.35 on 309 degrees of freedom
AIC: 320.35
```

Number of Fisher Scoring iterations: 17

```
> data <- read.table(file.choose(), header=T)
> LogReg_glm <- glm(Country ~ Strongness + Type_of_Beer2 + Colour, data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country ~ Strongness + Type_of_Beer2 + Colour,
    family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.13027 -0.67544  0.00011  0.91537  2.57600
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -1.3617     0.3783  -3.599 0.000319 ***
Strongnessmild   -2.8657     0.8862  -3.234 0.001222 **
Strongnessstrong 18.3373    877.2727   0.021 0.983323
Type_of_Beer2Barley_Wine -17.3002  877.2730  -0.020 0.984266
Type_of_Beer2Fruit  2.0698     0.9989   2.072 0.038259 *
Type_of_Beer2Lager 18.4943   1232.7760   0.015 0.988030
Type_of_Beer2Porter  0.6163     0.6349   0.971 0.331734
Type_of_Beer2Stout  0.4454     0.7150   0.623 0.533369
Type_of_Beer2Wheat  1.6456     0.8229   2.000 0.045528 *
ColourAmber       1.4913     0.4988   2.989 0.002795 **
ColourBrown       1.6340     0.6129   2.666 0.007670 **
ColourDark        2.0149     0.5522   3.649 0.000263 ***
ColourGold        0.9464     0.5722   1.654 0.098153 .
ColourPale        1.8760     0.4839   3.877 0.000106 ***
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
Null deviance: 429.24 on 322 degrees of freedom
Residual deviance: 292.35 on 309 degrees of freedom
AIC: 320.35
```

Number of Fisher Scoring iterations: 17

```
> LogReg_lrm <- lrm(Country ~ Strongness + Type_of_Beer2 + Colour, data = data, x=T, y=T)
> LogReg_lrm
```

Logistic Regression Model

```
lrm(formula = Country ~ Strongness + Type_of_Beer2 + Colour,
    data = data, x = T, y = T)
```

Frequencies of Responses

```
England Ireland Scotland      US      Wales
    123         6        25      163         6
```

```
      Obs  Max Deriv Model L.R.      d.f.      P      C      Dxy      Gamma      Tau-a      R2
Brier  323    3e-08    124.37      13      0      0.8    0.599    0.63    0.357    0.363
0.158
```

```
      Coef      S.E.      Wald Z P
y>=Ireland    -0.9297  0.3233   -2.88 0.0040
y>=Scotland   -1.0419  0.3249   -3.21 0.0013
y>=US         -1.5040  0.3316   -4.54 0.0000
y>=Wales      -6.7818  0.6544  -10.36 0.0000
Strongness=mild -2.7851  0.7297   -3.82 0.0001
Strongness=strong 2.6925  0.4926   5.47 0.0000
Type_of_Beer2=Barley_Wine -2.2075  0.7378   -2.99 0.0028
Type_of_Beer2=Fruit 1.8999  0.7921   2.40 0.0165
Type_of_Beer2=Lager 1.8437  0.5449   3.38 0.0007
Type_of_Beer2=Porter 1.1471  0.5392   2.13 0.0334
Type_of_Beer2=Stout 0.4399  0.5224   0.84 0.3998
Type_of_Beer2=Wheat 1.3384  0.6174   2.17 0.0302
Colour=Amber    1.2228  0.4327   2.83 0.0047
Colour=Brown    1.3787  0.5608   2.46 0.0139
Colour=Dark     1.1399  0.4408   2.59 0.0097
```

```
Colour=Gold          0.5062 0.5286  0.96 0.3383
Colour=Pale          1.6315 0.4165  3.92 0.0001
```

```
> LogReg_glm <- glm(Country.1 ~ Strongness + Type_of_Beer2 + Colour , data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country.1 ~ Strongness + Type_of_Beer2 + Colour,
     family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.28635  -0.74420   0.00002   0.82260   2.24413
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -1.8969    0.4422  -4.290 1.79e-05 ***
Strongnessmild  -35.4360   2192.9736  -0.016  0.98711
Strongnessstrong  20.0752   1458.5865   0.014  0.98902
Type_of_Beer2Barley_Wine -19.3923   1458.5867  -0.013  0.98939
Type_of_Beer2Fruit  18.7371   1498.0801   0.013  0.99002
Type_of_Beer2Lager   2.2892    0.7980   2.869  0.00412 **
Type_of_Beer2Porter  1.9822    0.6457   3.070  0.00214 **
Type_of_Beer2Stout   1.0724    0.6747   1.589  0.11198
Type_of_Beer2Wheat   1.6201    0.7598   2.132  0.03298 *
ColourAmber         1.7028    0.5454   3.122  0.00180 **
ColourBrown         1.9478    0.6582   2.959  0.00308 **
ColourDark          0.8245    0.6070   1.358  0.17433
ColourGold         -0.5371    0.8730  -0.615  0.53839
ColourPale          2.1453    0.5283   4.061 4.89e-05 ***
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
(Dispersion parameter for binomial family taken to be 1)
```

```
Null deviance: 447.75 on 322 degrees of freedom
Residual deviance: 271.02 on 309 degrees of freedom
AIC: 299.02
```

```
Number of Fisher Scoring iterations: 18
```

```
> LogReg_glm <- glm(Country.1 ~ Type_of_Beer2 + Colour , data = data, family = "binomial")
> summary(LogReg_glm)
```

```
Call:
glm(formula = Country.1 ~ Type_of_Beer2 + Colour, family = "binomial",
     data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.0762  -1.0249   0.4963   1.1078   2.1352
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -1.21338    0.31131  -3.898 9.71e-05 ***
Type_of_Beer2Barley_Wine  0.07221    0.67776   0.107 0.915157
Type_of_Beer2Fruit      1.67465    0.89036   1.881 0.059991 .
Type_of_Beer2Lager      1.86625    0.64881   2.876 0.004022 **
Type_of_Beer2Porter     1.44579    0.57168   2.529 0.011437 *
Type_of_Beer2Stout      1.18093    0.54804   2.155 0.031175 *
Type_of_Beer2Wheat      1.64026    0.71410   2.297 0.021621 *
ColourAmber           1.31176    0.43047   3.047 0.002309 **
ColourBrown           0.97925    0.54476   1.798 0.072242 .
ColourDark            0.84338    0.45495   1.854 0.063768 .
ColourGold           -0.95811    0.71023  -1.349 0.177334
ColourPale           1.37933    0.39894   3.457 0.000545 ***
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
(Dispersion parameter for binomial family taken to be 1)
```

```
Null deviance: 447.75 on 322 degrees of freedom
Residual deviance: 376.62 on 311 degrees of freedom
AIC: 400.62
```

```
Number of Fisher Scoring iterations: 4
```

```
> LogReg_lrm <- lrm(Country ~ Type_of_Beer2 + Colour , data = data, x=T, y=T)
> LogReg_lrm <- lrm(Country.1 ~ Type_of_Beer2 + Colour , data = data, x=T, y=T)
> LogReg_lrm
```

```
Logistic Regression Model
```

```
lrm(formula = Country.1 ~ Type_of_Beer2 + Colour, data = data,
     x = T, y = T)
```

Frequencies of Responses

England US
160 163

| | Obs | Max Deriv | Model L.R. | d.f. | P | C | Dxy | Gamma | Tau-a | R2 |
|-------|-----|-----------|------------|------|---|-------|-------|-------|-------|-------|
| Brier | 323 | 7e-12 | 71.12 | 11 | 0 | 0.756 | 0.512 | 0.558 | 0.257 | 0.264 |

| | Coef | S.E. | Wald Z | P |
|---------------------------|----------|--------|--------|--------|
| Intercept | -1.21338 | 0.3113 | -3.90 | 0.0001 |
| Type_of_Beer2=Barley_Wine | 0.07221 | 0.6778 | 0.11 | 0.9152 |
| Type_of_Beer2=Fruit | 1.67465 | 0.8904 | 1.88 | 0.0600 |
| Type_of_Beer2=Lager | 1.86625 | 0.6488 | 2.88 | 0.0040 |
| Type_of_Beer2=Porter | 1.44579 | 0.5717 | 2.53 | 0.0114 |
| Type_of_Beer2=Stout | 1.18093 | 0.5480 | 2.15 | 0.0312 |
| Type_of_Beer2=Wheat | 1.64026 | 0.7141 | 2.30 | 0.0216 |
| Colour=Amber | 1.31176 | 0.4305 | 3.05 | 0.0023 |
| Colour=Brown | 0.97925 | 0.5448 | 1.80 | 0.0722 |
| Colour=Dark | 0.84338 | 0.4549 | 1.85 | 0.0638 |
| Colour=Gold | -0.95811 | 0.7102 | -1.35 | 0.1773 |
| Colour=Pale | 1.37933 | 0.3989 | 3.46 | 0.0005 |

> data <- read.table(file.choose(), header=T)

> summary(data)

```

Country      Country.1  Year_Made_In  Year2      Year3      Year_in_Title  Type_of_Beer      Type_of_Beer2
Type_of_Beer_in_Title Geeraerts      Organic
England :47  England:64  N/A      :45      N/A :45  N/A :45  No:140      Bitter :51  Ale      :95  No
:81      Type1: 27  No :139
Ireland : 2  US      :76  y1988 :10  y1700: 2  y1700: 2      Ale      :21  Barley_Wine: 4
Yes:59      Type2:113  Yes: 1
Scotland:12      y1996 : 7  y1800: 8  y1800:19      Stout :15  Fruit      : 8
US      :76      y1992 : 6  y1850:11  y1900: 5      Porter :11  Lager      : 5
Wales   : 3      y2006 : 5  y1900: 4  y2000:69      IPA      : 9  Porter     :11
      y1994 : 4  y1950: 1      Fruit : 8  Stout      :15
      (Other):63  y2000:69      (Other):25  Wheat    : 2
Organic_in_Title Strongness Alcoholic_Percentage Alcoholic_Percentage.1 Colour Brewery_Name_in_Title
Target_Group      Brewery_Situated
No:140      medium:100  four      :13      5      :10      A_N/A:26  No :95
Female: 34  City      :41
      mild : 9  five      :10      4      : 9      Amber:23  Yes:45      Male
:106  Countryside:35
      strong: 31  six      : 9      6      : 9      Brown: 8
Isle      : 1
      four,two : 8      4,2      : 8      Dark :45
Seaside   : 2
      five,five : 6      4,8      : 6      Gold :10
Town      :61
      four,eight: 6      5,5      : 6      Pale :28
      (Other) :88      (Other):92
Brewery_Situated_in_Title ToD ToD2 Source_Domain Salient
No :131  Founder :42  Founder :42  Adventure2 :31  Pride3 :46
Yes: 9  Misc. :22  Misc. :22  Prestigious2:18  Dangerous3:31
      Animal :16  Animal :16  Pleasure2 :13  Humour3 :17
      Geografical :10  History :12  Animal2 : 9  Force3 :12
      Food : 8  Trad :12  Food2 : 8  Pleasure3 : 9
      Historical_fig: 7  Geografical:10  Force2 : 8  N/A : 8
      (Other) :35  (Other) :26  (Other) :53  (Other) :17

```

> LogReg_lrm <- lrm(Target_Group ~ Type_of_Beer2 + Colour + Strongness + Salient + Geeraerts + ToD2 + Year3 , data = data, x=T, y=T)

> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Colour + Strongness + Salient + Geeraerts + ToD2 + Year3 , data = data, family="binominal")

Error in get(family, mode = "function", envir = parent.frame()) :

object 'binominal' of mode 'function' was not found

> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Colour + Strongness + Salient + Geeraerts + ToD2 + Year3 , data = data, family = "binomial")

Warning message:

glm.fit: fitted probabilities numerically 0 or 1 occurred

> summary(LogReg_glm)

Call:

```

glm(formula = Target_Group ~ Type_of_Beer2 + Colour + Strongness +
Salient + Geeraerts + ToD2 + Year3, family = "binomial",
data = data)

```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|----------|---------|---------|---------|---------|
| -2.53960 | 0.00000 | 0.00004 | 0.32931 | 2.41102 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|------------|------------|---------|----------|
| (Intercept) | 1.939e+01 | 1.426e+04 | 0.001 | 0.9989 |
| Type_of_Beer2Barley_Wine | -2.565e+00 | 2.041e+00 | -1.257 | 0.2087 |
| Type_of_Beer2Fruit | -2.262e+01 | 7.918e+03 | -0.003 | 0.9977 |
| Type_of_Beer2Lager | -3.599e+00 | 2.182e+00 | -1.649 | 0.0991 |
| Type_of_Beer2Porter | 4.001e+01 | 8.438e+03 | 0.005 | 0.9962 |
| Type_of_Beer2Stout | -6.221e-02 | 1.579e+00 | -0.039 | 0.9686 |

| Variable | Estimate | Std. Error | z value | Pr(> z) |
|---------------------|------------|------------|---------|----------|
| Type_of_Beer2Wheat | 9.063e+00 | 2.297e+06 | 0.000 | 1.0000 |
| ColourAmber | -1.889e+00 | 2.145e+00 | -0.881 | 0.3786 |
| ColourBrown | 9.102e-01 | 2.314e+00 | 0.393 | 0.6941 |
| ColourDark | -5.347e-02 | 1.382e+00 | -0.039 | 0.9691 |
| ColourGold | -2.360e+00 | 1.613e+00 | -1.463 | 0.1434 |
| ColourPale | 2.681e-01 | 1.460e+00 | 0.184 | 0.8543 |
| Strongnessmild | 1.284e+00 | 2.150e+00 | 0.597 | 0.5502 |
| Strongnessstrong | 1.041e+00 | 1.338e+00 | 0.778 | 0.4367 |
| SalientDangerous3 | 7.238e-01 | 1.654e+00 | 0.438 | 0.6616 |
| SalientForce3 | 1.967e+01 | 7.361e+03 | 0.003 | 0.9979 |
| SalientHumour3 | 1.801e+00 | 2.390e+00 | 0.753 | 0.4512 |
| SalientN/A | 1.933e+01 | 9.290e+03 | 0.002 | 0.9983 |
| SalientPleasure3 | -5.327e+00 | 2.645e+00 | -2.014 | 0.0440 * |
| SalientPrestigious3 | -2.182e+01 | 5.702e+03 | -0.004 | 0.9969 |
| SalientPride3 | 4.134e-01 | 1.685e+00 | 0.245 | 0.8061 |
| SalientPure3 | -4.248e+01 | 1.166e+04 | -0.004 | 0.9971 |
| SalientWealth3 | 3.559e-01 | 1.868e+00 | 0.191 | 0.8489 |
| GeeraertsType2 | 4.395e-01 | 1.651e+00 | 0.266 | 0.7901 |
| ToD2Animal | -1.950e+01 | 1.426e+04 | -0.001 | 0.9989 |
| ToD2Food | -2.029e+01 | 1.426e+04 | -0.001 | 0.9989 |
| ToD2Founder | -1.773e+01 | 1.426e+04 | -0.001 | 0.9990 |
| ToD2Geografical | -2.077e+01 | 1.426e+04 | -0.001 | 0.9988 |
| ToD2History | -2.044e+01 | 1.426e+04 | -0.001 | 0.9989 |
| ToD2Local | -1.290e+00 | 2.082e+04 | 0.000 | 1.0000 |
| ToD2Misc. | -2.021e+01 | 1.426e+04 | -0.001 | 0.9989 |
| ToD2Nature | 5.547e-01 | 1.591e+04 | 0.000 | 1.0000 |
| ToD2Religion | 1.470e+00 | 2.124e+04 | 0.000 | 0.9999 |
| ToD2Trad | -1.643e+01 | 1.426e+04 | -0.001 | 0.9991 |
| Year3y1700 | 2.377e+01 | 1.738e+04 | 0.001 | 0.9989 |
| Year3y1800 | 9.469e-01 | 1.484e+00 | 0.638 | 0.5234 |
| Year3y1900 | 2.175e+01 | 1.125e+04 | 0.002 | 0.9985 |
| Year3y2000 | 1.909e+00 | 1.338e+00 | 1.427 | 0.1537 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 155.218 on 139 degrees of freedom
Residual deviance: 52.724 on 102 degrees of freedom
AIC: 128.72

Number of Fisher Scoring iterations: 20

```
> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Colour + Strongness + Salient + Geeraerts , data = data,
family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Target_Group ~ Type_of_Beer2 + Colour + Strongness +
Salient + Geeraerts, family = "binomial", data = data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|---------|--------|--------|--------|--------|
| -2.4424 | 0.0000 | 0.2161 | 0.4671 | 1.5939 |

Coefficients:

| | Estimate | Std. Error | z value | Pr(> z) |
|--------------------------|-----------|------------|---------|----------|
| (Intercept) | 0.00627 | 1.59973 | 0.004 | 0.9969 |
| Type_of_Beer2Barley_Wine | -1.89710 | 1.60323 | -1.183 | 0.2367 |
| Type_of_Beer2Fruit | -21.97184 | 4852.45241 | -0.005 | 0.9964 |
| Type_of_Beer2Lager | -3.21208 | 1.41958 | -2.263 | 0.0237 * |
| Type_of_Beer2Porter | 36.14433 | 5703.84475 | 0.006 | 0.9949 |
| Type_of_Beer2Stout | 0.76864 | 1.23260 | 0.624 | 0.5329 |
| Type_of_Beer2Wheat | 16.69081 | 5960.38466 | 0.003 | 0.9978 |
| ColourAmber | -0.63709 | 1.24684 | -0.511 | 0.6094 |
| ColourBrown | -1.00433 | 2.19877 | -0.457 | 0.6478 |
| ColourDark | -1.33686 | 1.17663 | -1.136 | 0.2559 |
| ColourGold | -1.75154 | 1.24406 | -1.408 | 0.1592 |
| ColourPale | -1.10269 | 1.14391 | -0.964 | 0.3351 |
| Strongnessmild | 0.73703 | 2.08512 | 0.353 | 0.7237 |
| Strongnessstrong | 0.05815 | 0.85185 | 0.068 | 0.9456 |
| SalientDangerous3 | 2.48975 | 1.36769 | 1.820 | 0.0687 . |
| SalientForce3 | 20.39535 | 4804.51789 | 0.004 | 0.9966 |
| SalientHumour3 | 3.79072 | 2.06712 | 1.834 | 0.0667 . |
| SalientN/A | 20.08129 | 6145.96384 | 0.003 | 0.9974 |
| SalientPleasure3 | -0.84706 | 1.53207 | -0.553 | 0.5803 |
| SalientPrestigious3 | -18.14115 | 3882.56135 | -0.005 | 0.9963 |
| SalientPride3 | 1.78858 | 1.31137 | 1.364 | 0.1726 |
| SalientPure3 | -33.98017 | 8429.25679 | -0.004 | 0.9968 |
| SalientWealth3 | 1.04748 | 1.65230 | 0.634 | 0.5261 |
| GeeraertsType2 | 1.00281 | 0.92979 | 1.079 | 0.2808 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 155.218 on 139 degrees of freedom
 Residual deviance: 71.175 on 116 degrees of freedom
 AIC: 119.18

Number of Fisher Scoring iterations: 19

```
> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Strongness + Salient + Geeraerts , data = data, family =
"binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)
```

```
Call:
glm(formula = Target_Group ~ Type_of_Beer2 + Strongness + Salient +
    Geeraerts, family = "binomial", data = data)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4381  0.0000  0.2525  0.4976  1.5016
```

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -0.7794     1.3344  -0.584  0.5591
Type_of_Beer2Barley_Wine -1.6417     1.5146  -1.084  0.2784
Type_of_Beer2Fruit  -21.7489    4853.3201  -0.004  0.9964
Type_of_Beer2Lager   -2.8742     1.2950  -2.219  0.0265 *
Type_of_Beer2Porter  35.8173    5766.0666   0.006  0.9950
Type_of_Beer2Stout    0.3713     0.9997   0.371  0.7103
Type_of_Beer2Wheat   16.6380    5909.9552   0.003  0.9978
Strongnessmild       0.4332     1.5848   0.273  0.7846
Strongnessstrong     0.0814     0.8047   0.101  0.9194
SalientDangerous3    2.6609     1.2282   2.166  0.0303 *
SalientForce3       20.5939    4954.0446   0.004  0.9967
SalientHumour3       3.5421     1.7382   2.038  0.0416 *
SalientN/A          20.7084    6260.9139   0.003  0.9974
SalientPleasure3    -0.6236     1.3540  -0.461  0.6451
SalientPrestigious3 -18.0130    3936.7350  -0.005  0.9963
SalientPride3        1.8433     1.1650   1.582  0.1136
SalientPure3       -34.2273    8357.9388  -0.004  0.9967
SalientWealth3       1.1248     1.5442   0.728  0.4664
GeeraertsType2       0.6670     0.8380   0.796  0.4261
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 155.218 on 139 degrees of freedom
 Residual deviance: 73.782 on 121 degrees of freedom
 AIC: 111.78

Number of Fisher Scoring iterations: 19

```
> LogReg_lrm <- lrm(Target_Group ~ Type_of_Beer2 + Strongness + Salient , data = data, x=T, y=T)
> LogReg_lrm
```

Logistic Regression Model

```
lrm(formula = Target_Group ~ Type_of_Beer2 + Strongness + Salient,
    data = data, x = T, y = T)
```

Frequencies of Responses

```
Female  Male
   34    106
```

```
      Obs  Max Deriv Model L.R.      d.f.      P      C      Dxy      Gamma      Tau-a      R2
Brier  140    4e-04    80.81      17      0    0.922    0.844    0.869    0.312    0.655
0.083
```

```
      Coef      S.E.      Wald Z P
Intercept      -0.1127    1.0374  -0.11  0.9135
Type_of_Beer2=Barley_Wine -1.5894    1.5174  -1.05  0.2949
Type_of_Beer2=Fruit  -12.2631   65.2299  -0.19  0.8509
Type_of_Beer2=Lager   -3.0587    1.2533  -2.44  0.0147
Type_of_Beer2=Porter  16.1820   65.1868   0.25  0.8039
Type_of_Beer2=Stout    0.3226    1.0005   0.32  0.7471
Type_of_Beer2=Wheat   7.2120   77.5137   0.09  0.9259
Strongness=mild       0.2818    1.4302   0.20  0.8438
Strongness=strong     0.1310    0.7953   0.16  0.8692
Salient=Dangerous3    2.6483    1.2294   2.15  0.0312
Salient=Force3       10.4876   55.8791   0.19  0.8511
Salient=Humour3       3.6460    1.7512   2.08  0.0373
Salient=N/A          10.6657   70.2811   0.15  0.8794
Salient=Pleasure3    -0.7081    1.3522  -0.52  0.6005
Salient=Prestigious3 -8.3448   44.5727  -0.19  0.8515
Salient=Pride3        1.6033    1.1122   1.44  0.1494
Salient=Pure3       -15.8810  111.7231  -0.14  0.8870
```

```

Salient=Wealth3          1.1356   1.5436  0.74  0.4619

> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Strongness + Salient , data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)

Call:
glm(formula = Target_Group ~ Type_of_Beer2 + Strongness + Salient,
     family = "binomial", data = data)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4141  0.0000  0.2399  0.5602  1.5398

Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -0.1127    1.0374  -0.109  0.9135
Type_of_Beer2Barley_Wine -1.5894    1.5175  -1.047  0.2949
Type_of_Beer2Fruit   -21.9245   4956.2297  -0.004  0.9965
Type_of_Beer2Lager   -3.0587    1.2533  -2.441  0.0147 *
Type_of_Beer2Porter  36.0720   5710.3966  0.006  0.9950
Type_of_Beer2Stout   0.3226    1.0005  0.322  0.7471
Type_of_Beer2Wheat  16.8971   5966.1572  0.003  0.9977
Strongnessmild       0.2818    1.4302  0.197  0.8438
Strongnessstrong     0.1310    0.7953  0.165  0.8692
SalientDangerous3    2.6483    1.2294  2.154  0.0312 *
SalientForce3       20.4663   4975.9316  0.004  0.9967
SalientHumour3       3.6460    1.7512  2.082  0.0373 *
SalientN/A          20.6438   6256.9079  0.003  0.9974
SalientPleasure3    -0.7081    1.3522  -0.524  0.6005
SalientPrestigious3 -18.2790   3881.1018 -0.005  0.9962
SalientPride3        1.6033    1.1122  1.442  0.1494
SalientPure3       -35.1721   8437.4204 -0.004  0.9967
SalientWealth3      1.1356    1.5436  0.736  0.4619
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 155.218  on 139  degrees of freedom
Residual deviance:  74.405  on 122  degrees of freedom
AIC: 110.4

Number of Fisher Scoring iterations: 19

> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Salient , data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)

Call:
glm(formula = Target_Group ~ Type_of_Beer2 + Salient, family = "binomial",
     data = data)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4381  0.0000  0.2336  0.6238  1.5106

Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -0.08982    1.02985  -0.087  0.9305
Type_of_Beer2Barley_Wine -1.49118    1.35038  -1.104  0.2695
Type_of_Beer2Fruit   -21.93503   4896.61065  -0.004  0.9964
Type_of_Beer2Lager   -3.05371    1.24403  -2.455  0.0141 *
Type_of_Beer2Porter  36.01427   5719.59001  0.006  0.9950
Type_of_Beer2Stout   0.36075    0.94540  0.382  0.7028
Type_of_Beer2Wheat  16.85306   5976.39785  0.003  0.9978
SalientDangerous3    2.64859    1.22552  2.161  0.0307 *
SalientForce3       20.48767   4983.75111  0.004  0.9967
SalientHumour3       3.67800    1.74884  2.103  0.0355 *
SalientN/A          20.65589   6268.63248  0.003  0.9974
SalientPleasure3    -0.66620    1.32785  -0.502  0.6159
SalientPrestigious3 -18.24067   3886.81548 -0.005  0.9963
SalientPride3        1.62791    1.10766  1.470  0.1416
SalientPure3       -35.15438   8451.90281 -0.004  0.9967
SalientWealth3      1.10442    1.53161  0.721  0.4709
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 155.218  on 139  degrees of freedom
Residual deviance:  74.466  on 124  degrees of freedom
AIC: 106.47

Number of Fisher Scoring iterations: 19

```

```
> LogReg_lrm <- lrm(Target_Group ~ Type_of_Beer2 + Salient , data = data, x=T, y=T)
> LogReg_lrm
```

Logistic Regression Model

```
lrm(formula = Target_Group ~ Type_of_Beer2 + Salient, data = data,
     x = T, y = T)
```

Frequencies of Responses

```
Female  Male
   34    106
```

```
Obs Max Deriv Model L.R.      d.f.      P      C      Dxy      Gamma      Tau-a      R2
Brier 140      4e-04      80.75      15      0      0.92      0.84      0.886      0.311      0.654
0.083
```

```
Coef      S.E.      Wald Z P
Intercept -0.08982  1.0298 -0.09 0.9305
Type_of_Beer2=Barley_Wine -1.49118  1.3503 -1.10 0.2695
Type_of_Beer2=Fruit -12.26274  64.0975 -0.19 0.8483
Type_of_Beer2=Lager -3.05371  1.2440 -2.45 0.0141
Type_of_Beer2=Porter 16.12544  65.3107  0.25 0.8050
Type_of_Beer2=Stout  0.36075  0.9454  0.38 0.7028
Type_of_Beer2=Wheat  7.16952  77.7050  0.09 0.9265
Salient=Dangerous3  2.64859  1.2255  2.16 0.0307
Salient=Force3     10.50931  55.9775  0.19 0.8511
Salient=Humour3    3.67800  1.7488  2.10 0.0354
Salient=N/A       10.67842  70.4366  0.15 0.8795
Salient=Pleasure3 -0.66620  1.3279 -0.50 0.6159
Salient=Prestigious3 -8.30676  44.6452 -0.19 0.8524
Salient=Pride3     1.62791  1.1077  1.47 0.1416
Salient=Pure3     -15.86585 111.9877 -0.14 0.8873
Salient=Wealth3   1.10442  1.5316  0.72 0.4709
```

```
> library(pvclust)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data
```

```
Female  Male  Mix  A_N.A  Amber  Brown  Dark  Gold  Pale  medium  mild  strong  Type1  Type2
Adventure3  2.00  2.00  5  1  1.00  0.01  2  2.00  3.00  8  0.01  1.00  1  8
Dangerous3  3.00  28.00  9  10  3.00  2.00  18  2.00  5.00  25  4.00  11.00  1  39
Force3      0.01  12.00  3  6  2.00  1.00  6  0.01  0.01  11  2.00  2.00  3  12
Humour3     2.00  15.00  26  6  6.00  5.00  9  3.00  14.00  37  2.00  4.00  3  40
Pleasure3   7.00  2.00  7  3  0.01  2.00  6  1.00  4.00  10  3.00  3.00  5  11
Prestigious3 3.00  1.00  7  1  1.00  0.01  6  1.00  2.00  7  0.01  4.00  1  10
Pride3     11.00  35.00  89  23  30.00  9.00  31  8.00  34.00  101  8.00  26.00  55  80
Pure3      5.00  0.01  16  1  4.00  1.00  2  1.00  12.00  16  1.00  4.00  5  16
Wealth3    1.00  3.00  7  1  0.01  0.01  1  5.00  4.00  10  1.00  0.01  3  8
```

```
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.64)... Done.
Bootstrap (r = 0.79)... Done.
Bootstrap (r = 0.86)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.07)... Done.
Bootstrap (r = 1.14)... Done.
Bootstrap (r = 1.29)... Done.
Bootstrap (r = 1.36)... Done.
```

```
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
```

```
> ?pvclust
```

```
starting httpd help server ... done
```

```
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="manhattan")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.64)... Done.
Bootstrap (r = 0.79)... Done.
Bootstrap (r = 0.86)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.07)... Done.
Bootstrap (r = 1.14)... Done.
Bootstrap (r = 1.29)... Done.
Bootstrap (r = 1.36)... Done.
```

```
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
```

```
> data <- read.table(file.choose(), header=T, row.names= 1)
```

```
> data.t <- t(data)
```

```
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="manhattan")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.62)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.88)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.12)... Done.
Bootstrap (r = 1.25)... Done.
```



```

Bootstrap (r = 1.38)... Done.
Warning message:
In a$P[] <- c(1, bp[r == 1]) :
  number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> plot(pvclust, frame.plot = T, cex = 1, col = 1)
> pvclust <- pvclust(data.t, method.hclust="average", method.dist="manhattan")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.62)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.88)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.12)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.38)... Done.

```

```

Warning message:
In a$P[] <- c(1, bp[r == 1]) :
  number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
>

```

```

R version 2.13.2 (2011-09-30)
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Platform: i386-pc-mingw32/i386 (32-bit)

```

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 'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
 'help.start()' for an HTML browser interface to help.
 Type 'q()' to quit R.

[Previously saved workspace restored]

```

> library(MASS)
> data <- read.table(file.choose(), header=T)
> summary(data)
  Country          Country.1   Year_Made_In   Year2      Year3
England :123   British_Isles:160   N/A      : 83   y2000 :171   N/A      : 83
Ireland  : 6    US                :163   y1988  : 18   N/A      : 83   y1700: 7
Scotland: 25                                     y1996  : 16   y1850  : 30   y1800: 44
US       :163                                     y1995  : 15   y1800  : 14   y1900: 18
Wales   : 6                                     y1992  : 12   y1950  : 10   y2000:171
                                     y2002  : 11   y1900  : 8
                                     (Other):168 (Other): 7
Year_in_Title  Type_of_Beer   Type_of_Beer2  Type_of_Beer_in_Title
No :321        Bitter :109   Ale           :215   No :194
Yes: 2         Ale    : 44   Barley_Wine: 11   Yes:129
                Stout  : 26   Fruit         : 9
                IPA   : 25   Lager         : 22
                Porter: 24   Porter       : 24
                Wheat : 16   Stout        : 26
                (Other): 79   Wheat        : 16
Geeraerts     Organic   Organic_in_Title  Strength  Alcoholic_Percentage
Type1: 83     No :307   No :312           medium:244  four      : 32
Type2:240     Yes: 16   Yes: 11           mild  : 24   five     : 29
                                     strong: 55   four,two : 18
                                               five,five : 16
                                               four,eight: 14
                                               four,five : 13
                                               (Other)  :201
Alcoholic_Percentage.1  Colour  Brewery_Name_in_Title  Target_Group
5      : 29              A_N/A:60   No :198              Female: 34
4      : 24              Amber:50   Yes:125              Male  :106
4,2    : 18              Brown:21                   Mix  :183
5,5    : 16              Dark :84
4,8    : 14              Gold :24
4,5    : 13              Pale :84
(Other):209
Brewery_Situated  Brewery_Situated_in_Title  ToD
City              : 81   No :287              Founder      :116
Countryside:101   Yes: 36              Animal      : 35
Town              :141              Misc.       : 35
                                               Geografical : 32
                                               Nature      : 19
                                               Historical_fig: 16
                                               (Other)    : 70
ToD2              Source_Domain  Salient
Founder           :116   Prestigious2 :60   Pride3      :135
Misc.             : 36   Adventure2   :58   Humour3     : 43
Animal            : 35   Local_identity2:42   Dangerous3: 40

```

```

Geografical: 32  Pride2      :27  N/A      : 22
History      : 27  Pleasure2   :22  Pure3     : 21
Nature       : 19  Animal2     :18  Pleasure3 : 16
(Other)      : 58  (Other)     :96  (Other)   : 46
> table(data$Column_Name)
character(0)
> table(data$Source_Domain)

      Adventure2      Animal2      Food2
      58             18             8
      Force2        Historical_Fig2  Humour2
      12             6              14
      Local_dialect2  Local_identity2  Macho2
      7              42             7
      Nature2       Pleasure2       Prestigious2
      14            22             60
      Pride2        Religion2       Sports2
      27            9              5
Strong_bodily_effects2  Trad2
      5              9

> table(data$Salient)

      Adventure3  Dangerous3      Force3      Humour3      N/A      Pleasure3
      9           40           15           43           22           16
Prestigious3      Pride3      Pure3      Wealth3
      11           135          21           11

> data <- read.table(file.choose(), header=T)
> summary(data)
      Country      Country.1      Year_Made_In      Year2      Year3
England :123      British_Isles:160      N/A      : 83      y2000 :171      N/A      : 83
Ireland : 6       US      :163      y1988 : 18      N/A      : 83      y1800: 51
Scotland: 25      y1996 : 16      y1850 : 30      y1900: 18
US      :163      y1995 : 15      y1800 : 14      y2000:171
Wales   : 6       y1992 : 12      y1950 : 10
                        y2002 : 11      y1900 : 8
                        (Other):168      (Other): 7

      Year_in_Title  Type_of_Beer      Type_of_Beer2  Type_of_Beer_in_Title
No :321      Bitter :109      Ale      :215      No :194
Yes: 2       Ale      : 44      Barley_Wine: 11      Yes:129
                        Stout : 26      Fruit      : 9
                        IPA   : 25      Lager     : 22
                        Porter : 24      Porter    : 24
                        Wheat : 16      Stout     : 26
                        (Other): 79      Wheat     : 16

      Geeraerts  Organic      Organic_in_Title  Strength      Alcoholic_Percentage
Type1: 83      No :307      No :312      medium:244      four      : 32
Type2:240      Yes: 16      Yes: 11      mild : 24      five      : 29
                        strong: 55      four,two : 18
                        five,five : 16
                        four,eight: 14
                        four,five : 13
                        (Other) :201

      Alcoholic_Percentage.1  Colour      Brewery_Name_in_Title  Target_Group
5      : 29      A N/A:60      No :198      Female: 34
4      : 24      Amber:50      Yes:125      Male :106
4,2    : 18      Brown:21      Mix :183
5,5    : 16      Dark :84
4,8    : 14      Gold :24
4,5    : 13      Pale :84
(Other):209

      Brewery_Situated  Brewery_Situated_in_Title      ToD
City      : 81      No :287      Founder      :116
Countryside:101      Yes: 36      Animal      : 35
Town      :141      Misc.      : 35
                        Geografical : 32
                        Nature      : 19
                        Historical_fig: 16
                        (Other)    : 70

      ToD2      Source_Domain      Source_Domain2      Salient
Founder :116      Prestigious2 :60      Adventure2 :63      Pride3 :135
Misc.   : 36      Adventure2   :58      Prestigious2:60      Humour3 : 43
Animal  : 35      Local_identity2:42      Local2     :49      Dangerous3: 40
Geografical: 32      Pride2      :27      Pleasure2  :30      N/A      : 22
History  : 27      Pleasure2    :22      Pride2     :27      Pure3     : 21
Nature   : 19      Animal2     :18      Force2     :24      Pleasure3 : 16
(Other)  : 58      (Other)     :96      (Other)    :70      (Other)   : 46
> data <- read.table(file.choose(), header=T)
> summary(data)
      Target_Group      Salient
Female: 34      Pride3 :135
Male :106      Humour3 : 43
Mix :183      Dangerous3: 40
                        N/A      : 22
                        Pure3     : 21
                        Pleasure3 : 16
                        (Other)    : 46
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)

```

```

> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)
> library(pvclust)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.64)... Done.
Bootstrap (r = 0.79)... Done.
Bootstrap (r = 0.86)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.07)... Done.
Bootstrap (r = 1.14)... Done.
Bootstrap (r = 1.29)... Done.
Bootstrap (r = 1.36)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="manhattan")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.64)... Done.
Bootstrap (r = 0.79)... Done.
Bootstrap (r = 0.86)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.07)... Done.
Bootstrap (r = 1.14)... Done.
Bootstrap (r = 1.29)... Done.
Bootstrap (r = 1.36)... Done.
> plot(pvclust, frame.plot = T, cex = 1.1, col = 1)
> pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean"
+ )
Bootstrap (r = 0.44)... Done.
Bootstrap (r = 0.56)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.78)... Done.
Bootstrap (r = 0.89)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.11)... Done.
Bootstrap (r = 1.22)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In a$pf[] <- c(1, bp[r == 1]) :
  number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> library(Design)
Loading required package: Hmisc
Loading required package: survival
Loading required package: splines
Hmisc library by Frank E Harrell Jr

```

Type `library(help='Hmisc')`, `?Overview`, or `?Hmisc.Overview`)
to see overall documentation.

NOTE:Hmisc no longer redefines `[.factor` to drop unused levels when
subsetting. To get the old behavior of Hmisc type `dropUnusedLevels()`.

Attaching package: 'Hmisc'

The following object(s) are masked from 'package:survival':

untangle.specials

The following object(s) are masked from 'package:base':

format.pval, round.POSIXt, trunc.POSIXt, units

Design library by Frank E Harrell Jr

Type `library(help='Design')`, `?DesignOverview`, or `?Design.Overview`)
to see overall documentation.

Attaching package: 'Design'

The following object(s) are masked from 'package:Hmisc':

strgraphwrap

The following object(s) are masked from 'package:survival':

Surv

```

> LogReg_glm <- glm(Response_Variable ~ Variable1 + Variable2 + Variable3, data = data, family = "binomial")
Error in eval(expr, envir, enclos) : object 'Response_Variable' not found
> data <- read.table(file.choose(), header=T)
> summary(data)
  Type_of_Beer2  Strength  Target_Group  Salient
Ale           :96   medium:100  Female: 34  Pride3   :46
Barley_Wine: 4   mild  : 10   Male  :106  Dangerous3:31
Fruit        : 8   strong: 31  Mix   : 1   Humour3   :17
Lager        : 5                                           Force3    :13
Porter       :11                                           Pleasure3 : 9
Stout        :15                                           N/A       : 8
Wheat        : 2                                           (Other)   :17
> data <- read.table(file.choose(), header=T)
> summary(data)
  Type_of_Beer2  Strength  Target_Group  Salient
Ale           :95   medium:100  Female: 34  Pride3   :46
Barley_Wine: 4   mild  : 9   Male  :106  Dangerous3:31
Fruit        : 8   strong: 31  Humour3   :17
Lager        : 5                                           Force3    :12
Porter       :11                                           Pleasure3 : 9
Stout        :15                                           N/A       : 8
Wheat        : 2                                           (Other)   :17
> LogReg_glm <- glm(Response_Variable ~ Variable1 + Variable2 + Variable3, data = data, family = "binomial")
Error in eval(expr, envir, enclos) : object 'Response_Variable' not found
> LogReg_glm <- glm(Target_Group ~ Type_of_Beer2 + Strength + Salient, data = data, family = "binomial")
Warning message:
glm.fit: fitted probabilities numerically 0 or 1 occurred
> summary(LogReg_glm)

```

```

Call:
glm(formula = Target_Group ~ Type_of_Beer2 + Strength + Salient,
    family = "binomial", data = data)

```

```

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4141  0.0000  0.2399  0.5602  1.5398

```

```

Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      -0.1127    1.0374  -0.109  0.9135
Type_of_Beer2Barley_Wine -1.5894    1.5175  -1.047  0.2949
Type_of_Beer2Fruit    -21.9245  4956.2297  -0.004  0.9965
Type_of_Beer2Lager    -3.0587    1.2533  -2.441  0.0147 *
Type_of_Beer2Porter   36.0720  5710.3966  0.006  0.9950
Type_of_Beer2Stout    0.3226    1.0005  0.322  0.7471
Type_of_Beer2Wheat   16.8971  5966.1572  0.003  0.9977
Strengthmild          0.2818    1.4302  0.197  0.8438
Strengthstrong        0.1310    0.7953  0.165  0.8692
SalientDangerous3    2.6483    1.2294  2.154  0.0312 *
SalientForce3        20.4663  4975.9316  0.004  0.9967
SalientHumour3        3.6460    1.7512  2.082  0.0373 *
SalientN/A            20.6438  6256.9079  0.003  0.9974
SalientPleasure3     -0.7081    1.3522  -0.524  0.6005
SalientPrestigious3  -18.2790  3881.1018  -0.005  0.9962
SalientPride3         1.6033    1.1122  1.442  0.1494
SalientPure3         -35.1721  8437.4204  -0.004  0.9967
SalientWealth3        1.1356    1.5436  0.736  0.4619

```

```

---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```

(Dispersion parameter for binomial family taken to be 1)

```

```

Null deviance: 155.218 on 139 degrees of freedom
Residual deviance: 74.405 on 122 degrees of freedom
AIC: 110.4

```

```

Number of Fisher Scoring iterations: 19

```

```

> LogReg_lrm <- lrm(Response_Variable ~ Variable1 + Variable2 + Variable3, data = data, x=T, y=T)
Error in eval(expr, envir, enclos) : object 'Response_Variable' not found
> LogReg_lrm <- lrm(Target_Group ~ Type_of_Beer2 + Strength + Salient, data = data, x=T, y=T)
> LogReg_lrm

```

```

Logistic Regression Model

```

```

lrm(formula = Target_Group ~ Type_of_Beer2 + Strength + Salient,
    data = data, x = T, y = T)

```

```

Frequencies of Responses

```

```

Female  Male
   34    106

```

```

      Obs  Max Deriv Model L.R.      d.f.      P      C      Dxy      Gamma      Tau-a      R2
Brier  140    4e-04    80.81      17      0    0.922    0.844    0.869    0.312    0.655
0.083

```

| | Coef | S.E. | Wald | Z | P |
|---------------------------|----------|----------|-------|--------|---|
| Intercept | -0.1127 | 1.0374 | -0.11 | 0.9135 | |
| Type_of_Beer2=Barley_Wine | -1.5894 | 1.5174 | -1.05 | 0.2949 | |
| Type_of_Beer2=Fruit | -12.2631 | 65.2299 | -0.19 | 0.8509 | |
| Type_of_Beer2=Lager | -3.0587 | 1.2533 | -2.44 | 0.0147 | |
| Type_of_Beer2=Porter | 16.1820 | 65.1868 | 0.25 | 0.8039 | |
| Type_of_Beer2=Stout | 0.3226 | 1.0005 | 0.32 | 0.7471 | |
| Type_of_Beer2=Wheat | 7.2120 | 77.5137 | 0.09 | 0.9259 | |
| Strength=mild | 0.2818 | 1.4302 | 0.20 | 0.8438 | |
| Strength=strong | 0.1310 | 0.7953 | 0.16 | 0.8692 | |
| Salient=Dangerous3 | 2.6483 | 1.2294 | 2.15 | 0.0312 | |
| Salient=Force3 | 10.4876 | 55.8791 | 0.19 | 0.8511 | |
| Salient=Humour3 | 3.6460 | 1.7512 | 2.08 | 0.0373 | |
| Salient=N/A | 10.6657 | 70.2811 | 0.15 | 0.8794 | |
| Salient=Pleasure3 | -0.7081 | 1.3522 | -0.52 | 0.6005 | |
| Salient=Prestigious3 | -8.3448 | 44.5727 | -0.19 | 0.8515 | |
| Salient=Pride3 | 1.6033 | 1.1122 | 1.44 | 0.1494 | |
| Salient=Pure3 | -15.8810 | 111.7231 | -0.14 | 0.8870 | |
| Salient=Wealth3 | 1.1356 | 1.5436 | 0.74 | 0.4619 | |

```
>
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ISBN 3-900051-07-0
Platform: i386-pc-mingw32/i386 (32-bit)
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'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Previously saved workspace restored]

```
> library(MASS)
> plot(pvclust, frame.plot = T, cex = 1, col = 1)
Error in xy.coords(x, y, xlabel, ylabel, log) :
  'x' is a list, but does not have components 'x' and 'y'
> data <- read.table(file.choose(), header=T, row.names= 1)
Error in read.table(file.choose(), header = T, row.names = 1) :
  duplicate 'row.names' are not allowed
> data <- read.table(file.choose(), header=T)
> summary(data)
```

| ToD2 | Source_Domain2 | Salient |
|------------------|-----------------|----------------|
| Founder :116 | Adventure2 :63 | Pride3 :135 |
| Misc. : 36 | Prestigious2:60 | Humour3 : 43 |
| Animal : 35 | Local2 :49 | Dangerous3: 40 |
| Geographical: 32 | Pleasure2 :30 | N/A : 22 |
| History : 27 | Pride2 :27 | Pure3 : 21 |
| Nature : 19 | Force2 :24 | Pleasure3 : 16 |
| (Other) : 58 | (Other) :70 | (Other) : 46 |

```
> table(data$Column_Name)
character(0)
> table(data$ToD2)
```

| Adventure | Animal | Food | Founder | Geographical | History |
|-----------|--------|--------|----------|--------------|---------|
| 9 | 35 | 11 | 116 | 32 | 27 |
| Local | Misc. | Nature | Religion | Trad | |
| 13 | 36 | 19 | 9 | 16 | |

```
> table(data$Source_Domain2)
```

| Adventure2 | Animal2 | Force2 | Humour2 | Local2 | Nature2 |
|------------|--------------|--------|-----------|--------|---------|
| 63 | 18 | 24 | 14 | 49 | 14 |
| Pleasure2 | Prestigious2 | Pride2 | Religion2 | Trad2 | |
| 30 | 60 | 27 | 9 | 15 | |

```
> table(data$Salient)
```

| Adventure3 | Dangerous3 | Force3 | Humour3 | N/A | Pleasure3 |
|--------------|------------|--------|---------|-----|-----------|
| 9 | 40 | 15 | 43 | 22 | 16 |
| Prestigious3 | Pride3 | Pure3 | Wealth3 | | |
| 11 | 135 | 21 | 11 | | |

```
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'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Previously saved workspace restored]

```
> library(MASS)
> plot(pvclust, frame.plot = T, cex = 1, col = 1)
Error in xy.coords(x, y, xlabel, ylabel, log) :
  'x' is a list, but does not have components 'x' and 'y'
> data <- read.table(file.choose(), header=T, row.names= 1)
Error in read.table(file.choose(), header = T, row.names = 1) :
  duplicate 'row.names' are not allowed
> data <- read.table(file.choose(), header=T)
> summary(data)
      ToD2          Source_Domain2      Salient
Founder   :116  Adventure2   :63  Pride3      :135
Misc.     : 36  Prestigious2:60  Humour3   : 43
Animal    : 35  Local2       :49  Dangerous3: 40
Geografical: 32  Pleasure2   :30  N/A       : 22
History   : 27  Pride2       :27  Pure3     : 21
Nature    : 19  Force2       :24  Pleasure3 : 16
(Other)   : 58  (Other)     :70  (Other)   : 46
> table(data$Column_Name)
character(0)
> table(data$ToD2)

  Adventure  Animal  Food  Founder Geografical  History
      9      35    11    116      32      27
  Local  Misc.  Nature  Religion  Trad
    13    36    19      9      16
> table(data$Source_Domain2)

  Adventure2  Animal2  Force2  Humour2  Local2  Nature2
      63      18      24      14      49      14
  Pleasure2 Prestigious2  Pride2  Religion2  Trad2
      30      60      27      9      15
> table(data$Salient)

  Adventure3  Dangerous3  Force3  Humour3  N/A  Pleasure3
      9      40      15      43      22      16
Prestigious3  Pride3  Pure3  Wealth3
      11      135      21      11
>
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'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Previously saved workspace restored]

```
> library(MASS)
> data <- read.table(file.choose(), header=T, row.names= 1)
Error in read.table(file.choose(), header = T, row.names = 1) :
  duplicate 'row.names' are not allowed
> data <- read.table(file.choose(), header=T)
> summary(data)
      Source_Domain2 Target_Group
Adventure2   :63  Female: 34
Prestigious2:60  Male   :106
Local2       :49  Mix    :183
Pleasure2    :30
Pride2       :27
Force2       :24
(Other)      :70
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
```

```

> plot (mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot (mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot (mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot (mcatlab, rows = F, col = 1)
>

```

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 Type 'q()' to quit R.

[Previously saved workspace restored]

```

> library(MASS)
> data <- read.table(file.choose(), header=T)
> sumary(data)
Error: could not find function "sumary"
> summary(data)

```

| Country | Year3 | Type_of_Beer2 | Target_Group | ToD2 |
|--------------|-----------|-----------------|--------------|------------------|
| England:123 | N/A : 83 | Ale :215 | Female: 34 | Founder :116 |
| Ireland : 6 | y1800: 51 | Barley_Wine: 11 | Male :106 | Misc. : 36 |
| Scotland: 25 | y1900: 18 | Fruit : 9 | Mix :183 | Animal : 35 |
| US :163 | y2000:171 | Lager : 22 | | Geographical: 32 |
| Wales : 6 | | Porter : 24 | | History : 27 |
| | | Stout : 26 | | Nature : 19 |
| | | Wheat : 16 | | (Other) : 58 |

```

> mcatlab <- mca(data, abbrev = T)
> plot (mcatlab, rows = F, col = 1)
> library(pvclust)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.48)... Done.
Bootstrap (r = 0.59)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.78)... Done.
Bootstrap (r = 0.89)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.07)... Done.
Bootstrap (r = 1.19)... Done.
Bootstrap (r = 1.3)... Done.
Bootstrap (r = 1.37)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean"
+ pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean"
Error: unexpected symbol in:
"pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean"
pvclust"
> pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.4)... Done.
Bootstrap (r = 0.6)... Done.
Bootstrap (r = 0.6)... Done.
Bootstrap (r = 0.8)... Done.
Bootstrap (r = 0.8)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.2)... Done.
Bootstrap (r = 1.2)... Done.
Bootstrap (r = 1.4)... Done.
Warning message:
In a$pf[] <- c(1, bp[r == 1]) :
number of items to replace is not a multiple of replacement length
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.56)... Done.
Bootstrap (r = 0.69)... Done.
Bootstrap (r = 0.75)... Done.

```

```

Bootstrap (r = 0.88)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.06)... Done.
Bootstrap (r = 1.19)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.38)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.4)... Done.
Bootstrap (r = 0.6)... Done.
Bootstrap (r = 0.6)... Done.
Bootstrap (r = 0.8)... Done.
Bootstrap (r = 0.8)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.2)... Done.
Bootstrap (r = 1.2)... Done.
Bootstrap (r = 1.4)... Done.

```

Warning message:

```

In a$P[] <- c(1, bp[r == 1]) :
  number of items to replace is not a multiple of replacement length

```

```

> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)

```

```

> data <- read.table(file.choose(), header=T)

```

```

> mcatlab <- mca(data, abbrev = T)

```

```

> plot(mcatlab, rows = F, col = 1)

```

```

> data <- read.table(file.choose(), header=T)

```

```

> mcatlab <- mca(data, abbrev = T)

```

```

> plot(mcatlab, rows = F, col = 1)

```

```

>

```

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 'help.start()' for an HTML browser interface to help.
 Type 'q()' to quit R.

[Previously saved workspace restored]

```

> library(MASS)

```

```

> library(pvclust)

```

```

> data <- read.table(file.choose(), header=T, row.names= 1)

```

```

> summary(data)

```

| Adventure3 | | Dangerous3 | | Force3 | | Humour3 | |
|------------|---------|------------|---------|----------|----------|----------|---------|
| Min. | :0.0010 | Min. | : 0.001 | Min. | : 0.0010 | Min. | : 0.001 |
| 1st Qu.: | 0.0010 | 1st Qu.: | 0.001 | 1st Qu.: | 0.0010 | 1st Qu.: | 0.001 |
| Median | :0.0010 | Median | : 0.001 | Median | : 0.0010 | Median | : 0.001 |
| Mean | :0.3921 | Mean | : 1.740 | Mean | : 0.5226 | Mean | : 1.870 |
| 3rd Qu.: | 0.0010 | 3rd Qu.: | 1.000 | 3rd Qu.: | 0.0010 | 3rd Qu.: | 1.000 |
| Max. | :4.0000 | Max. | :15.000 | Max. | :10.0000 | Max. | :15.000 |

| Pleasure3 | | Prestigious3 | | Pride3 | | Pure3 | |
|-----------|---------|--------------|--------|----------|----------|----------|---------|
| Min. | :0.0010 | Min. | :0.001 | Min. | : 0.0010 | Min. | :0.0010 |
| 1st Qu.: | 0.0010 | 1st Qu.: | 0.001 | 1st Qu.: | 0.5005 | 1st Qu.: | 0.0010 |
| Median | :0.0010 | Median | :0.001 | Median | : 2.0000 | Median | :0.0010 |
| Mean | :0.6962 | Mean | :0.479 | Mean | : 5.8698 | Mean | :0.9137 |
| 3rd Qu.: | 1.0000 | 3rd Qu.: | 0.001 | 3rd Qu.: | 7.0000 | 3rd Qu.: | 1.0000 |
| Max. | :4.0000 | Max. | :5.000 | Max. | :35.0000 | Max. | :9.0000 |

```

Wealth3

```

```

Min. :0.001

```

```

1st Qu.:0.001

```

```

Median :0.001

```

```

Mean :0.479

```

```

3rd Qu.:0.001

```

```

Max. :7.000

```

```

> data.t <- t(data)

```

```

> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")

```

```

Bootstrap (r = 0.44)... Done.

```

```

Bootstrap (r = 0.56)... Done.

```

```

Bootstrap (r = 0.67)... Done.

```

```

Bootstrap (r = 0.78)... Done.

```

```

Bootstrap (r = 0.89)... Done.

```

```

Bootstrap (r = 1.0)... Done.

```

```

Bootstrap (r = 1.0)... Done.

```

```

Bootstrap (r = 1.11)... Done.

```

```

Bootstrap (r = 1.22)... Done.

```

```

Bootstrap (r = 1.33)... Done.

```

Warning message:

```

In a$P[] <- c(1, bp[r == 1]) :
  number of items to replace is not a multiple of replacement length

```



```

> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> summary(data)
      Female           Male           Mix
Min.   :0.001   Min.   : 0.001   Min.   : 0.001
1st Qu.:0.001   1st Qu.: 0.001   1st Qu.: 1.000
Median :0.001   Median : 1.000   Median : 3.000
Mean   :1.479   Mean   : 4.609   Mean   : 7.957
3rd Qu.:2.000   3rd Qu.: 2.500   3rd Qu.: 6.000
Max.   :8.000   Max.   :35.000   Max.   :64.000
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.33)... Error in hclust(distance, method = method.hclust) :
  must have n >= 2 objects to cluster
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.33)... Error in hclust(distance, method = method.hclust) :
  must have n >= 2 objects to cluster
> data <- read.table(file.choose(), header=T, row.names= 1)
> summary(data)
      Female           Male           Mix
Min.   :0.001   Min.   : 0.001   Min.   : 0.001
1st Qu.:0.001   1st Qu.: 0.001   1st Qu.: 1.000
Median :0.001   Median : 1.000   Median : 3.000
Mean   :1.479   Mean   : 4.609   Mean   : 7.957
3rd Qu.:2.000   3rd Qu.: 2.500   3rd Qu.: 6.000
Max.   :8.000   Max.   :35.000   Max.   :64.000
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.33)... Error in hclust(distance, method = method.hclust) :
  must have n >= 2 objects to cluster
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> summary(data)
      Female           Male           Mix
Min.   :0.001   Min.   : 0.001   Min.   : 0.001
1st Qu.:0.001   1st Qu.: 0.001   1st Qu.: 1.000
Median :0.001   Median : 1.000   Median : 3.000
Mean   :1.479   Mean   : 4.609   Mean   : 7.957
3rd Qu.:2.000   3rd Qu.: 2.500   3rd Qu.: 6.000
Max.   :8.000   Max.   :35.000   Max.   :64.000
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.33)... Error in hclust(distance, method = method.hclust) :
  must have n >= 2 objects to cluster
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="manhattan")
Bootstrap (r = 0.33)... Error in hclust(distance, method = method.hclust) :
  must have n >= 2 objects to cluster
> pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean")
+ pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Error: unexpected symbol in:
"pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean"
pvclust"
> pvclust <- pvclust(data, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.48)... Done.
Bootstrap (r = 0.57)... Done.
Bootstrap (r = 0.7)... Done.
Bootstrap (r = 0.78)... Done.
Bootstrap (r = 0.87)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.09)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.26)... Done.
Bootstrap (r = 1.39)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.58)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.08)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.33)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T)
> summary(data)
      Country   Year3           ToD2
England :123   N/A   : 83   Founder   :116
Ireland  : 6   y1800: 51   Misc.       : 36
Scotland: 25   y1900: 18   Animal     : 35
US       :163   y2000:171   Geografical: 32

```

```

Wales      : 6                History      : 27
                Nature        : 19
                (Other)       : 58
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> mcatlab <- mca(data, abbrev = T)
> plot(mcatlab, rows = F, col = 1)
> data <- read.table(file.choose(), header=T)
> data <- read.table(file.choose(), header=T, row.names= 1)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.58)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.08)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.33)... Done.
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.58)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.08)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In dist(t(x), method) : NAs introduced by coercion
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.58)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.08)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In dist(t(x), method) : NAs introduced by coercion
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.58)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.08)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In dist(t(x), method) : NAs introduced by coercion
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T)
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.45)... Done.
Bootstrap (r = 0.55)... Done.
Bootstrap (r = 0.64)... Done.
Bootstrap (r = 0.73)... Done.
Bootstrap (r = 0.82)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.09)... Done.
Bootstrap (r = 1.18)... Done.
Bootstrap (r = 1.27)... Done.
Bootstrap (r = 1.36)... Done.
Warning message:
In dist(t(x), method) : NAs introduced by coercion
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
> data <- read.table(file.choose(), header=T)

```

```
> data.t <- t(data)
> pvclust <- pvclust(data.t, method.hclust="ward", method.dist="euclidean")
Bootstrap (r = 0.5)... Done.
Bootstrap (r = 0.58)... Done.
Bootstrap (r = 0.67)... Done.
Bootstrap (r = 0.75)... Done.
Bootstrap (r = 0.83)... Done.
Bootstrap (r = 1.0)... Done.
Bootstrap (r = 1.08)... Done.
Bootstrap (r = 1.17)... Done.
Bootstrap (r = 1.25)... Done.
Bootstrap (r = 1.33)... Done.
Warning message:
In dist(t(x), method) : NAs introduced by coercion
> plot(pvclust, frame.plot = T, cex = 1.4, col = 1)
>
```

| Beer names | Country | Country | Country+beer | Country+beer2 |
|-----------------------------------|----------|---------------|----------------|-----------------|
| Brakspear Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| St Austel IPA | England | British_Isles | Eng_Ale | Brit_Ale |
| Bank's Original | England | British_Isles | Eng_Ale | Brit_Ale |
| Bluebird Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Black Dog | England | British_Isles | Eng_Ale | Brit_Ale |
| Eagle IPA | England | British_Isles | Eng_Ale | Brit_Ale |
| XB Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Hogs Back Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Viking | England | British_Isles | Eng_Ale | Brit_Ale |
| Arkell's 3B | England | British_Isles | Eng_Ale | Brit_Ale |
| Cains Finest Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Samuel Smith's Old Brewery Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Sharp's Doom Bar | England | British_Isles | Eng_Ale | Brit_Ale |
| Sharp's Atlantic IPA | England | British_Isles | Eng_Ale | Brit_Ale |
| Lord Marples | England | British_Isles | Eng_Ale | Brit_Ale |
| Rivet Catcher | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Man Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Stallion | England | British_Isles | Eng_Ale | Brit_Ale |
| Cragg Vale Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Battleaxe | England | British_Isles | Eng_Ale | Brit_Ale |
| Black Sheep Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Barn Ale Special | England | British_Isles | Eng_Ale | Brit_Ale |
| Holt 1849 | England | British_Isles | Eng_Ale | Brit_Ale |
| Workie Ticket | England | British_Isles | Eng_Ale | Brit_Ale |
| Spitfire | England | British_Isles | Eng_Ale | Brit_Ale |
| Fiddler's Elbow | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Hooky | England | British_Isles | Eng_Ale | Brit_Ale |
| Adnams Broadside | England | British_Isles | Eng_Ale | Brit_Ale |
| Freeminer Speculation | England | British_Isles | Eng_Ale | Brit_Ale |
| Freeminer Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Kingsdown Special Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Pride of Romsey | England | British_Isles | Eng_Ale | Brit_Ale |
| Hobgoblin | England | British_Isles | Eng_Ale | Brit_Ale |
| Pale Rider | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Thumper | England | British_Isles | Eng_Ale | Brit_Ale |
| Riggwelter | England | British_Isles | Eng_Ale | Brit_Ale |
| Monkman's Slaughter | England | British_Isles | Eng_Ale | Brit_Ale |
| Fraoch Heather Ale | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Belhaven St. Andrews Ale | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Spotted Cow | US | US | US_Ale | US_Ale |
| Laughing Lab | US | US | US_Ale | US_Ale |
| Duck Breath Bitter | US | US | US_Ale | US_Ale |
| Rogue Brutal Bitter | US | US | US_Ale | US_Ale |
| Arrogant Bastard Ale | US | US | US_Ale | US_Ale |
| Hibernation Ale | US | US | US_Ale | US_Ale |
| Dorado Double IPA | US | US | US_Ale | US_Ale |
| Green Peppercorn Triple | US | US | US_Ale | US_Ale |
| Bittersweet Lenny's R.I.P.A | US | US | US_Ale | US_Ale |
| Firestone 11 | US | US | US_Ale | US_Ale |
| Samuel Adams Utopias | US | US | US_Ale | US_Ale |
| Crow Valley Bitter | Wales | British_Isles | Wales_Ale | Brit_Ale |
| Tomos Watkin CWRW Haf | Wales | British_Isles | Wales_Ale | Brit_Ale |
| Moonraker | England | British_Isles | Eng_BarleyWine | Brit_BarleyWine |
| Vintage Ale | England | British_Isles | Eng_BarleyWine | Brit_BarleyWine |
| Thomas Hardy's Ale | England | British_Isles | Eng_BarleyWine | Brit_BarleyWine |
| Sierra Nevada Bigfoot | US | US | US_BarleyWine | US_BarleyWine |
| Arctic Devil Barley Wine | US | US | US_BarleyWine | US_BarleyWine |
| Wachusett Blueberry | US | US | US_Fruit | US_Fruit |
| Rogue Dead Guy Ale | US | US | US_Lager | US_Lager |
| Cains Wheat Beer | England | British_Isles | Eng_Wheat | Brit_Wheat |
| Copper Dragon Best Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Tawny Owl | England | British_Isles | Eng_Ale | Brit_Ale |
| Iceni Boadicea Chariot Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Black Bull Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Jobling's Swinging Gibbet | England | British_Isles | Eng_Ale | Brit_Ale |

| | | | | |
|--------------------------------------|----------|---------------|----------------|-----------------|
| Geordie Pride | England | British_Isles | Eng_Ale | Brit_Ale |
| Jack O'Legs | England | British_Isles | Eng_Ale | Brit_Ale |
| Rooster's Yankee | England | British_Isles | Eng_Ale | Brit_Ale |
| Wells Bombardier | England | British_Isles | Eng_Ale | Brit_Ale |
| Barn Owl Premium Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Whitstable Bay Organic | England | British_Isles | Eng_Ale | Brit_Ale |
| Newcastle Brown Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Flying Herbert | England | British_Isles | Eng_Ale | Brit_Ale |
| Bishop's Finger | England | British_Isles | Eng_Ale | Brit_Ale |
| Wylam Rocket | England | British_Isles | Eng_Ale | Brit_Ale |
| Pendle Witches Brew | England | British_Isles | Eng_Ale | Brit_Ale |
| Beamish Red Ale | Ireland | British_Isles | Ire_Ale | Brit_Ale |
| Belhaven 80 Shilling Ale | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Innis & Gunn Oak Aged Beer | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Long Trail Ale | US | US | US_Ale | US_Ale |
| MacTarnahan's Amber Ale | US | US | US_Ale | US_Ale |
| New Belgium Fat Tire | US | US | US_Ale | US_Ale |
| Mac & Jack's African Amber | US | US | US_Ale | US_Ale |
| Jolly Scot Scottish Ale | US | US | US_Ale | US_Ale |
| Flying Fish ESB Ale | US | US | US_Ale | US_Ale |
| Saint Arnold Amber | US | US | US_Ale | US_Ale |
| McIlhenney's Irish Red | US | US | US_Ale | US_Ale |
| Kiltlifter | US | US | US_Ale | US_Ale |
| Fire Rock Pale Ale | US | US | US_Ale | US_Ale |
| Red Tail Ale | US | US | US_Ale | US_Ale |
| Sacramento Red Horse Ale | US | US | US_Ale | US_Ale |
| Jamaica Red Ale | US | US | US_Ale | US_Ale |
| Drake's Expedition Ale | US | US | US_Ale | US_Ale |
| Jeremiah's Red Ale | US | US | US_Ale | US_Ale |
| Kill Ugly Radio | US | US | US_Ale | US_Ale |
| Hop Rod Rye | US | US | US_Ale | US_Ale |
| Old Woody | US | US | US_Ale | US_Ale |
| Old Tom Strong Ale | England | British_Isles | Eng_BarleyWine | Brit_BarleyWine |
| Sisyphus | US | US | US_BarleyWine | US_BarleyWine |
| Abita Purple Haze | US | US | US_Fruit | US_Fruit |
| Michelob Ultra Pomegranate Raspberry | US | US | US_Fruit | US_Fruit |
| Wisconsin Cherry Beer | US | US | US_Fruit | US_Fruit |
| Berkshire Raspberry Strong Ale | US | US | US_Fruit | US_Fruit |
| Alaskan Amber | US | US | US_Lager | US_Lager |
| Peter Straub's Special Dark | US | US | US_Lager | US_Lager |
| Bayern Amber | US | US | US_Lager | US_Lager |
| Otter Creek Copper Ale | US | US | US_Lager | US_Lager |
| Caramel Bock | US | US | US_Lager | US_Lager |
| Raspberry Eisbock | US | US | US_Lager | US_Lager |
| Eel River Organic Porter | US | US | US_Porter | US_Porter |
| Bathams Mild Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Essex Boys Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Barnsley Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Leg Over | England | British_Isles | Eng_Ale | Brit_Ale |
| Everards Tiger | England | British_Isles | Eng_Ale | Brit_Ale |
| Lancaster Bomber | England | British_Isles | Eng_Ale | Brit_Ale |
| Abbot Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Samuel Smith's Nut Brown Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Speckled Hen | England | British_Isles | Eng_Ale | Brit_Ale |
| 6th Sense | England | British_Isles | Eng_Ale | Brit_Ale |
| Caledonian 80 Shilling | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Ithaca Nut Brown | US | US | US_Ale | US_Ale |
| Moose Drool | US | US | US_Ale | US_Ale |
| Pete's Wicked Ale | US | US | US_Ale | US_Ale |
| Green Flash Nut Brown Ale | US | US | US_Ale | US_Ale |
| Red Poppy Ale | US | US | US_Ale | US_Ale |
| Fat Squirrel | US | US | US_Ale | US_Ale |
| Cottonwood Low Down Brown | US | US | US_Ale | US_Ale |
| Bitch Creek ESB | US | US | US_Ale | US_Ale |
| Flaming Stone Beer | US | US | US_Lager | US_Lager |
| Bully Porter | US | US | US_Porter | US_Porter |

| | | | | |
|-----------------------------|----------|---------------|-----------------|-----------------|
| Moorhouse's Black Cat | England | British_Isles | Eng_Ale | Brit_Ale |
| Sneck Lifter | England | British_Isles | Eng_Ale | Brit_Ale |
| Strongarm | England | British_Isles | Eng_Ale | Brit_Ale |
| Batemans XXXB | England | British_Isles | Eng_Ale | Brit_Ale |
| Beartown Black Bear | England | British_Isles | Eng_Ale | Brit_Ale |
| Greyhound Strong Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Palmer's Tally Ho! | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Peculier | England | British_Isles | Eng_Ale | Brit_Ale |
| Meantime Chocolate | England | British_Isles | Eng_Ale | Eng_Ale |
| Greenmantle Ale | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Ben Nevis Organic | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Three Sisters Scottish Ale | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Maverick | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Kelpie Seaweed Ale | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Dark Island | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Highlander | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Black Douglas | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Blackened Voodoo | US | US | US_Ale | US_Ale |
| Death and Taxes Black | US | US | US_Ale | US_Ale |
| Middle Ages Grail Ale | US | US | US_Ale | US_Ale |
| Messiah Bold | US | US | US_Ale | US_Ale |
| Full Moon Pale Rye | US | US | US_Ale | US_Ale |
| Abita Turbodog | US | US | US_Ale | US_Ale |
| Brewer's Art Resurrection | US | US | US_Ale | US_Ale |
| Russian River Temptation | US | US | US_Ale | US_Ale |
| Bodacious Black & Tan | US | US | US_Ale | US_Ale |
| Onnegang Abbey Ale | US | US | US_Ale | US_Ale |
| Sweetwater Festive Ale | US | US | US_Ale | US_Ale |
| New Holland Black Tulip | US | US | US_Ale | US_Ale |
| Hair of the Dog Adam | US | US | US_Ale | US_Ale |
| Traquair House Ale | Scotland | British_Isles | Scot_BarleyWine | Brit_BarleyWine |
| Jacobite Ale | Scotland | British_Isles | Scot_BarleyWine | Brit_BarleyWine |
| Skullspitter | Scotland | British_Isles | Scot_BarleyWine | Brit_BarleyWine |
| Lost Abbey Angel's Share | US | US | US_BarleyWine | US_BarleyWine |
| Miner Mishap | US | US | US_Lager | US_Lager |
| Tommyknocker Butt Head Bock | US | US | US_Lager | US_Lager |
| Puritan's Porter | England | British_Isles | Eng_Porter | Brit_Porter |
| Bath Ales Festivity | England | British_Isles | Eng_Porter | Brit_Porter |
| Nightmare | England | British_Isles | Eng_Porter | Brit_Porter |
| Old Growler | England | British_Isles | Eng_Porter | Brit_Porter |
| Station Porter | England | British_Isles | Eng_Porter | Brit_Porter |
| Molly Malone Ale | Ireland | British_Isles | Ire_Porter | Brit_Porter |
| Wasatch Polygamy Porter | US | US | US_Porter | US_Porter |
| King's Peak Porter | US | US | US_Porter | US_Porter |
| Blackwater Dry Porter | US | US | US_Porter | US_Porter |
| Left Hand Blackjack Porter | US | US | US_Porter | US_Porter |
| Blackwatch Cream Porter | US | US | US_Porter | US_Porter |
| Planet Porter | US | US | US_Porter | US_Porter |
| Perseus Porter | US | US | US_Porter | US_Porter |
| Pig Iron Porter | US | US | US_Porter | US_Porter |
| Pipeline Porter | US | US | US_Porter | US_Porter |
| Ten Pin Porter | US | US | US_Porter | US_Porter |
| Butte Creek Organic Porter | US | US | US_Porter | US_Porter |
| Blak Rabbit Porter | US | US | US_Porter | US_Porter |
| Great Northern Porter | US | US | US_Porter | US_Porter |
| Edmund Fitzgerald Porter | US | US | US_Porter | US_Porter |
| Arcadia London Porter | US | US | US_Porter | US_Porter |
| Duck Rabbit Baltic Porter | US | US | US_Porter | US_Porter |
| Oatmeal Stout | England | British_Isles | Eng_Stout | Brit_Stout |
| Summerhill Stout | England | British_Isles | Eng_Stout | Brit_Stout |
| Titanic Stout | England | British_Isles | Eng_Stout | Brit_Stout |
| Stoodley Stout | England | British_Isles | Eng_Stout | Brit_Stout |
| Murphy's Irish Stout | Ireland | British_Isles | Ire_Stout | Brit_Stout |
| Beamish Irish Stout | Ireland | British_Isles | Ire_Stout | Brit_Stout |
| Guinness Original | Ireland | British_Isles | Ire_Stout | Brit_Stout |
| Black Gold | Scotland | British_Isles | Scot_Stout | Brit_Stout |

| | | | | |
|---------------------------------|----------|---------------|------------|------------|
| Gritty McDuff's Black Fly Stout | US | US | US_Stout | US_Stout |
| Zonker Stout | US | US | US_Stout | US_Stout |
| Lost Cost 8 ball Stout | US | US | US_Stout | US_Stout |
| Bridgeport Black Strap Stout | US | US | US_Stout | US_Stout |
| Shakespeare Stout | US | US | US_Stout | US_Stout |
| Winter Warlock | US | US | US_Stout | US_Stout |
| New Holland The Poet | US | US | US_Stout | US_Stout |
| Black Heart Stout | US | US | US_Stout | US_Stout |
| Tsunami Stout | US | US | US_Stout | US_Stout |
| San Quentin's Breakout Stout | US | US | US_Stout | US_Stout |
| Dragonstooth Stout | US | US | US_Stout | US_Stout |
| Breakfast Stout | US | US | US_Stout | US_Stout |
| Boris the Crusher | US | US | US_Stout | US_Stout |
| Russian Imperial Stout | US | US | US_Stout | US_Stout |
| Brooklyn Black Chocolate Stout | US | US | US_Stout | US_Stout |
| The Abyss | US | US | US_Stout | US_Stout |
| Old Rasputin | US | US | US_Stout | US_Stout |
| Speedway Stout | US | US | US_Stout | US_Stout |
| Golden Delicious | England | British_Isles | Eng_Ale | Brit_Ale |
| Badger First Gold | England | British_Isles | Eng_Ale | Brit_Ale |
| Celtic Queen | England | British_Isles | Eng_Ale | Brit_Ale |
| John Smith's Magnet | England | British_Isles | Eng_Ale | Brit_Ale |
| Wentworth Woppa | England | British_Isles | Eng_Ale | Brit_Ale |
| Hobson's Choice | England | British_Isles | Eng_Ale | Brit_Ale |
| Ghost Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| London Pride | England | British_Isles | Eng_Ale | Brit_Ale |
| Goacher's Best Dark Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Barnsley Gold | England | British_Isles | Eng_Ale | Brit_Ale |
| Lionheart | England | British_Isles | Eng_Ale | Brit_Ale |
| Prince Bishop Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Tanglefoot | England | British_Isles | Eng_Ale | Brit_Ale |
| Summer Lightning | England | British_Isles | Eng_Ale | Brit_Ale |
| Deuchars IPA | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Black Isle Yellowhammer IPA | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Ossian | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Lazy Mutt | US | US | US_Ale | US_Ale |
| Golden Monkey | US | US | US_Ale | US_Ale |
| Cambrian Bitter | Wales | British_Isles | Wales_Ale | Brit_Ale |
| Brains SA Gold | Wales | British_Isles | Wales_Ale | Brit_Ale |
| Double Dragon | Wales | British_Isles | Wales_Ale | Brit_Ale |
| Pyramid Apricot Ale | US | US | US_Fruit | US_Fruit |
| Trade Winds | Scotland | British_Isles | Scot_Wheat | Brit_Wheat |
| Norwich Terrier | England | British_Isles | Eng_Ale | Brit_Ale |
| Side Pocket for a Toad | England | British_Isles | Eng_Ale | Brit_Ale |
| Bath Ales Special Pale Ale | England | British_Isles | Eng_Ale | Brit_Ale |
| Outlaw Wild Mule | England | British_Isles | Eng_Ale | Brit_Ale |
| Excelsior | England | British_Isles | Eng_Ale | Brit_Ale |
| Golden Pippin | England | British_Isles | Eng_Ale | Brit_Ale |
| Daleside Blonde | England | British_Isles | Eng_Ale | Brit_Ale |
| Beartown Kodiak Gold | England | British_Isles | Eng_Ale | Brit_Ale |
| Crouch Vale Brewers Gold | England | British_Isles | Eng_Ale | Brit_Ale |
| Darwin's Evolution | England | British_Isles | Eng_Ale | Brit_Ale |
| Top Totty | England | British_Isles | Eng_Ale | Brit_Ale |
| Butcombe Blonde | England | British_Isles | Eng_Ale | Brit_Ale |
| Easy Rider | England | British_Isles | Eng_Ale | Brit_Ale |
| Yellow Hammer | England | British_Isles | Eng_Wheat | Brit_Wheat |
| Dr Okell's IPA | England | British_Isles | Eng_Ale | Brit_Ale |
| Bathams Best Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Centurion Best Bitter | England | British_Isles | Eng_Ale | Brit_Ale |
| Holy Grail | England | British_Isles | Eng_Ale | Brit_Ale |
| Old Empire | England | British_Isles | Eng_Ale | Brit_Ale |
| Jaipur | England | British_Isles | Eng_Ale | Brit_Ale |
| Galway Hooker Irish Pale Ale | Ireland | British_Isles | Ire_Ale | Brit_Ale |
| Arran Blonde | Scotland | British_Isles | Scot_Ale | Brit_Ale |
| Festina Pech | US | US | US_Ale | US_Ale |
| Magic Hat #9 | US | US | US_Ale | US_Ale |

| | | | | |
|--------------------------------|----------|---------------|------------|------------|
| Scape Goat Pale Ale | US | US | US_Ale | US_Ale |
| Hazed & Infused | US | US | US_Ale | US_Ale |
| Mateveza Yerba Mate Ale | US | US | US_Ale | US_Ale |
| Carolina Blonde | US | US | US_Ale | US_Ale |
| Mirror Pond | US | US | US_Ale | US_Ale |
| Doggie Style Pale Ale | US | US | US_Ale | US_Ale |
| Odell 90 Shilling | US | US | US_Ale | US_Ale |
| Stone Mill Organic Pale Ale | US | US | US_Ale | US_Ale |
| Fish Tale Organic IPA | US | US | US_Ale | US_Ale |
| River Horse Hop Hazard | US | US | US_Ale | US_Ale |
| Nimbus Old Monkeyshine | US | US | US_Ale | US_Ale |
| Sockeye Red IPA | US | US | US_Ale | US_Ale |
| Liberty Ale | US | US | US_Ale | US_Ale |
| 60 minute Spa | US | US | US_Ale | US_Ale |
| Burning River Pale Ale | US | US | US_Ale | US_Ale |
| Lake Placid 46'er IPA | US | US | US_Ale | US_Ale |
| Hammerhead | US | US | US_Ale | US_Ale |
| Alpha King | US | US | US_Ale | US_Ale |
| Furious | US | US | US_Ale | US_Ale |
| Big Daddy IPA | US | US | US_Ale | US_Ale |
| Hopworks Organic IPA | US | US | US_Ale | US_Ale |
| Bear Republic Racer 5 | US | US | US_Ale | US_Ale |
| Bell's Two Hearted Ale | US | US | US_Ale | US_Ale |
| Alesmith IPA | US | US | US_Ale | US_Ale |
| Union Jack IPA | US | US | US_Ale | US_Ale |
| Pure Hoppiness | US | US | US_Ale | US_Ale |
| Pliny the Elder | US | US | US_Ale | US_Ale |
| Avery Salvation | US | US | US_Ale | US_Ale |
| Midas Touch | US | US | US_Ale | US_Ale |
| Curieux | US | US | US_Ale | US_Ale |
| Drayman's Choice | Wales | British_Isles | Wales_Ale | Brit_Ale |
| Melbourne Brother's Strawberry | England | British_Isles | Eng_Fruit | Brit_Fruit |
| Melbourne Brother's Apricot | England | British_Isles | Eng_Fruit | Brit_Fruit |
| Wicked Strawberry Blond | US | US | US_Fruit | US_Fruit |
| Latitude Cask Pilsner | Scotland | British_Isles | Scot_Lager | Brit_Lager |
| Black Isle Organic Blonde | Scotland | British_Isles | Scot_Lager | Brit_Lager |
| Schiehallion | Scotland | British_Isles | Scot_Lager | Brit_Lager |
| Squatters Provo Girl Pilsner | US | US | US_Lager | US_Lager |
| Yellowtail Pale Ale | US | US | US_Lager | US_Lager |
| Reality Czeck | US | US | US_Lager | US_Lager |
| Blue Paddle Pilsener | US | US | US_Lager | US_Lager |
| Samuel Adams Boston Lager | US | US | US_Lager | US_Lager |
| Michelob Ultra | US | US | US_Lager | US_Lager |
| Southampton Secret Ale | US | US | US_Lager | US_Lager |
| Victroy Prima Pils | US | US | US_Lager | US_Lager |
| Small Craft Warning | US | US | US_Lager | US_Lager |
| White Dwarf | England | British_Isles | Eng_Ale | Brit_Ale |
| Goose Island 312 Urban Wheat | US | US | US_Wheat | US_Wheat |
| Celis White | US | US | US_Wheat | US_Wheat |
| Boulevard Unfiltered Wheat | US | US | US_Wheat | US_Wheat |
| New Belgium Mothership Wit | US | US | US_Wheat | US_Wheat |
| Gumballhead | US | US | US_Wheat | US_Wheat |
| Leinenkugel's Sunset Wheat | US | US | US_Wheat | US_Wheat |
| 1919 Choc | US | US | US_Wheat | US_Wheat |
| Whirlwind Witbier | US | US | US_Wheat | US_Wheat |
| Brooklyner Weisse | US | US | US_Wheat | US_Wheat |
| Hinterland Hefe Weizen | US | US | US_Wheat | US_Wheat |
| Shiner Hefeweizen | US | US | US_Wheat | US_Wheat |
| Allagash White | US | US | US_Wheat | US_Wheat |
| Star Brew Triple Wheat Ale | US | US | US_Wheat | US_Wheat |

| Year_Made_In | Year2 | Year3 | Year_in_Title | Type_of_Beer | Type_of_Beer2 | Type_of_Beer_in_Title |
|--------------|-------|-------|---------------|--------------|---------------|-----------------------|
| y1711 | y1700 | y1800 | No | Bitter | Ale | Yes |
| y1851 | y1850 | y1800 | No | IPA | Ale | Yes |
| y1875 | y1850 | y1800 | No | Bitter | Ale | No |
| y1995 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y1795 | y1800 | y1800 | No | Ale | Ale | No |
| y1876 | y1900 | y1900 | No | IPA | Ale | Yes |
| y1870 | y1850 | y1800 | No | Bitter | Ale | Yes |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1843 | y1850 | y1800 | No | Bitter | Ale | No |
| y1858 | y1850 | y1800 | No | Bitter | Ale | Yes |
| y1758 | y1750 | y1800 | No | Bitter | Ale | Yes |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | IPA | Ale | Yes |
| y2005 | y2000 | y2000 | No | Bitter | Ale | No |
| y2002 | y2000 | y2000 | No | Bitter | Ale | No |
| y1995 | y2000 | y2000 | No | Bitter | Ale | No |
| y1991 | y2000 | y2000 | No | Bitter | Ale | No |
| y2005 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1990 | y2000 | y2000 | No | Bitter | Ale | No |
| y1849 | y1850 | y1800 | Yes | Bitter | Ale | No |
| y1995 | y2000 | y2000 | No | Bitter | Ale | No |
| y1950 | y1950 | y1900 | No | Bitter | Ale | No |
| y1996 | y2000 | y2000 | No | Bitter | Ale | No |
| y1849 | y1850 | y1800 | No | Bitter | Ale | No |
| y1872 | y1850 | y1800 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1843 | y1850 | y1800 | No | Bitter | Ale | No |
| y1999 | y2000 | y2000 | No | Bitter | Ale | No |
| y1996 | y2000 | y2000 | No | Bitter | Ale | No |
| y1990 | y2000 | y2000 | No | Bitter | Ale | No |
| y1978 | y2000 | y2000 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1984 | y2000 | y2000 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| y17y19 | y1700 | y1800 | No | Bitter | Ale | No |
| y2002 | y2000 | y2000 | No | Ale | Ale | No |
| y1994 | y2000 | y2000 | No | Scottish | Ale | No |
| y1991 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y1988 | y2000 | y2000 | No | Bitter | Ale | Yes |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y1994 | y2000 | y2000 | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | Yes |
| N/A | N/A | N/A | No | Triple | Ale | Yes |
| y1996 | y2000 | y2000 | No | IPA | Ale | Yes |
| y2008 | y2000 | y2000 | No | Ale | Ale | No |
| y1984 | y2000 | y2000 | No | Ale | Ale | No |
| y1996 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y2002 | y2000 | y2000 | No | Bitter | Ale | No |
| y1950 | y1950 | y1900 | No | Barley_Wine | Barley_Wine | No |
| y1845 | y1850 | y1800 | No | Barley_Wine | Barley_Wine | No |
| N/A | N/A | N/A | No | Barley_Wine | Barley_Wine | No |
| y1981 | y2000 | y2000 | No | Barley_Wine | Barley_Wine | No |
| y2007 | y2000 | y2000 | No | Barley_Wine | Barley_Wine | Yes |
| N/A | N/A | N/A | No | Fruit | Fruit | Yes |
| y1988 | y2000 | y2000 | No | Bock | Lager | No |
| y1858 | y1850 | y1800 | No | Wheat | Wheat | Yes |
| y2002 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y1979 | y2000 | y2000 | No | Bitter | Ale | No |
| y1995 | y2000 | y2000 | No | Bitter | Ale | No |
| y1822 | y1800 | y1800 | No | Bitter | Ale | Yes |
| y2002 | y2000 | y2000 | No | Bitter | Ale | No |

| | | | | | | |
|--------|-------|-------|----|---------------|-------------|-----|
| y1995 | y2000 | y2000 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1993 | y2000 | y2000 | No | Bitter | Ale | No |
| y1876 | y1900 | y1900 | No | Bitter | Ale | No |
| y1979 | y2000 | y2000 | No | Bitter | Ale | No |
| y1950 | y1950 | y1900 | No | Bitter | Ale | No |
| y1927 | y1950 | y1900 | No | Brown_Ale | Ale | Yes |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| y1689 | y1700 | y1800 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| y1865 | y1850 | y1800 | No | Bitter | Ale | No |
| y1792 | y1800 | y1800 | No | Irish_Red_Ale | Ale | Yes |
| y17y19 | y1700 | y1800 | No | Scottish | Ale | No |
| y2003 | y2000 | y2000 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | Yes |
| y2004 | y2000 | y2000 | No | Amber | Ale | Yes |
| y1991 | y2000 | y2000 | No | Amber | Ale | No |
| N/A | N/A | N/A | No | Amber | Ale | Yes |
| y1997 | y2000 | y2000 | No | Scottish | Ale | Yes |
| y1996 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y1994 | y2000 | y2000 | No | Amber | Ale | Yes |
| N/A | N/A | N/A | No | Irish_Red_Ale | Ale | Yes |
| y1996 | y2000 | y2000 | No | Scottish | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | Yes |
| y1983 | y2000 | y2000 | No | Amber | Ale | No |
| y1995 | y2000 | y2000 | No | Amber | Ale | No |
| y1989 | y2000 | y2000 | No | Amber | Ale | No |
| y1999 | y2000 | y2000 | No | Amber | Ale | No |
| N/A | N/A | N/A | No | Irish_Red_Ale | Ale | Yes |
| y2006 | y2000 | y2000 | No | IPA | Ale | No |
| N/A | N/A | N/A | No | IPA | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y1838 | y1850 | y1800 | No | Barley_Wine | Barley_Wine | No |
| y2007 | y2000 | y2000 | No | Barley_Wine | Barley_Wine | No |
| y1986 | y2000 | y2000 | No | Fruit | Fruit | No |
| y2007 | y2000 | y2000 | No | Fruit | Fruit | Yes |
| y2002 | y2000 | y2000 | No | Fruit | Fruit | Yes |
| N/A | N/A | N/A | No | Fruit | Fruit | Yes |
| N/A | N/A | N/A | No | Altbier | Lager | No |
| y1872 | y1850 | y1800 | No | Lager | Lager | No |
| y1987 | y2000 | y2000 | No | Lager | Lager | No |
| y2002 | y2000 | y2000 | No | Altbier | Lager | No |
| y1860 | y1850 | y1800 | No | Bock | Lager | Yes |
| N/A | N/A | N/A | No | Bock | Lager | Yes |
| y1995 | y2000 | y2000 | No | Porter | Porter | Yes |
| y1877 | y1850 | y1800 | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | Bitter | Ale | Yes |
| y2001 | y2000 | y2000 | No | Bitter | Ale | Yes |
| y1988 | y2000 | y2000 | No | Bitter | Ale | No |
| y1849 | y1850 | y1800 | No | Bitter | Ale | No |
| y1807 | y1800 | y1800 | No | Bitter | Ale | No |
| y1799 | y1800 | y1800 | No | Bitter | Ale | No |
| y1758 | y1750 | y1800 | No | Brown_Ale | Ale | Yes |
| y1979 | y2000 | y2000 | No | Bitter | Ale | No |
| y1865 | y1850 | y1800 | No | Ale | Ale | No |
| y1869 | y1850 | y1800 | No | Scottish | Ale | No |
| y1998 | y2000 | y2000 | No | Brown_Ale | Ale | Yes |
| N/A | N/A | N/A | No | Brown_Ale | Ale | No |
| y1988 | y2000 | y2000 | No | Brown_Ale | Ale | No |
| N/A | N/A | N/A | No | Brown_Ale | Ale | Yes |
| y2006 | y2000 | y2000 | No | Ale | Ale | Yes |
| y2002 | y2000 | y2000 | No | Brown_Ale | Ale | No |
| N/A | N/A | N/A | No | Brown_Ale | Ale | Yes |
| y1988 | y2000 | y2000 | No | Brown_Ale | Ale | No |
| y1992 | y2000 | y2000 | No | Steinbeer | Lager | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |

| | | | | | | |
|-------|-------|-------|----|----------------|-------------|-----|
| y1865 | y1850 | y1800 | No | Ale | Ale | No |
| y1874 | y1850 | y1800 | No | Bitter | Ale | No |
| y1865 | y1850 | y1800 | No | Bitter | Ale | No |
| y1870 | y1850 | y1800 | No | Bitter | Ale | Yes |
| y1994 | y2000 | y2000 | No | Ale | Ale | No |
| y1795 | y1800 | y1800 | No | Bitter | Ale | Yes |
| y1800 | y1800 | y1800 | No | Bitter | Ale | No |
| y1822 | y1800 | y1800 | No | Bitter | Ale | No |
| y1999 | y2000 | y2000 | No | Ale | Ale | No |
| y1974 | y1950 | y1900 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Scottish | Ale | No |
| y2001 | y2000 | y2000 | No | Bitter | Ale | No |
| y2001 | y2000 | y2000 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| y1988 | y2000 | y2000 | No | Bitter | Ale | No |
| y2001 | y2000 | y2000 | No | Scottish | Ale | No |
| y1974 | y1950 | y1900 | No | Bitter | Ale | No |
| y1905 | y1900 | y1900 | No | Ale | Ale | No |
| y1992 | y2000 | y2000 | No | Ale | Ale | No |
| y1995 | y2000 | y2000 | No | Bitter | Ale | No |
| y1996 | y2000 | y2000 | No | Brown_Ale | Ale | No |
| y2007 | y2000 | y2000 | No | Ale | Ale | Yes |
| y1986 | y2000 | y2000 | No | Brown_Ale | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | No |
| N/A | N/A | N/A | No | Belgian_Strong | Ale | No |
| y2006 | y2000 | y2000 | No | Ale | Ale | No |
| y1997 | y2000 | y2000 | No | Belgian_Strong | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | Triple | Ale | No |
| y1994 | y2000 | y2000 | No | Ale | Ale | No |
| y1965 | y1950 | y1900 | No | Barley_Wine | Barley_Wine | No |
| y1965 | y1950 | y1900 | No | Barley_Wine | Barley_Wine | No |
| y1988 | y2000 | y2000 | No | Barley_Wine | Barley_Wine | No |
| y2006 | y2000 | y2000 | No | Barley_Wine | Barley_Wine | No |
| y1995 | y2000 | y2000 | No | Lager | Lager | No |
| N/A | N/A | N/A | No | Bock | Lager | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| y1995 | y2000 | y2000 | No | Porter | Porter | No |
| y1991 | y2000 | y2000 | No | Porter | Porter | No |
| y1986 | y2000 | y2000 | No | Porter | Porter | No |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| y1981 | y2000 | y2000 | No | Porter | Porter | No |
| y2000 | y2000 | y2000 | No | Porter | Porter | Yes |
| y2002 | y2000 | y2000 | No | Porter | Porter | Yes |
| y2006 | y2000 | y2000 | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| y2004 | y2000 | y2000 | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| y1995 | y2000 | y2000 | No | Porter | Porter | Yes |
| y1996 | y2000 | y2000 | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| y1930 | y1950 | y1900 | No | Porter | Porter | Yes |
| y1988 | y2000 | y2000 | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Porter | Porter | No |
| N/A | N/A | N/A | No | Porter | Porter | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y1982 | y2000 | y2000 | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y2005 | y2000 | y2000 | No | Stout | Stout | Yes |
| y1856 | y1850 | y1800 | No | Stout | Stout | Yes |
| y1792 | y1800 | y1800 | No | Stout | Stout | Yes |
| y1759 | y1750 | y1800 | No | Stout | Stout | No |
| y2001 | y2000 | y2000 | No | Stout | Stout | No |

| | | | | | | |
|-------|-------|-------|----|--------|-------|-----|
| y1988 | y2000 | y2000 | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y1990 | y2000 | y2000 | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y1988 | y2000 | y2000 | No | Stout | Stout | Yes |
| y1994 | y2000 | y2000 | No | Stout | Stout | No |
| N/A | N/A | N/A | No | Stout | Stout | No |
| y1995 | y2000 | y2000 | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y2006 | y2000 | y2000 | No | Stout | Stout | No |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y1988 | y2000 | y2000 | No | Stout | Stout | No |
| y1988 | y2000 | y2000 | No | Stout | Stout | No |
| N/A | N/A | N/A | No | Stout | Stout | Yes |
| y1984 | y2000 | y2000 | No | Bitter | Ale | No |
| y1777 | y1800 | y1800 | No | Bitter | Ale | No |
| y1995 | y2000 | y2000 | No | Bitter | Ale | No |
| y1847 | y1850 | y1800 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y1997 | y2000 | y2000 | No | Bitter | Ale | No |
| y1994 | y2000 | y2000 | No | Bitter | Ale | No |
| y1845 | y1850 | y1800 | No | Bitter | Ale | No |
| y1983 | y2000 | y2000 | No | Bitter | Ale | No |
| y2001 | y2000 | y2000 | No | Bitter | Ale | No |
| y1999 | y2000 | y2000 | No | Bitter | Ale | No |
| y1982 | y2000 | y2000 | No | Bitter | Ale | No |
| y1777 | y1800 | y1800 | No | Bitter | Ale | No |
| y1986 | y2000 | y2000 | No | Bitter | Ale | No |
| y1869 | y1850 | y1800 | No | IPA | Ale | Yes |
| y1998 | y2000 | y2000 | No | IPA | Ale | Yes |
| y1997 | y2000 | y2000 | No | Bitter | Ale | No |
| y2006 | y2000 | y2000 | No | Ale | Ale | No |
| y1996 | y2000 | y2000 | No | Triple | Ale | No |
| y1878 | y1900 | y1900 | No | Bitter | Ale | Yes |
| y1900 | y1900 | y1900 | No | Bitter | Ale | No |
| y1878 | y1900 | y1900 | No | Bitter | Ale | No |
| y1984 | y2000 | y2000 | No | Fruit | Fruit | Yes |
| y2001 | y2000 | y2000 | No | Wheat | Wheat | No |
| y1993 | y2000 | y2000 | No | Bitter | Ale | No |
| y1992 | y2000 | y2000 | No | Bitter | Ale | No |
| y1995 | y2000 | y2000 | No | Ale | Ale | Yes |
| y1993 | y2000 | y2000 | No | Bitter | Ale | No |
| y1997 | y2000 | y2000 | No | Bitter | Ale | No |
| y2002 | y2000 | y2000 | No | Bitter | Ale | No |
| y1988 | y2000 | y2000 | No | Bitter | Ale | No |
| y1994 | y2000 | y2000 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| y1994 | y2000 | y2000 | No | Bitter | Ale | No |
| y1994 | y2000 | y2000 | No | Bitter | Ale | No |
| y1978 | y2000 | y2000 | No | Bitter | Ale | No |
| y1990 | y2000 | y2000 | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| y1874 | y1850 | y1800 | No | IPA | Ale | Yes |
| y1877 | y1850 | y1800 | No | Bitter | Ale | Yes |
| y1777 | y1800 | y1800 | No | Bitter | Ale | Yes |
| y1999 | y2000 | y2000 | No | Ale | Ale | No |
| y1834 | y1850 | y1800 | No | IPA | Ale | No |
| y2005 | y2000 | y2000 | No | IPA | Ale | No |
| y2006 | y2000 | y2000 | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | Bitter | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y2008 | y2000 | y2000 | No | Ale | Ale | No |

| | | | | | | |
|--------|-------|-------|-----|----------------|-------|-----|
| N/A | N/A | N/A | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y1996 | y2000 | y2000 | No | Ale | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y1988 | y2000 | y2000 | No | Ale | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | Yes |
| y1989 | y2000 | y2000 | No | Scottish | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | Yes |
| y1996 | y2000 | y2000 | No | Ale | Ale | No |
| y1997 | y2000 | y2000 | No | Ale | Ale | No |
| y2007 | y2000 | y2000 | No | IPA | Ale | Yes |
| y1965 | y1950 | y1900 | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | No |
| y1988 | y2000 | y2000 | No | Ale | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | Yes |
| N/A | N/A | N/A | No | Ale | Ale | No |
| y1996 | y2000 | y2000 | No | Ale | Ale | No |
| y2006 | y2000 | y2000 | No | IPA | Ale | No |
| y1997 | y2000 | y2000 | No | IPA | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | No |
| y1985 | y2000 | y2000 | No | IPA | Ale | No |
| N/A | N/A | N/A | No | IPA | Ale | Yes |
| y2008 | y2000 | y2000 | No | IPA | Ale | Yes |
| N/A | N/A | N/A | No | IPA | Ale | No |
| N/A | N/A | N/A | No | IPA | Ale | No |
| N/A | N/A | N/A | No | Belgian_Strong | Ale | No |
| N/A | N/A | N/A | No | Ale | Ale | No |
| N/A | N/A | N/A | No | Triple | Ale | No |
| y1996 | y2000 | y2000 | No | Ale | Ale | No |
| y1825 | y1800 | y1800 | No | Fruit | Fruit | Yes |
| y1825 | y1800 | y1800 | No | Fruit | Fruit | Yes |
| y1988 | y2000 | y2000 | No | Fruit | Fruit | Yes |
| y2001 | y2000 | y2000 | No | Pilsner | Lager | Yes |
| y1998 | y2000 | y2000 | No | Lager | Lager | No |
| y1985 | y2000 | y2000 | No | Lager | Lager | No |
| y2000 | y2000 | y2000 | No | Pilsner | Lager | Yes |
| N/A | N/A | N/A | No | Lager | Lager | No |
| y1992 | y2000 | y2000 | No | Pilsner | Lager | No |
| y1991 | y2000 | y2000 | No | Pilsner | Lager | Yes |
| y1984 | y2000 | y2000 | No | Lager | Lager | Yes |
| y2002 | y2000 | y2000 | No | Lager | Lager | No |
| N/A | N/A | N/A | No | Altbier | Lager | No |
| y1996 | y2000 | y2000 | No | Pilsner | Lager | Yes |
| y1995 | y2000 | y2000 | No | Lager | Lager | No |
| y1993 | y2000 | y2000 | No | Wheat | Wheat | No |
| y1988 | y2000 | y2000 | No | Wheat | Wheat | Yes |
| N/A | N/A | N/A | No | Wheat | Wheat | Yes |
| N/A | N/A | N/A | No | Wheat | Wheat | Yes |
| y1991 | y2000 | y2000 | No | Wheat | Wheat | Yes |
| y1996 | y2000 | y2000 | No | Wheat | Wheat | No |
| y1988 | y2000 | y2000 | No | Wheat | Wheat | Yes |
| y19y19 | y1900 | y1900 | Yes | Wheat | Wheat | No |
| y1996 | y2000 | y2000 | No | Wheat | Wheat | Yes |
| N/A | N/A | N/A | No | Wheat | Wheat | Yes |
| y1997 | y2000 | y2000 | No | Wheat | Wheat | Yes |
| y1909 | y1900 | y1900 | No | Wheat | Wheat | Yes |
| N/A | N/A | N/A | No | Wheat | Wheat | Yes |
| N/A | N/A | N/A | No | Wheat | Wheat | Yes |

| Geeraerts | Organic | Organic_in_Title | Strength | Alcoholic_Percentage | Alcoholic_Percentage | Colour |
|-----------|---------|------------------|----------|----------------------|----------------------|------------|
| Type1 | No | No | mild | three,four | | 3.4 A_N/A |
| Type1 | No | No | mild | three,four | | 3.4 A_N/A |
| Type1 | No | No | mild | three,five | | 3.5 A_N/A |
| Type2 | No | No | mild | three,six | | 3.6 A_N/A |
| Type2 | No | No | mild | three,six | | 3.6 A_N/A |
| Type2 | No | No | mild | three,six | | 3.6 A_N/A |
| Type1 | No | No | mild | three,seven | | 3.7 A_N/A |
| Type2 | No | No | mild | three,seven | | 3.7 A_N/A |
| Type2 | No | No | medium | four | | 3.8 A_N/A |
| Type1 | No | No | medium | four | | 4 A_N/A |
| Type1 | No | No | medium | four | | 4 A_N/A |
| Type1 | No | No | medium | four | | 4 A_N/A |
| Type2 | No | No | medium | four | | 4 A_N/A |
| Type1 | No | No | medium | four | | 4 A_N/A |
| Type2 | No | No | medium | four | | 4 A_N/A |
| Type2 | No | No | medium | four,one | | 4.1 A_N/A |
| Type2 | No | No | medium | four,two | | 4.2 A_N/A |
| Type2 | No | No | medium | four,two | | 4.2 A_N/A |
| Type1 | Yes | Yes | medium | four,two | | 4.2 A_N/A |
| Type2 | No | No | medium | four,two | | 4.2 A_N/A |
| Type2 | No | No | medium | four,four | | 4.4 A_N/A |
| Type2 | No | No | medium | four,four | | 4.4 A_N/A |
| Type1 | No | No | medium | four,five | | 4.5 A_N/A |
| Type2 | No | No | medium | four,five | | 4.5 A_N/A |
| Type2 | No | No | medium | four,five | | 4.5 A_N/A |
| Type2 | No | No | medium | four,five | | 4.5 A_N/A |
| Type2 | No | No | medium | four,six | | 4.6 A_N/A |
| Type1 | No | No | medium | four,seven | | 4.7 A_N/A |
| Type2 | No | No | medium | four,eight | | 4.8 A_N/A |
| Type1 | No | No | medium | four,eight | | 4.8 A_N/A |
| Type2 | No | No | medium | five | | 5 A_N/A |
| Type2 | No | No | medium | five | | 5 A_N/A |
| Type2 | No | No | medium | five | | 5 A_N/A |
| Type2 | No | No | medium | five,two | | 5.2 A_N/A |
| Type2 | No | No | medium | five,six | | 5.6 A_N/A |
| Type2 | No | No | medium | five,nine | | 5.9 A_N/A |
| Type2 | No | No | medium | six | | 6 A_N/A |
| Type2 | No | No | medium | four,one | | 4.1 A_N/A |
| Type2 | No | No | medium | four,nine | | 4.9 A_N/A |
| Type2 | No | No | medium | four,eight | | 4.8 A_N/A |
| Type2 | No | No | medium | five,three | | 5.3 A_N/A |
| Type2 | No | No | medium | five,five | | 5.5 A_N/A |
| Type2 | No | No | medium | six,two | | 6.2 A_N/A |
| Type2 | No | No | strong | seven,two | | 7.2 A_N/A |
| Type2 | No | No | strong | eight,one | | 8.1 A_N/A |
| Type2 | No | No | strong | nine,six | | 9.6 A_N/A |
| Type2 | No | No | strong | ten | | 10 A_N/A |
| Type2 | No | No | strong | one | | 10 A_N/A |
| Type1 | No | No | strong | eleven | | 11 A_N/A |
| Type2 | No | No | strong | twentyseven | | 27 A_N/A |
| Type2 | No | No | medium | four,two | | 4.2 A_N/A |
| Type1 | No | No | medium | four,two | | 4.2 A_N/A |
| Type2 | No | No | strong | seven,five | | 7.5 A_N/A |
| Type2 | No | No | strong | eight,five | | 8.5 A_N/A |
| Type2 | No | No | strong | eleven,seven | | 11.7 A_N/A |
| Type2 | No | No | strong | nine,six | | 9.6 A_N/A |
| Type2 | No | No | strong | fourteen | | 14 A_N/A |
| Type1 | No | No | medium | four,four | | 4.4 A_N/A |
| Type2 | No | No | medium | six,six | | 6.6 A_N/A |
| Type1 | Yes | No | medium | four | | 4 A_N/A |
| Type2 | No | No | medium | four | | 3.8 Amber |
| Type2 | No | No | medium | four | | 3.8 Amber |
| Type2 | No | No | medium | four | | 3.8 Amber |
| Type2 | No | No | mild | three,nine | | 3.9 Amber |
| Type2 | No | No | medium | four,one | | 4.1 Amber |

| | | | | | |
|-------|-----|-----|--------|----------------|------------|
| Type2 | No | No | medium | four,two | 4.2 Amber |
| Type2 | No | No | medium | four,two | 4.2 Amber |
| Type2 | No | No | medium | four,three | 4.3 Amber |
| Type2 | No | No | medium | four,three | 4.3 Amber |
| Type2 | No | No | medium | four,five | 4.5 Amber |
| Type2 | Yes | Yes | medium | four,five | 4.5 Amber |
| Type1 | No | No | medium | four,seven | 4.7 Amber |
| Type2 | Yes | Yes | medium | four,seven | 4.7 Amber |
| Type2 | No | No | medium | five | 5 Amber |
| Type2 | No | No | medium | five | 5 Amber |
| Type2 | No | No | medium | five,one | 5.1 Amber |
| Type1 | No | No | medium | four,two | 4.2 Amber |
| Type2 | No | No | medium | four,two | 4.2 Amber |
| Type1 | No | No | medium | six,six | 6.6 Amber |
| Type2 | No | No | medium | five | 5 Amber |
| Type1 | No | No | medium | five | 5 Amber |
| Type2 | No | No | medium | five,three | 5.3 Amber |
| Type1 | No | No | medium | five,four | 5.4 Amber |
| Type2 | No | No | medium | five,five | 5.5 Amber |
| Type1 | No | No | medium | five,five | 5.5 Amber |
| Type1 | No | No | medium | five,five | 5.5 Amber |
| Type1 | No | No | medium | six | 6 Amber |
| Type2 | No | No | medium | six | 6 Amber |
| Type2 | No | No | medium | six | 6 Amber |
| Type2 | No | No | medium | six,one | 6.1 Amber |
| Type2 | No | No | medium | six,two | 6.2 Amber |
| Type2 | No | No | medium | six,six | 6.6 Amber |
| Type1 | No | No | medium | six,eight | 6.8 Amber |
| Type2 | No | No | strong | seven,three | 7.3 Amber |
| Type2 | No | No | strong | seven,eight | 7.8 Amber |
| Type2 | No | No | strong | eight | 8 Amber |
| Type2 | No | No | strong | ten | 10 Amber |
| Type2 | No | No | strong | eight,five | 8.5 Amber |
| Type2 | No | No | strong | eleven | 11 Amber |
| Type2 | No | No | medium | four,sevenfive | 4.75 Amber |
| Type1 | No | No | medium | five | 5 Amber |
| Type2 | No | No | medium | five,five | 5.5 Amber |
| Type1 | No | No | strong | nine | 9 Amber |
| Type2 | No | No | medium | five | 5 Amber |
| Type1 | No | No | medium | five | 5 Amber |
| Type2 | No | No | medium | five,three | 5.3 Amber |
| Type1 | No | No | medium | five,four | 5.4 Amber |
| Type1 | No | No | medium | five,six | 5.6 Amber |
| Type1 | No | No | strong | ten,six | 10.6 Amber |
| Type1 | Yes | Yes | medium | six,three | 6.3 Amber |
| Type1 | No | No | mild | three,five | 3.5 Brown |
| Type2 | No | No | mild | three,five | 3.5 Brown |
| Type1 | No | No | mild | three,eight | 3.8 Brown |
| Type2 | No | No | medium | four,one | 4.1 Brown |
| Type2 | No | No | medium | four,two | 4.2 Brown |
| Type2 | No | No | medium | four,four | 4.4 Brown |
| Type2 | No | No | medium | five | 5 Brown |
| Type1 | No | No | medium | five | 5 Brown |
| Type2 | No | No | medium | five,two | 5.2 Brown |
| Type2 | No | No | medium | six | 6 Brown |
| Type2 | No | No | medium | four,two | 4.2 Brown |
| Type1 | No | No | medium | five | 5 Brown |
| Type2 | No | No | medium | five,three | 5.3 Brown |
| Type2 | No | No | medium | five,three | 5.3 Brown |
| Type1 | No | No | medium | five,five | 5.5 Brown |
| Type2 | No | No | medium | five,five | 5.5 Brown |
| Type2 | No | No | medium | five,five | 5.5 Brown |
| Type2 | No | No | medium | five,seven | 5.7 Brown |
| Type2 | No | No | medium | six,five | 6.5 Brown |
| Type2 | No | No | medium | four,eight | 4.8 Brown |
| Type2 | No | No | medium | five,four | 5.4 Brown |

| | | | | | | |
|-------|-----|-----|--------|-------------|------|------|
| Type2 | No | No | mild | three,four | 3.4 | Dark |
| Type2 | No | No | medium | four | 4 | Dark |
| Type2 | No | No | medium | four,seven | 4.7 | Dark |
| Type1 | No | No | medium | four,eight | 4.8 | Dark |
| Type2 | No | No | medium | five | 5 | Dark |
| Type2 | No | No | medium | five,two | 5.2 | Dark |
| Type2 | No | No | medium | five,five | 5.5 | Dark |
| Type2 | No | No | medium | five,six | 5.6 | Dark |
| Type2 | No | No | medium | six,five | 6.5 | Dark |
| Type2 | No | No | mild | three,nine | 3.9 | Dark |
| Type2 | Yes | Yes | medium | four | 4 | Dark |
| Type2 | No | No | medium | four,two | 4.2 | Dark |
| Type2 | No | No | medium | four,two | 4.2 | Dark |
| Type2 | Yes | No | medium | four,four | 4.4 | Dark |
| Type2 | No | No | medium | four,six | 4.6 | Dark |
| Type2 | No | No | medium | four,eight | 4.8 | Dark |
| Type2 | No | No | medium | five,two | 5.2 | Dark |
| Type2 | No | No | medium | five | 5 | Dark |
| Type2 | No | No | medium | five | 5 | Dark |
| Type2 | No | No | medium | five,five | 5.5 | Dark |
| Type2 | No | No | medium | five,five | 5.5 | Dark |
| Type2 | No | No | medium | five,six | 5.6 | Dark |
| Type2 | No | No | medium | six,one | 6.1 | Dark |
| Type2 | No | No | strong | seven | 7 | Dark |
| Type2 | No | No | strong | seven,two | 7.2 | Dark |
| Type2 | No | No | strong | seven,six | 7.6 | Dark |
| Type1 | No | No | strong | eight,five | 8.5 | Dark |
| Type1 | No | No | strong | eight,six | 8.6 | Dark |
| Type2 | No | No | strong | nine | 9 | Dark |
| Type2 | No | No | strong | ten | 10 | Dark |
| Type1 | No | No | strong | seven,two | 7.2 | Dark |
| Type2 | No | No | strong | eight | 8 | Dark |
| Type2 | No | No | strong | eight,five | 8.5 | Dark |
| Type2 | No | No | strong | eleven,five | 11.5 | Dark |
| Type2 | No | No | medium | five,three | 5.3 | Dark |
| Type2 | No | No | strong | eight,two | 8.2 | Dark |
| Type2 | No | No | medium | four | 4 | Dark |
| Type2 | No | No | medium | five | 5 | Dark |
| Type2 | No | No | medium | five | 5 | Dark |
| Type2 | No | No | medium | five | 5 | Dark |
| Type2 | No | No | medium | six,one | 6.1 | Dark |
| Type2 | No | No | medium | four,six | 4.6 | Dark |
| Type2 | No | No | medium | four | 4 | Dark |
| Type2 | No | No | medium | four | 4 | Dark |
| Type2 | No | No | medium | five,one | 5.1 | Dark |
| Type1 | No | No | medium | five,two | 5.2 | Dark |
| Type2 | No | No | medium | five,three | 5.3 | Dark |
| Type2 | No | No | medium | five,four | 5.4 | Dark |
| Type2 | No | No | medium | five,four | 5.4 | Dark |
| Type2 | No | No | medium | five,four | 5.4 | Dark |
| Type2 | No | No | medium | five,four | 5.4 | Dark |
| Type2 | No | No | medium | five,four | 5.4 | Dark |
| Type1 | Yes | Yes | medium | five,five | 5.5 | Dark |
| Type2 | No | No | medium | five,six | 5.6 | Dark |
| Type2 | No | No | medium | five,six | 5.6 | Dark |
| Type2 | No | No | medium | five,eight | 5.8 | Dark |
| Type1 | No | No | strong | seven,two | 7.2 | Dark |
| Type1 | No | No | strong | nine | 9 | Dark |
| Type2 | No | No | medium | four | 4 | Dark |
| Type1 | No | No | medium | four,four | 4.4 | Dark |
| Type2 | No | No | medium | four,five | 4.5 | Dark |
| Type1 | Yes | Yes | medium | four,eight | 4.8 | Dark |
| Type1 | No | No | medium | four | 4 | Dark |
| Type1 | No | No | medium | four,one | 4.1 | Dark |
| Type1 | No | No | medium | four,two | 4.2 | Dark |
| Type2 | No | No | medium | four,four | 4.4 | Dark |

| | | | | | | |
|-------|-----|----|--------|-------------|------|------|
| Type1 | No | No | medium | four,one | 4.1 | Dark |
| Type2 | No | No | medium | five,eight | 5.8 | Dark |
| Type2 | No | No | medium | five,nine | 5.9 | Dark |
| Type1 | No | No | medium | six | 6 | Dark |
| Type2 | No | No | medium | six | 6 | Dark |
| Type2 | No | No | medium | six,five | 6.5 | Dark |
| Type2 | No | No | medium | six,five | 6.5 | Dark |
| Type2 | No | No | medium | six,six | 6.6 | Dark |
| Type2 | No | No | strong | seven | 7 | Dark |
| Type2 | No | No | strong | seven,one | 7.1 | Dark |
| Type2 | No | No | strong | seven,two | 7.2 | Dark |
| Type2 | No | No | strong | eight,three | 8.3 | Dark |
| Type2 | No | No | strong | nine,four | 9.4 | Dark |
| Type2 | No | No | strong | nine,five | 9.5 | Dark |
| Type2 | No | No | strong | ten,six | 10.6 | Dark |
| Type2 | No | No | strong | eleven | 11 | Dark |
| Type2 | No | No | strong | eleven,six | 11.6 | Dark |
| Type2 | No | No | strong | twelve | 12 | Dark |
| Type2 | No | No | medium | four | 3.8 | Gold |
| Type2 | No | No | medium | four | 4 | Gold |
| Type2 | No | No | medium | four | 4 | Gold |
| Type2 | No | No | medium | four | 4 | Gold |
| Type2 | No | No | medium | four | 4 | Gold |
| Type2 | No | No | medium | four,one | 4.1 | Gold |
| Type2 | No | No | medium | four,one | 4.1 | Gold |
| Type2 | No | No | medium | four,one | 4.1 | Gold |
| Type1 | No | No | medium | four,one | 4.1 | Gold |
| Type1 | No | No | medium | four,three | 4.3 | Gold |
| Type2 | No | No | medium | four,five | 4.5 | Gold |
| Type2 | No | No | medium | four,eight | 4.8 | Gold |
| Type2 | No | No | medium | five | 5 | Gold |
| Type2 | No | No | medium | five | 5 | Gold |
| Type2 | No | No | medium | four | 3.8 | Gold |
| Type1 | Yes | No | medium | four | 4 | Gold |
| Type2 | No | No | medium | four,one | 4.1 | Gold |
| Type2 | No | No | medium | four,eight | 4.8 | Gold |
| Type2 | No | No | medium | five,three | 5.3 | Gold |
| Type2 | No | No | mild | three,nine | 3.9 | Gold |
| Type1 | No | No | medium | four,two | 4.2 | Gold |
| Type2 | No | No | medium | four,two | 4.2 | Gold |
| Type1 | No | No | medium | five,one | 5.1 | Gold |
| Type2 | No | No | medium | four,three | 4.3 | Gold |
| Type2 | No | No | mild | three,six | 3.6 | Pale |
| Type2 | No | No | mild | three,six | 3.6 | Pale |
| Type1 | No | No | mild | three,seven | 3.7 | Pale |
| Type2 | No | No | mild | three,seven | 3.7 | Pale |
| Type2 | No | No | medium | four | 3.8 | Pale |
| Type2 | No | No | mild | three,nine | 3.9 | Pale |
| Type1 | No | No | mild | three,nine | 3.9 | Pale |
| Type2 | No | No | medium | four | 4 | Pale |
| Type2 | No | No | medium | four | 4 | Pale |
| Type2 | No | No | medium | four | 4 | Pale |
| Type2 | No | No | medium | four | 4 | Pale |
| Type1 | No | No | medium | four,three | 4.3 | Pale |
| Type2 | No | No | medium | four,three | 4.3 | Pale |
| Type2 | No | No | medium | four,three | 4.3 | Pale |
| Type1 | No | No | medium | four,four | 4.4 | Pale |
| Type1 | No | No | medium | four,five | 4.5 | Pale |
| Type2 | No | No | medium | four,five | 4.5 | Pale |
| Type2 | No | No | medium | five | 5 | Pale |
| Type2 | No | No | medium | five,seven | 5.7 | Pale |
| Type2 | No | No | medium | five,nine | 5.9 | Pale |
| Type2 | No | No | medium | four,four | 4.4 | Pale |
| Type1 | No | No | medium | five | 5 | Pale |
| Type2 | No | No | medium | four,five | 4.5 | Pale |
| Type1 | No | No | medium | four,six | 4.6 | Pale |

| | | | | | |
|-------|-----|-----|--------|----------------|-----------|
| Type2 | No | No | medium | four,seven | 4.7 Pale |
| Type2 | No | No | medium | four,eightfive | 4.85 Pale |
| Type2 | Yes | No | medium | five | 5 Pale |
| Type1 | No | No | medium | five | 5 Pale |
| Type2 | No | No | medium | five,two | 5.2 Pale |
| Type2 | No | No | medium | five,three | 5.3 Pale |
| Type2 | No | No | medium | five,three | 5.3 Pale |
| Type1 | Yes | Yes | medium | five,five | 5.5 Pale |
| Type2 | Yes | Yes | medium | five,five | 5.5 Pale |
| Type2 | No | No | medium | five,five | 5.5 Pale |
| Type2 | No | No | medium | five,five | 5.5 Pale |
| Type2 | No | No | medium | five,seven | 5.7 Pale |
| Type2 | No | No | medium | six | 6 Pale |
| Type2 | No | No | medium | six | 6 Pale |
| Type2 | No | No | medium | six | 6 Pale |
| Type1 | No | No | medium | six | 6 Pale |
| Type2 | No | No | medium | six | 6 Pale |
| Type2 | No | No | medium | six | 6 Pale |
| Type2 | No | No | medium | six,two | 6.2 Pale |
| Type2 | No | No | medium | six,five | 6.5 Pale |
| Type1 | Yes | Yes | medium | six,six | 6.6 Pale |
| Type2 | No | No | strong | seven | 7 Pale |
| Type2 | No | No | strong | seven | 7 Pale |
| Type1 | No | No | strong | seven,three | 7.3 Pale |
| Type2 | No | No | strong | seven,five | 7.5 Pale |
| Type2 | No | No | strong | eight | 8 Pale |
| Type2 | No | No | strong | eight | 8 Pale |
| Type2 | No | No | strong | nine | 9 Pale |
| Type2 | No | No | strong | nine | 9 Pale |
| Type2 | No | No | strong | ten | 10 Pale |
| Type2 | No | No | medium | four | 3.8 Pale |
| Type1 | No | No | mild | three,four | 3.4 Pale |
| Type1 | No | No | mild | three,four | 3.4 Pale |
| Type2 | No | No | medium | five | 5 Pale |
| Type2 | No | No | mild | three,six | 3.6 Pale |
| Type1 | Yes | Yes | medium | four,five | 4.5 Pale |
| Type2 | No | No | medium | four,eight | 4.8 Pale |
| Type2 | No | No | medium | four | 4 Pale |
| Type2 | No | No | medium | four,six | 4.6 Pale |
| Type2 | No | No | medium | four,eight | 4.8 Pale |
| Type2 | No | No | medium | four,eight | 4.8 Pale |
| Type1 | No | No | medium | four,nine | 4.9 Pale |
| Type2 | No | No | medium | five | 5 Pale |
| Type2 | No | No | medium | five,one | 5.1 Pale |
| Type1 | No | No | medium | five,three | 5.3 Pale |
| Type2 | No | No | strong | seven,twofive | 7.25 Pale |
| Type2 | No | No | medium | four,three | 4.3 Pale |
| Type1 | No | No | medium | four,two | 4.2 Pale |
| Type1 | No | No | medium | four,twofive | 4.25 Pale |
| Type1 | No | No | medium | four,five | 4.5 Pale |
| Type2 | Yes | No | medium | four,eight | 4.8 Pale |
| Type2 | No | No | medium | four,eight | 4.8 Pale |
| Type1 | No | No | medium | four,nine | 4.9 Pale |
| Type1 | No | No | medium | five | 5 Pale |
| Type2 | No | No | medium | five | 5 Pale |
| Type1 | No | No | medium | five,one | 5.1 Pale |
| Type1 | No | No | medium | five,two | 5.2 Pale |
| Type1 | No | No | medium | five,three | 5.3 Pale |
| Type1 | No | No | medium | six,two | 6.2 Pale |
| Type2 | No | No | strong | nine,five | 9.5 Pale |

| Brewery_Name_in_Title | Target_Group | Brewery_Situated | Brewery_Situated_in_Title | ToD |
|-----------------------|--------------|------------------|---------------------------|----------------|
| Yes | Mix | Town | No | Founder |
| Yes | Mix | Countryside | No | Founder |
| Yes | Male | City | No | Founder |
| No | Mix | Town | No | Animal |
| No | Mix | Town | No | Animal |
| No | Mix | Town | No | Animal |
| Yes | Male | Town | No | Founder |
| Yes | Male | Countryside | No | Geographical |
| No | Male | Countryside | No | Historical_fig |
| Yes | Mix | Town | No | Founder |
| Yes | Mix | Town | No | Founder |
| Yes | Mix | Town | No | Founder |
| Yes | Male | Countryside | No | Founder |
| Yes | Mix | Countryside | Yes | Founder |
| No | Male | Countryside | No | Historical_fig |
| No | Male | Countryside | No | Trad_Culture |
| No | Male | Town | No | Trad_Culture |
| No | Male | Countryside | No | Animal |
| No | Mix | Countryside | No | Geographical |
| No | Male | Countryside | No | Misc. |
| Yes | Mix | Town | No | Founder |
| No | Mix | Countryside | No | Nature |
| Yes | Mix | Town | No | Founder |
| No | Mix | Countryside | No | Local_Dialect |
| No | Mix | Town | No | Misc. |
| No | Male | Town | No | Folklore |
| Yes | Mix | Countryside | No | Founder |
| Yes | Mix | Countryside | Yes | Founder |
| Yes | Male | Town | No | Founder |
| Yes | Male | Town | No | Founder |
| No | Mix | Town | No | Founder |
| No | Mix | Town | Yes | Local_Identity |
| No | Male | Town | No | Folklore |
| No | Male | City | No | Misc. |
| No | Mix | Town | No | Animal |
| No | Mix | Town | No | Animal |
| No | Male | Town | No | Religion |
| No | Female | Countryside | No | History |
| Yes | Male | Town | No | Founder |
| No | Mix | Countryside | No | Nature |
| No | Mix | Countryside | No | Misc. |
| No | Male | Town | No | Animal |
| Yes | Male | Town | No | Founder |
| No | Male | Countryside | No | Misc. |
| No | Mix | City | No | Nature |
| No | Mix | City | No | Nature |
| No | Male | City | No | Food |
| No | Mix | City | No | Historical_fig |
| Yes | Male | City | No | Founder |
| Yes | Mix | City | No | Founder |
| No | Mix | City | Yes | Animal |
| No | Mix | Town | No | Founder |
| No | Mix | City | No | History |
| No | Mix | City | No | Trad_Culture |
| No | Mix | Countryside | No | Historical_fig |
| Yes | Mix | Countryside | Yes | Founder |
| No | Female | Countryside | No | Geographical |
| Yes | Female | Countryside | Yes | Founder |
| Yes | Male | Town | No | Founder |
| Yes | Mix | Town | No | Founder |
| Yes | Mix | Town | No | Founder |
| No | Mix | Countryside | No | Animal |
| Yes | Female | Countryside | No | Founder |
| No | Male | Town | No | Animal |
| No | Mix | Countryside | No | Historical_fig |

| | | | | |
|-----|--------|-------------|-----|----------------|
| No | Mix | Countryside | No | Local_Dialect |
| No | Mix | Countryside | No | History |
| Yes | Mix | Countryside | No | Founder |
| Yes | Male | Town | No | Founder |
| No | Male | Countryside | No | Nature |
| No | Mix | Town | No | Nature |
| Yes | Mix | City | Yes | Founder |
| No | Mix | Countryside | No | Adventure |
| No | Mix | Town | No | Religion |
| Yes | Male | Countryside | No | Founder |
| No | Female | Town | No | Folklore |
| Yes | Female | City | No | Founder |
| Yes | Male | Town | No | Founder |
| Yes | Male | City | No | Founder |
| Yes | Mix | Countryside | No | Founder |
| Yes | Mix | City | No | Founder |
| Yes | Mix | Town | No | Geografical |
| Yes | Mix | Town | No | Founder |
| No | Male | Town | No | Local_Dialect |
| Yes | Male | Town | No | Founder |
| Yes | Mix | City | No | Founder |
| No | Male | Countryside | No | Geografical |
| No | Male | Countryside | No | Trad_Culture |
| No | Male | Countryside | No | Nature |
| No | Mix | Town | No | Animal |
| Yes | Mix | City | Yes | Founder |
| No | Mix | Countryside | No | Geografical |
| Yes | Male | City | No | Founder |
| No | Male | Town | No | Religion |
| No | Mix | Town | No | Misc. |
| No | Mix | Town | No | Food |
| No | Male | Town | No | Trad_Methods |
| No | Male | Town | No | Trad_Methods |
| No | Mix | Town | No | Historical_fig |
| Yes | Mix | Town | No | Founder |
| No | Female | City | No | Local_Dialect |
| No | Female | Countryside | Yes | Geografical |
| Yes | Female | Town | No | Founder |
| Yes | Mix | Countryside | Yes | Founder |
| Yes | Mix | Town | No | Founder |
| Yes | Mix | Countryside | No | Geografical |
| Yes | Mix | Countryside | Yes | Geografical |
| No | Female | Town | No | Food |
| No | Female | Town | No | Food |
| Yes | Mix | Countryside | Yes | Founder |
| Yes | Female | Town | No | Founder |
| No | Male | City | Yes | Geografical |
| No | Mix | Town | No | Geografical |
| No | Mix | Countryside | No | Sports |
| No | Male | City | No | Animal |
| No | Male | Countryside | Yes | Geografical |
| No | Mix | Town | No | Religion |
| Yes | Mix | Town | No | Founder |
| No | Mix | Town | No | History |
| No | Mix | Town | No | Misc. |
| Yes | Mix | City | No | Founder |
| Yes | Mix | Countryside | No | Founder |
| No | Male | Countryside | No | Animal |
| Yes | Male | City | No | Founder |
| Yes | Mix | Town | No | Founder |
| No | Female | Town | No | Nature |
| No | Mix | Countryside | No | Animal |
| No | Mix | Town | No | Nature |
| No | Mix | Countryside | No | Geografical |
| No | Mix | Town | No | Adventure |
| No | Male | City | No | Local_Dialect |

| | | | | |
|-----|--------|-------------|-----|----------------|
| Yes | Mix | Town | No | Founder |
| No | Mix | Countryside | No | Local_Dialect |
| No | Male | Town | No | Misc. |
| Yes | Male | Town | No | Founder |
| Yes | Male | Town | No | Founder |
| No | Male | Town | No | Animal |
| Yes | Mix | Town | No | Founder |
| No | Male | Countryside | No | Misc. |
| Yes | Female | City | No | Founder |
| No | Mix | Town | No | Misc. |
| No | Mix | Countryside | No | Geographical |
| No | Mix | Countryside | No | Geographical |
| No | Male | Town | No | Misc. |
| No | Female | Countryside | No | Animal |
| No | Male | Countryside | No | Misc. |
| No | Male | Countryside | Yes | Geographical |
| No | Male | Town | No | Historical_fig |
| No | Male | City | No | Folklore |
| No | Male | Town | No | Misc. |
| Yes | Mix | Town | No | Founder |
| No | Mix | City | No | Religion |
| No | Mix | Town | No | Nature |
| Yes | Male | Town | No | Founder |
| Yes | Mix | City | No | Founder |
| Yes | Mix | City | No | Founder |
| No | Mix | Town | No | Misc. |
| Yes | Mix | Town | No | Founder |
| Yes | Female | City | No | Founder |
| Yes | Female | Town | Yes | Geographical |
| No | Male | City | No | Animal |
| Yes | Mix | Town | No | Founder |
| No | Mix | Town | No | Religion |
| No | Male | Countryside | No | Misc. |
| Yes | Female | Town | No | Founder |
| No | Mix | Countryside | No | Local_Dialect |
| Yes | Male | Countryside | No | Founder |
| No | Mix | Countryside | No | Religion |
| Yes | Mix | Town | Yes | Founder |
| No | Mix | Countryside | No | Misc. |
| No | Male | Town | No | Animal |
| No | Male | Town | No | Misc. |
| No | Mix | Town | No | Historical_fig |
| No | Male | City | Yes | Geographical |
| No | Male | City | No | Nature |
| No | Male | City | No | Local_Identity |
| Yes | Male | Town | No | Founder |
| No | Mix | City | No | Misc. |
| No | Mix | Countryside | No | Misc. |
| No | Mix | City | No | History |
| No | Male | Town | No | Misc. |
| No | Mix | Countryside | No | Sports |
| No | Mix | Town | No | Sports |
| Yes | Mix | City | Yes | Founder |
| No | Male | Town | No | Animal |
| No | Mix | Town | No | Geographical |
| No | Male | City | No | Historical_fig |
| Yes | Mix | Town | No | Founder |
| Yes | Male | Countryside | No | Founder |
| No | Mix | City | No | Food |
| No | Mix | Town | No | Geographical |
| Yes | Mix | Countryside | No | Founder |
| No | Mix | Countryside | No | Geographical |
| Yes | Mix | Town | Yes | Founder |
| Yes | Male | City | No | Founder |
| Yes | Mix | City | No | Founder |
| No | Male | Countryside | No | Misc. |

| | | | | |
|-----|--------|-------------|-----|----------------|
| Yes | Mix | City | No | Founder |
| No | Male | Countryside | No | Sports |
| Yes | Male | Town | No | Founder |
| Yes | Male | City | No | Founder |
| No | Mix | Town | No | Historical_fig |
| No | Mix | Countryside | No | Folklore |
| Yes | Mix | Town | Yes | Geographical |
| No | Female | Town | No | Misc. |
| No | Male | City | No | Nature |
| No | Male | Town | No | Misc. |
| No | Male | City | No | Animal |
| No | Male | Countryside | No | Food |
| No | Male | Town | No | Misc. |
| No | Mix | Town | No | Geographical |
| Yes | Female | City | Yes | Founder |
| No | Male | Town | No | Nature |
| No | Male | Town | No | Historical_fig |
| No | Male | City | No | Sports |
| No | Female | Countryside | No | Food |
| No | Mix | Countryside | No | Animal |
| No | Female | Countryside | No | Prestigious |
| Yes | Male | Town | No | Founder |
| Yes | Mix | City | Yes | Founder |
| No | Mix | Town | No | Historical_fig |
| No | Male | City | No | Folklore |
| No | Mix | City | Yes | Geographical |
| Yes | Mix | Town | No | Founder |
| No | Mix | Town | No | Geographical |
| No | Mix | Town | No | Animal |
| No | Male | Town | No | Religion |
| No | Mix | Countryside | No | Misc. |
| No | Female | Countryside | No | Misc. |
| No | Mix | City | No | Historical_fig |
| Yes | Mix | Countryside | Yes | Founder |
| No | Male | Town | No | Historical_fig |
| No | Mix | Countryside | No | Nature |
| No | Mix | Town | No | Animal |
| No | Male | Town | No | History |
| Yes | Mix | City | No | Founder |
| No | Male | Town | No | Animal |
| Yes | Female | City | No | Food |
| No | Mix | Countryside | No | Nature |
| No | Mix | Countryside | No | Animal |
| No | Mix | Countryside | No | Animal |
| Yes | Mix | Town | Yes | Founder |
| No | Mix | Countryside | No | Animal |
| No | Mix | Countryside | No | Misc. |
| No | Mix | Town | No | Animal |
| Yes | Mix | Countryside | Yes | Founder |
| Yes | Mix | Town | No | Founder |
| Yes | Male | City | No | Founder |
| Yes | Mix | City | No | Founder |
| No | Male | Town | No | Local_Dialect |
| Yes | Mix | Countryside | No | Founder |
| No | Male | City | No | Animal |
| No | Mix | Countryside | No | Misc. |
| Yes | Mix | Countryside | No | Founder |
| Yes | Mix | Town | No | Founder |
| No | Mix | Town | No | Historical_fig |
| No | Mix | Town | No | Religion |
| No | Male | Countryside | No | Trad_Culture |
| No | Mix | Town | No | Geographical |
| Yes | Mix | City | Yes | Geographical |
| Yes | Mix | Countryside | Yes | Founder |
| No | Female | Town | No | Food |
| Yes | Mix | Town | No | Founder |

| | | | | |
|-----|--------|-------------|-----|----------------|
| No | Male | Countryside | No | Animal |
| No | Mix | Countryside | No | Misc. |
| No | Mix | City | No | Food |
| Yes | Female | Town | Yes | Geographical |
| No | Mix | Town | No | Nature |
| No | Male | City | No | Animal |
| Yes | Mix | Countryside | No | Founder |
| No | Mix | City | No | Trad_Methods |
| Yes | Mix | Town | No | Founder |
| Yes | Mix | Countryside | No | Animal |
| Yes | Male | City | No | Founder |
| No | Mix | Countryside | No | Animal |
| No | Mix | City | No | Prestigious |
| No | Female | Town | No | Misc. |
| No | Male | City | No | Nature |
| Yes | Mix | Countryside | Yes | Geographical |
| No | Male | Town | No | Animal |
| No | Male | Countryside | No | Misc. |
| No | Male | Town | No | Misc. |
| No | Male | City | No | Misc. |
| Yes | Mix | City | No | Founder |
| Yes | Male | Town | No | Founder |
| Yes | Mix | Town | No | Founder |
| Yes | Male | City | No | Founder |
| No | Male | City | No | History |
| No | Female | Countryside | No | Misc. |
| No | Male | City | No | Historical_fig |
| Yes | Mix | Countryside | No | Founder |
| No | Mix | Town | No | History |
| No | Female | City | No | Misc. |
| No | Male | Countryside | No | Trad_Culture |
| Yes | Female | Town | No | Founder |
| Yes | Female | Town | No | Founder |
| No | Female | City | No | Food |
| No | Mix | Countryside | No | Geographical |
| Yes | Mix | Countryside | Yes | Founder |
| No | Mix | Countryside | No | Geographical |
| No | Female | City | No | History |
| No | Mix | City | No | Animal |
| No | Mix | Town | No | Prestigious |
| No | Mix | Town | No | Sports |
| Yes | Mix | City | Yes | Founder |
| No | Mix | City | No | Local_Dialect |
| Yes | Mix | City | Yes | Founder |
| Yes | Mix | Town | No | Founder |
| No | Mix | City | No | Nature |
| No | Mix | Town | No | Folklore |
| Yes | Mix | City | No | Founder |
| No | Female | Town | No | Founder |
| Yes | Mix | City | No | Founder |
| Yes | Mix | Town | No | Local_Identity |
| No | Male | City | No | Prestigious |
| Yes | Mix | Countryside | No | Founder |
| Yes | Mix | Countryside | No | Founder |
| No | Mix | Town | No | Nature |
| Yes | Mix | City | Yes | Founder |
| No | Mix | Town | No | Geographical |
| Yes | Mix | Town | Yes | Founder |
| Yes | Mix | City | No | Founder |
| No | Mix | Town | No | Prestigious |

| ToD2 | Source_Domain | Source_Domain2 | Salient |
|--------------|-----------------|----------------|--------------|
| Founder | Pride2 | Pride2 | Force3 |
| Founder | Religion2 | Religion2 | Pride3 |
| Founder | Pride2 | Pride2 | N/A |
| Animal | Adventure2 | Adventure2 | Pride3 |
| Animal | Adventure2 | Adventure2 | Dangerous3 |
| Animal | Adventure2 | Adventure2 | N/A |
| Founder | Adventure2 | Adventure2 | Force3 |
| Geographical | Animal2 | Animal2 | Humour3 |
| History | Adventure2 | Adventure2 | Force3 |
| Founder | Pride2 | Pride2 | N/A |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Trad2 | Trad2 | Pride3 |
| Founder | Adventure2 | Adventure2 | Dangerous3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| History | Prestigious2 | Prestigious2 | Wealth3 |
| Trad | Prestigious2 | Prestigious2 | Dangerous3 |
| Trad | Pride2 | Pride2 | N/A |
| Animal | Adventure2 | Adventure2 | Force3 |
| Geographical | Prestigious2 | Prestigious2 | Pride3 |
| Misc. | Force2 | Force2 | Dangerous3 |
| Founder | Animal2 | Animal2 | Dangerous3 |
| Nature | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Local | Pride2 | Pride2 | Humour3 |
| Misc. | Adventure2 | Adventure2 | Force3 |
| Trad | Humour2 | Humour2 | N/A |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Local_identity2 | Local2 | Prestigious3 |
| Local | Prestigious2 | Prestigious2 | Pride3 |
| Trad | Humour2 | Humour2 | N/A |
| Misc. | Animal2 | Animal2 | Adventure3 |
| Animal | Force2 | Force2 | Humour3 |
| Animal | Local_dialect2 | Local2 | Humour3 |
| Religion | Force2 | Force2 | Dangerous3 |
| History | Historical_Fig2 | Trad2 | Pride3 |
| Founder | Religion2 | Religion2 | Pleasure3 |
| Nature | Animal2 | Animal2 | Humour3 |
| Misc. | Pleasure2 | Pleasure2 | Humour3 |
| Animal | Humour2 | Humour2 | N/A |
| Founder | Adventure2 | Adventure2 | Dangerous3 |
| Misc. | Humour2 | Humour2 | Dangerous3 |
| Nature | Adventure2 | Adventure2 | Pride3 |
| Nature | Adventure2 | Adventure2 | Pride3 |
| Food | Macho2 | Force2 | Force3 |
| History | Pleasure2 | Pleasure2 | Pride3 |
| Founder | Macho2 | Force2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Animal | Local_identity2 | Local2 | Pride3 |
| Founder | Pride2 | Pride2 | N/A |
| History | Local_dialect2 | Local2 | Pride3 |
| Trad | Pride2 | Pride2 | Pleasure3 |
| History | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Geographical | Adventure2 | Adventure2 | Dangerous3 |
| Founder | Food2 | Pleasure2 | Pleasure3 |
| Founder | Adventure2 | Adventure2 | Dangerous3 |
| Founder | Pride2 | Pride2 | Pure3 |
| Founder | Animal2 | Animal2 | Pride3 |
| Animal | Pride2 | Pride2 | N/A |
| Founder | Historical_Fig2 | Trad2 | Prestigious3 |
| Animal | Force2 | Force2 | Dangerous3 |
| History | Pride2 | Pride2 | Humour3 |

| | | | |
|-------------|----------------------|--------------|------------|
| Local | Prestigious2 | Prestigious2 | Pride3 |
| History | Adventure2 | Adventure2 | Humour3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Adventure2 | Adventure2 | Force3 |
| Nature | Animal2 | Animal2 | Pride3 |
| Nature | Prestigious2 | Prestigious2 | Pure3 |
| Founder | Local_identity2 | Local2 | Humour3 |
| Adventure | Humour2 | Humour2 | N/A |
| Religion | Humour2 | Humour2 | N/A |
| Founder | Adventure2 | Adventure2 | Force3 |
| Trad | Adventure2 | Adventure2 | Dangerous3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Pleasure2 | Pleasure2 | Pride3 |
| Founder | Nature2 | Nature2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Geografical | Sports2 | Adventure2 | Humour3 |
| Founder | Local_identity2 | Local2 | Adventure3 |
| Local | Pride2 | Pride2 | Humour3 |
| Founder | Animal2 | Animal2 | Pride3 |
| Founder | Religion2 | Religion2 | Pride3 |
| Geografical | Prestigious2 | Prestigious2 | Pride3 |
| Trad | Pride2 | Pride2 | Humour3 |
| Nature | Adventure2 | Adventure2 | Pride3 |
| Animal | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Geografical | Local_identity2 | Local2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Religion | Prestigious2 | Prestigious2 | Pride3 |
| Misc. | Force2 | Force2 | Dangerous3 |
| Food | Humour2 | Humour2 | Pure3 |
| Trad | Nature2 | Nature2 | Pride3 |
| Trad | Historical_Fig2 | Trad2 | Pride3 |
| History | Adventure2 | Adventure2 | Pride3 |
| Founder | Nature2 | Nature2 | Pure3 |
| Local | Food2 | Pleasure2 | Pure3 |
| Geografical | Food2 | Pleasure2 | Pride3 |
| Founder | Food2 | Pleasure2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Geografical | Prestigious2 | Prestigious2 | Pride3 |
| Geografical | Local_identity2 | Local2 | Pride3 |
| Food | Pleasure2 | Pleasure2 | Pride3 |
| Food | Pleasure2 | Pleasure2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pleasure3 |
| Geografical | Local_identity2 | Local2 | Pride3 |
| Geografical | Local_identity2 | Local2 | Pride3 |
| Adventure | Pride2 | Pride2 | Humour3 |
| Animal | Adventure2 | Adventure2 | Dangerous3 |
| Geografical | Force2 | Force2 | Dangerous3 |
| Religion | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Pride2 | Pride2 | Pleasure3 |
| History | Animal2 | Animal2 | Pride3 |
| Misc. | Strong_bodily_effect | Force2 | Force3 |
| Founder | Local_dialect2 | Local2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Animal | Humour2 | Humour2 | N/A |
| Founder | Pride2 | Pride2 | Humour3 |
| Founder | Adventure2 | Adventure2 | Pride3 |
| Nature | Prestigious2 | Prestigious2 | Pure3 |
| Animal | Pleasure2 | Pleasure2 | Humour3 |
| Nature | Prestigious2 | Prestigious2 | Pride3 |
| Geografical | Local_identity2 | Local2 | Humour3 |
| Adventure | Trad2 | Trad2 | Pride3 |
| Local | Force2 | Force2 | Humour3 |

| | | | |
|--------------|----------------------|--------------|--------------|
| Founder | Animal2 | Animal2 | Dangerous3 |
| Local | Humour2 | Humour2 | N/A |
| Misc. | Strong_bodily_effect | Force2 | Dangerous3 |
| Founder | Adventure2 | Adventure2 | Force3 |
| Founder | Animal2 | Animal2 | Dangerous3 |
| Animal | Adventure2 | Adventure2 | Force3 |
| Founder | Adventure2 | Adventure2 | Humour3 |
| Misc. | Local_dialect2 | Local2 | Pride3 |
| Founder | Food2 | Pleasure2 | Pleasure3 |
| Misc. | Prestigious2 | Prestigious2 | Pride3 |
| Geographical | Prestigious2 | Prestigious2 | Pure3 |
| Geographical | Prestigious2 | Prestigious2 | Pride3 |
| Misc. | Adventure2 | Adventure2 | Force3 |
| Animal | Nature2 | Nature2 | Pride3 |
| Misc. | Force2 | Force2 | Dangerous3 |
| Geographical | Local_identity2 | Local2 | Pride3 |
| History | Adventure2 | Adventure2 | Dangerous3 |
| Trad | Adventure2 | Adventure2 | Dangerous3 |
| Misc. | Adventure2 | Adventure2 | Dangerous3 |
| Founder | Religion2 | Religion2 | Prestigious3 |
| Religion | Historical_Fig2 | Trad2 | Prestigious3 |
| Nature | Adventure2 | Adventure2 | Pleasure3 |
| Founder | Animal2 | Animal2 | Force3 |
| Founder | Religion2 | Religion2 | Prestigious3 |
| Founder | Local_identity2 | Local2 | Pleasure3 |
| Misc. | Local_dialect2 | Local2 | Humour3 |
| Founder | Religion2 | Religion2 | Pride3 |
| Founder | Nature2 | Nature2 | Prestigious3 |
| Geographical | Nature2 | Nature2 | Pride3 |
| Animal | Adventure2 | Adventure2 | Humour3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Religion | Prestigious2 | Prestigious2 | Pride3 |
| Misc. | Force2 | Force2 | Dangerous3 |
| Founder | Religion2 | Religion2 | Prestigious3 |
| Local | Humour2 | Humour2 | N/A |
| Founder | Macho2 | Force2 | Humour3 |
| Religion | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pleasure3 |
| Misc. | Force2 | Force2 | Dangerous3 |
| Animal | Local_dialect2 | Local2 | Humour3 |
| Misc. | Pleasure2 | Pleasure2 | Pride3 |
| History | Prestigious2 | Prestigious2 | Pride3 |
| Geographical | Trad2 | Trad2 | Humour3 |
| Nature | Prestigious2 | Prestigious2 | Pride3 |
| Local | Nature2 | Nature2 | Pride3 |
| Founder | Sports2 | Adventure2 | Humour3 |
| Misc. | Trad2 | Trad2 | Pleasure3 |
| Misc. | Adventure2 | Adventure2 | Humour3 |
| History | Historical_Fig2 | Trad2 | Adventure3 |
| Misc. | Animal2 | Animal2 | Force3 |
| Adventure | Adventure2 | Adventure2 | Pride3 |
| Adventure | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Nature2 | Nature2 | Pride3 |
| Animal | Adventure2 | Adventure2 | Prestigious3 |
| Geographical | Prestigious2 | Prestigious2 | Pride3 |
| History | Adventure2 | Adventure2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Animal2 | Animal2 | Pride3 |
| Food | Pleasure2 | Pleasure2 | Pure3 |
| Geographical | Pleasure2 | Pleasure2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Geographical | Pleasure2 | Pleasure2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Pride2 | Pride2 | N/A |
| Misc. | Prestigious2 | Prestigious2 | Wealth3 |

| | | | |
|--------------|----------------------|--------------|--------------|
| Founder | Animal2 | Animal2 | Pride3 |
| Adventure | Nature2 | Nature2 | Pride3 |
| Founder | Sports2 | Adventure2 | Pride3 |
| Founder | Pride2 | Pride2 | Dangerous3 |
| History | Prestigious2 | Prestigious2 | Pride3 |
| Trad | Adventure2 | Adventure2 | Dangerous3 |
| Geographical | Prestigious2 | Prestigious2 | Pride3 |
| Misc. | Pride2 | Pride2 | Dangerous3 |
| Nature | Force2 | Force2 | Dangerous3 |
| Misc. | Adventure2 | Adventure2 | Humour3 |
| Animal | Adventure2 | Adventure2 | Dangerous3 |
| Food | Macho2 | Force2 | Adventure3 |
| Misc. | Macho2 | Force2 | Dangerous3 |
| Geographical | Adventure2 | Adventure2 | Dangerous3 |
| Founder | Food2 | Pleasure2 | Pleasure3 |
| Nature | Adventure2 | Adventure2 | Dangerous3 |
| History | Adventure2 | Adventure2 | Dangerous3 |
| Adventure | Adventure2 | Adventure2 | Force3 |
| Food | Pleasure2 | Pleasure2 | Wealth3 |
| Animal | Pride2 | Pride2 | Wealth3 |
| History | Prestigious2 | Prestigious2 | Adventure3 |
| Founder | Strong_bodily_effect | Force2 | Pride3 |
| Founder | Local_identity2 | Local2 | Humour3 |
| History | Local_identity2 | Local2 | Pride3 |
| Trad | Adventure2 | Adventure2 | Dangerous3 |
| Geographical | Pride2 | Pride2 | Pleasure3 |
| Founder | Pride2 | Pride2 | N/A |
| Geographical | Prestigious2 | Prestigious2 | Wealth3 |
| Animal | Adventure2 | Adventure2 | Pride3 |
| Religion | Prestigious2 | Prestigious2 | Pride3 |
| Misc. | Strong_bodily_effect | Force2 | Humour3 |
| Misc. | Pleasure2 | Pleasure2 | Adventure3 |
| History | Local_identity2 | Local2 | Prestigious3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| History | Prestigious2 | Prestigious2 | Pride3 |
| Nature | Animal2 | Animal2 | Humour3 |
| Animal | Prestigious2 | Prestigious2 | Wealth3 |
| History | Adventure2 | Adventure2 | Pride3 |
| Founder | Pride2 | Pride2 | Wealth3 |
| Animal | Adventure2 | Adventure2 | Dangerous3 |
| Food | Pleasure2 | Pleasure2 | Pride3 |
| Nature | Force2 | Force2 | Pure3 |
| Animal | Adventure2 | Adventure2 | N/A |
| Animal | Local_dialect2 | Local2 | Humour3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Animal | Adventure2 | Adventure2 | Dangerous3 |
| Misc. | Adventure2 | Adventure2 | Pride3 |
| Animal | Prestigious2 | Prestigious2 | Wealth3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Animal2 | Animal2 | Wealth3 |
| Founder | Prestigious2 | Prestigious2 | Wealth3 |
| Founder | Historical_Fig2 | Trad2 | Prestigious3 |
| Local | Pleasure2 | Pleasure2 | Humour3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Animal | Adventure2 | Adventure2 | N/A |
| Misc. | Adventure2 | Adventure2 | Humour3 |
| Founder | Pride2 | Pride2 | N/A |
| Founder | Local_identity2 | Local2 | Pride3 |
| History | Adventure2 | Adventure2 | Pride3 |
| Religion | Prestigious2 | Prestigious2 | Humour3 |
| Trad | Prestigious2 | Prestigious2 | Pleasure3 |
| Geographical | Adventure2 | Adventure2 | N/A |
| Geographical | Pride2 | Pride2 | Humour3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Food | Prestigious2 | Prestigious2 | Pleasure3 |
| Founder | Pride2 | Pride2 | Humour3 |

| | | | |
|--------------|----------------------|--------------|--------------|
| Animal | Pleasure2 | Pleasure2 | Humour3 |
| Misc. | Trad2 | Trad2 | Adventure3 |
| Food | Nature2 | Nature2 | Pure3 |
| Geographical | Local_identity2 | Local2 | Pride3 |
| Nature | Prestigious2 | Prestigious2 | N/A |
| Animal | Humour2 | Humour2 | N/A |
| Founder | Trad2 | Trad2 | Pride3 |
| Trad | Prestigious2 | Prestigious2 | Pure3 |
| Founder | Animal2 | Animal2 | Pure3 |
| Animal | Nature2 | Nature2 | Pride3 |
| Founder | Animal2 | Animal2 | Humour3 |
| Animal | Adventure2 | Adventure2 | Pride3 |
| History | Pleasure2 | Pleasure2 | Pride3 |
| Misc. | Pleasure2 | Pleasure2 | Pure3 |
| Nature | Adventure2 | Adventure2 | Dangerous3 |
| Geographical | Adventure2 | Adventure2 | Pride3 |
| Animal | Humour2 | Humour2 | Dangerous3 |
| Misc. | Macho2 | Force2 | Pride3 |
| Misc. | Strong_bodily_effect | Force2 | Dangerous3 |
| Misc. | Macho2 | Force2 | Humour3 |
| Founder | Adventure2 | Adventure2 | Pride3 |
| Founder | Sports2 | Adventure2 | Pride3 |
| Founder | Nature2 | Nature2 | Pure3 |
| Founder | Trad2 | Trad2 | Pride3 |
| History | Local_identity2 | Local2 | Pride3 |
| Misc. | Pleasure2 | Pleasure2 | Pure3 |
| History | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Religion2 | Religion2 | Pure3 |
| History | Religion2 | Religion2 | Prestigious3 |
| Misc. | Pleasure2 | Pleasure2 | Pride3 |
| Trad | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Food2 | Pleasure2 | Pleasure3 |
| Founder | Food2 | Pleasure2 | Pleasure3 |
| Food | Pleasure2 | Pleasure2 | Humour3 |
| Geographical | Trad2 | Trad2 | Pure3 |
| Founder | Local_identity2 | Local2 | Pure3 |
| Geographical | Pride2 | Pride2 | Pure3 |
| History | Nature2 | Nature2 | Humour3 |
| Animal | Adventure2 | Adventure2 | Pride3 |
| Local | Pleasure2 | Pleasure2 | Humour3 |
| Adventure | Trad2 | Trad2 | Humour3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Local | Humour2 | Humour2 | Pride3 |
| Founder | Local_identity2 | Local2 | Adventure3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Nature | Adventure2 | Adventure2 | Dangerous3 |
| Trad | Humour2 | Humour2 | Adventure3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Founder | Pride2 | Pride2 | Pure3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Local | Prestigious2 | Prestigious2 | Humour3 |
| Adventure | Sports2 | Adventure2 | Pride3 |
| Founder | Nature2 | Nature2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Nature | Pleasure2 | Pleasure2 | Pure3 |
| Founder | Local_identity2 | Local2 | Pride3 |
| Geographical | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Pride3 |
| Founder | Prestigious2 | Prestigious2 | Wealth3 |
| Misc. | Local_identity2 | Local2 | Pride3 |