# British Quaker Survey: Examining religious beliefs and practices in the Twenty-first Century\*

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#### ABSTRACT

Whilst based on Traditional Christian theology, Quakerism is distinct from other Christian groups in terms of the non-hierarchical structure of the group, a lack of clergy and a particular style of worship. The British Quaker worshipping style, characterised by still and silent waiting, allows for a diversity of beliefs to be held that may not necessarily be recognised by the group. It is argued that it is the conservative attitude towards how the Society is organised and certain behaviours (such as how decisions for church affairs are conducted), rather than coherence of belief, that unites the group. However, some researchers have voiced concern that diversity of belief, if taken to the extreme, may lead to a disruption of adherence to this 'behavioural creed' and thus disrupt the Society as a whole. This concern, coupled with declining numbers, has inspired research to be conducted that examines the types and trends of those who call themselves Quaker.

The current research had four aims: to summarise the dominant beliefs and characteristics of British Quakers (Aim 1); to investigate the characteristics of those taking on clerking responsibilities (Aim 2); to identify patterns of religious beliefs and practices amongst British Quakers (Aim 3); to make temporal comparisons over three national surveys of British Quakers, spanning 25 years (Aim 4). A questionnaire was developed and administered via Local Meetings. 649 responses were obtained using a quasi-random sampling method. Exploratory statistics showed that the majority of respondents were members (70%) rather than recognised attenders (29%). Other exploratory statistics addressing Aim 1 revealed that 14% of those that identified as Quaker did not hold a belief in God. Although a statistically non-significant association, such a result was unlike that which one would expect from a religious group and added support to investigation of beliefs held by those in the Society. Aim 2 was addressed using logistic regression techniques. A multivariate analysis, following a series of univariate analyses, revealed twelve predictors to be statistically significant for taking on clerking responsibilities. Temporal comparisons (Aim 4) were conducted using chi-square techniques and found a statistically significant decrease in belief in God.

The latent class analysis, conducted to investigate the religious beliefs and practices of modern British Quakers (Aim 3), can be thought of as the main contribution of this study. Using questions from the survey concerning religious beliefs, attitudes and practices, the analysis revealed three distinct underlying classes. The first class, labelled Traditional Quakers, represented 32% of those identifying as Quaker. This group held traditionally Christian attitudes in

terms of belief in God, Jesus as Saviour and the importance of the Bible. The second class, labelled Non-theist Quakers, represented 18% of those identifying as Quaker. The labelling and constituency of these groups are informed by the latent class analysis results rather than any formal groupings, e.g. the Non-theist group referred to throughout the paper is based on this study alone rather than any formal Non-theist group such as the Non-Theist Network. This group held a distinctly different set of beliefs, the most striking of which was an apparent lack of belief in God. The third class, labelled Liberal Quakers, represented 50% of those identifying as Quaker. This group held a pattern of beliefs similar to, but less pronounced than, the Traditional Group.

#### **KEYWORDS**

Quakers, Britain Yearly Meeting, religious belief, worship, latent class analysis.

#### 1. Introduction

# 1.1. RECENT QUAKER RESEARCH

Relative to the small size of the group, there has been a substantial amount of literature published about Quakers. Whilst a great deal of this is concerned with historical events and figures, there is a substantial amount on current (twentieth—twenty-first-century) Quaker affairs. This work on current Quakerism is driven by a few key ideas. These include topics such as diversity of belief within the Society (Bourke 2003), increasing secularisation (both within the Society of Friends and within British society more generally; Bruce 2003) and decline in numbers (Friends House 2012). These concepts are by no means isolated from one another in practise. As will be detailed below, there is suggestion that the decline in numbers may be attributable to diverse belief within the Society.

The Annual Tabular Statement is produced by Britain Yearly Meeting. This details the numbers of all members and recognised attenders of Meetings across Britain. The 2012 Tabular Statement (Friends House 2012) shows a decline in the number of official members, from 17,765 in 1990 to 13,863 in 2012. Over the same time period the number of recognised attenders appears to have remained relatively stable. Whilst recognised attenders can play an active part in the Society to a certain extent, Heron (1992) raises the question of the strength of commitment of those who decline to apply for membership to the Society. It is the decline in the number of members, rather than attenders, which has prompted a national discussion of a 'crisis' within the Society. Research concerning this decline, and the ultimate end-point of the Society, has been conducted by those such as Burton (2005), Chadkirk (2004) and Stroud and Dandelion (2004), amongst others. Chadkirk's work exploring trends in membership within the Society recognised a peak in membership in the 1960s. He suggests that this may be attributable to the last of the birthright child members coming into adult membership (a practice which was abolished the decade before). Heron (1999, 2000, 2001) suggests another reason, more pertinent to ideas of secularisation, in that membership restrictions were relaxed during this time period. Thus those who were attracted to the style of worship, for example, could join without necessarily sharing all of the beliefs laid out in the book of discipline. Considering the time period that Heron and Chadkirk are discussing, this coincides with a growing national sense of spirituality taking the place of religion (Heelas et al. 2004). Based on the declining trend in membership, Chadkirk estimates an end to the Society in 2032. This estimate is somewhat similar to, albeit at the lower end of, that estimated in work by Stroud and Dandelion (2004). They estimate a 'critical minimum' will be reached at some point this century (specifically, between 2028 and 2088). This is a revision of the work presented in Dandelion (2002, 2004), where an end-point of 2108 was estimated. This kind of work, concerned with declining numbers and prediction of an end-point, is by no means unique to Quakerism. Numbers of those attending any form of (Christian) Sunday worship have been declining across the UK for decades (Brierley 1999, 2003). Work by Bruce (2001, 2003) suggests that Christianity in the UK will die out, and complete secularisation will occur, before the end of the century. Specifically, he gives the date of 2030 for the death of Methodism, similar enough to be consistent with the end-point(s) estimated for British Quakerism.

There are those, such as Burton (2005), who suggest that predictions of an end-point, such as those made by Chadkirk and Stroud and Dandelion, are too simplistic. Burton argues that the situation is not as clear as simply predicting the fate of the Society based on total numbers. Conducting trend analyses collections of Local Meetings at an area-wide level (General Meeting), rather than national (Britain Yearly Meeting), Burton found that the situation is not the same throughout the Society. Whilst he did predict that some General Meetings would cease to be, others show a positive trend with increasing numbers. This discrepancy between Meetings may well reflect the diversity found, both within and between, Local Meetings in Dandelion's 1990 survey (Dandelion 1996). The 1990 survey attempted to uncover and describe Quaker attitudes, beliefs and practices within Britain. This work highlighted the diversity of belief within the Society. Some, such as Bradney and Cowie (2000), have expressed surprise at how individuals with vastly differing beliefs can coexist within one religious movement. Dandelion's work argues that it is adherence to a behavioural creed, rather than a scriptural creed, along with conservative attitudes towards the organisation of the Society, which unifies contemporary Quakers. In other words, heterogeneity of belief can exist as long as homogeneity of practice is preserved: the nature of Quaker worship is such that widely differing beliefs can be held amongst individuals without conflict. Bourke (2003) has also conducted work into the diversity of Quaker belief. She highlights how the book of discipline is clear in how the group should conduct itself and worship, but with no scriptural creed to follow and a focus on individual revelation, beliefs held can (and do) differ between individuals. However, there is an argument, drawing on Weening's 1997 outline of basic Quaker beliefs, to suggest that there are some fundamental similarities which are shared by all those calling themselves Quaker. These include the concept of Inner Light, which can be taken to mean that of God in everyone

(but that also neatly avoids specification of deity); a belief in God; religion as experiential, that a personal relationship with God is not only possible, but is necessary; that prayer and love of God are of primary importance; and a non-authoritative view of the Bible. Whether these fundamental beliefs actually exist within those regularly attending Meeting is less clear.

Clearly, diversity of belief can be accommodated within Quaker practice and so the secularisation of the group may not be considered too much of a problem up to a certain point. The variation between the beliefs held by individuals within Local Meetings and between Local Meetings themselves (Dandelion 1996) may, of course, lead to schism within the society just as happened in the USA in the mid-1800s. This is alluded to in work predicting some re-invigoration of the Society within pockets of membership (Burton 2005). Indeed, such schism has been predicted by those concerned with differing Quaker identities (Pilgrim 2003). Should such a schism happen, it is obviously going to be detrimental to the Society as it exists now, but also, with so few numbers, it may make any resulting groups untenable in practice. Research in this area, trying to establish types of Quaker so as to understand better potential problems such as schism, may also help to identify the reason behind declining numbers. The decline is not simply about the lack of new members but also concerns losing existing members. Three distinctive types of British Quakers were identified by Pilgrim (2003) in her qualitative work. She termed these groups Exclusivists, Inclusivists and Syncretists. Her work highlights both the issue of declining numbers and potential schism. She claims Exclusivists are those who hold a specific set of beliefs and are not permissive about them. This group holds very strong beliefs about how Meetings should be held and who should be allowed to participate (based on belief) to the extent that most have left Britain Yearly Meeting. Although the stance of this group seems incongruous with modern Quakerism, it is reminiscent of early Quakers' strict adherence to rules of conduct. The second group, the Inclusivists, behave more like those one would expect to find in modern British Quakerism. This group is fairly secular in that they are accepting of diversity in belief but have a strong sense of the importance of behaviours and organisation. Finally, the Syncretists are those who are drawn to Quakerism by the permissive approach to belief and for whom being a Quaker is a part, not the whole, of their religious identity. Pilgrim predicts that the number of the Syncretists are increasing. Should this last group get too large, schism may well occur.

Quantitative work has also been undertaken in the field of investigating differing Quaker beliefs, including that by Ives (1980), as well as Cary and colleagues (Cary and Dandelion 2007; Cary and Weber 2007). Cary and Weber's work, based on data drawn from an unprogrammed American Yearly Meeting (Philadelphia), identified two types of Quaker. The first group had a focus on developing a relationship with a personal God. Those in the second group were more interested in the social testimonies rather than a belief in God. Although from the States, the Meeting which was surveyed was of a tradition similar to that found in British Quakerism. More relevant to consideration of contemporary Quakers in the UK is work by Cary and Dandelion (2007) on data collected in a 2003 survey

of Quakers in Britain (Rutherford 2003). The 2003 survey was both an extension and revision of Dandelion's 1990 survey (Dandelion 1996). Cary and Weber identified three distinct groups. They termed these groups Traditional, Secularised and Inner Light Quakers. The Traditional and Inner Light Quakers are as one might expect from their labels. The Traditional group were found to have a belief system firmly rooted in Christianity whereas the Inner Light group were more liberal in their views, with less emphasis on Jesus or using the language of 'God'. The latter group hold beliefs one might expect from modern, liberal, British Quakers. The Secularised group were most like Pilgrim's Syncretist group. They are least likely to hold with traditional beliefs and had a third of the class share.

#### 1.2. CURRENT RESEARCH

This current research aims to address concerns outlined in the introduction, primarily of the nature of beliefs and practices of those regularly attending Meeting for Worship. Whilst this work is part of a larger study (Woodbrooke Quaker Study Centre 2013), with wider research questions, the aims of the current paper are presented below.

Aim 1: Summarise dominant beliefs and characteristics of British Quakers
Research question: What are the dominant beliefs, attitudes and practices of
Quakers in Britain today?

The work presented here is part of a large piece of sociological research being undertaken with several other interested parties (Woodbrooke Quaker Study Centre 2013). This first aim concerned creating a comprehensive overview of the data, as an aid to future investigations based on the findings of this research, other related future work and the dissemination of findings.

Aim 2: Investigate the characteristics of Clerks convening Meetings for Worship for Business Research question: What factors characterise those most likely to take on the role of Clerk?

Business Method is one example of the 'behavioural creed' Quakers are thought to follow (Dandelion and Collins 2008). As described, the role of the Clerk is central to Quaker Business Method. Their presence and role in Business Meeting is crucial. Both those inside and outside of membership can take on this responsibility. It is clearly laid out in *Faith and Practice* what the process of discernment should be and how it should be approached. Of interest is whether Clerks are following this. This paper's second aim is to determine what factors characterise those taking on Clerking responsibilities.

Aim 3: To identify patterns of religious belief and practice within British Quakers Research question: What do modern British Quakers believe and how do they practice those beliefs?

The issue of Quaker identity is of central importance both to this paper, the larger research project from which the data are drawn and the Society nationally.

Quaker identity in this context primarily concerns the 'belief identities' of those in the worshipping community. Therefore, this paper's third aim is to produce a comprehensive profile of Quaker identity or identities in the Britain.

# Aim 4: Temporal comparisons with previous surveys

Research question: Have religious beliefs and behaviours changed over the past 25 years and, if so, how?

Finally, it is important to remember the context in which this research is being undertaken. It is not a stand-alone project as such; two previous surveys have already been undertaken over the last 25 years. These were in 1990 and 2003 (Dandelion 1996; Rutherford 2003) and measured very similar concepts, with the same or similar questions. The final aim of this paper is to place the current research in this context by comparing, where possible, if and how Quakers are changing in their beliefs, demographics and behaviours over time.

This report concerns a recent questionnaire conducted of Quakers who are a part of Britain Yearly Meeting. In Section 2, the method of data collection and analysis are detailed. The results of all statistical analyses are reported in Section 3, with clear reference to which aim they pertain. Section 4 presents a discussion of these results in relation to the aims and prior research set out in Section 1 above. The methods used in the collection and analysis of the data are also discussed here. Finally, a conclusion is presented, along with suggestions for future research.

#### 2. METHODS

#### 2.1. Questionnaire Design

In order to investigate the nature of Quaker belief, behaviours and identity, a questionnaire was devised. This questionnaire can be seen as both a revision and extension to the 1990 and 2003 incarnations (Dandelion 1996; Rutherford 2003). Many of the questions were taken from these prior surveys, with additional questions being drawn from a variety of sources. Effort was taken to balance comprehensive measurement of the nuances of respondents' beliefs or practices whilst avoiding repetitive questions measuring the same concepts. Altogether, the questionnaire consisted of five sections comprising 43 questions in total (plus subquestions). Each section was signposted by a heading relevant to the questions contained therein, along with a brief description of the nature of the questions. In the following order, the sections were 'Initial experiences', 'Religious belief', 'You and Quakerism', 'Ideas about the world' and 'About you'. The majority of the questions were of a closed tick-box response type. Several questions specifically allowed for more than one response to be ticked. Such questions generally also allowed for an additional open response. Some questions, particularly those measuring attitudes in the 'Ideas about the world' section, used a Likert-type scale measuring strength of agreement/belief.

In addition to the questions themselves, the questionnaire comprised a detachable title page and covering letter. Given the self-completion nature of the questionnaires this covering letter was an essential opportunity to introduce the

research. It explained why the research was being conducted, what the respondent could expect from the questionnaire (type of questions, time to complete etc.) and what was expected of them, contained an expression of thanks, contact details for the lead researcher and assurance that any information provided would be held confidentially. Respondents were also given an opportunity, at the end of the questionnaire, to provide their contact details if they were prepared to be interviewed in more detail as a future part of the research. Assurances of confidentiality are considered particularly important in these circumstances; the very nature of the subject matter may be considered sensitive, even private, information to some. Included in the cover letter was an indication of how quickly the questionnaire should ideally be returned. Each was distributed with a free-post envelope. The complete questionnaire can be found in Appendix A.

# 2.1.1. Pilot study

After the questionnaire was compiled, a pilot study was carried out on a relatively small group (n=17) prior to the printing and distribution of the final questionnaire. The pilot study participants gave useful feedback which informed the layout and design of the final questionnaire. In addition to this, minor alterations were made to some of the questions. The pilot study was also useful in terms of estimating how long future respondents might be expected to take to complete the questionnaire. This information was included in the cover letter, attached to the front of the questionnaire.

The questionnaire was paper-based by design. Consideration was given to hosting an online version. However, feedback from consultation with the pilot group suggested that this may well be a waste of resources. The demographics of the population (the majority of whom are over 60) suggest that they may not be the group most suited to such a medium (Gosling et al. 2004). Further to this, feedback suggested that the length and nature of the content makes having a physical item more preferable. A paper document can be picked up and put down more easily than something to be completed online (if only psychologically). Having a tangible paper copy of the questionnaire encouraged respondents to take their time filling it in, possibly resulting in more considered and accurate responses. The option of a large print questionnaire was made available to those who might require it.

#### 2.2. SAMPLING DESIGN

As it was impractical to survey the whole population, a representative sample of the population of British Quakers needed to be obtained. A complete list of members and recognised attenders does exist for the whole of Britain Yearly Meeting (BYM), listing 22,544 adults but is not publically available. Even if it were, the costs of administering a questionnaire to a simple random sample generated from this list would have been great, especially when considering potential non-response. In addition to this, the list may not be complete or up to date; the list obtainable for members and recognised attenders of BYM may not truly reflect those attending Meeting for Worship on a weekly basis (Chadkirk and Dandelion

2008). Further, it is possible to be listed as both a member of a particular Local Meeting and as an attender at another. Bearing these considerations in mind, and for ease of administration of the questionnaire, a multistage sampling method was used. This method was based on that used in the 2003 incarnation of the survey (described in Cary and Dandelion 2007).

Britain Yearly Meeting consists of 478 Local Meetings, varying widely in numbers of members and attenders. In order to account for the fact that there are many more small than large Meetings, the Meetings were stratified by size. This resulted in six strata, containing equal numbers of potential respondents. Eight Meetings were chosen at random from each strata, totalling 48 Meetings from which to recruit participants. These Meetings were contacted directly and asked whether they were willing to be included in the study. For those that were not, or did not respond, another Meeting was randomly selected from the remaining Meetings in the same stratum. Once agreement was obtained, the Clerk of each Meeting was sent 22 questionnaires, a random number table (based on the number of estimated members and attenders likely to be present at the Meeting) and a comprehensive letter of instruction. This letter detailed when (on one of two specific Sundays) and how to distribute the questionnaires. There were instructions on how to use the random number table so as to randomly pick 22 participants from the number actually present. In addition to this, the Clerks were informed that only members and attenders were being asked to complete the questionnaire (rather than visitors or enquirers). They were also asked to remind participants on subsequent Sundays about completing and returning the questionnaire. A copy of this letter can be found in Appendix A. For those Meetings where less than 22 members and attenders were present, all were asked to take part in the survey. Clerks from these smaller Meetings were asked to return the unused questionnaires. Of the 1059 questionnaires sent out, 819 questionnaires were distributed. Of the 819 questionnaires distributed, 649 were returned completed, a response rate of 79%. Both the sampling method for selecting the Meetings and the random number tables were based on work by Kish (1965). The key attributes under investigation, clerking duties and considering oneself to be a Quaker, are both proportions. When this is the case, with variance unknown and a desired accuracy of 5% with 95% confidence, a sample size of around 400 is considered to be satisfactory for large samples in much of the literature (Stopher 2012).

#### 2.3. STATISTICAL METHODS

For each of the aims outlined in the introduction, the statistical methods for answering the research questions are outlined here. Data from the questionnaires were input directly into SPSS (version 20) and the following descriptive and statistical analyses, unless otherwise stated, were conducted in this package.

# 2.3.1. Exploratory data analysis for summarising dominant beliefs

To give an overview of the data and address Aim 1, descriptive statistics were produced for each variable. These were considered in terms of percentages (both

actual and valid) and presented as a series of bar charts. Further to this, exploratory data analysis in the form of contingency tables (cross-tabulation methods) was performed.

Contingency tables allowed associations between two (or more) categorical variables to be explored. As well as summarising the data collected for the variables in the table, the associations between the included variables were tested using Pearson's chi-square test. Essentially, the test calculates the difference between the number of observed counts in each cell of the table against the number of expected counts. If considering the simplest scenario of a  $2 \times 2$  contingency table, let  $O_{ij}$  denote the observed count in the  $i^{th}$  row of the  $j^{th}$  column and  $E_{ij}$  denote the expected count in the  $i^{th}$  row of the  $j^{th}$  column. The expected count is then calculated from the observed totals of each variable such that

$$E_{ij} = \frac{n_{i.}n_{.j}}{n}$$

where  $n_i$  is the total of row i and  $n_{.j}$  is the total of column j.

To compare the difference between the observed and expected counts, the chi-square statistic was used:

$$\chi^2 = \sum_{i=1}^2 \sum_{j=1}^2 \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Being tested was whether the observed counts gave sufficient evidence to reject the null hypothesis; the null hypothesis being that the probabilities are equal across different values of the variable. This was done by testing the statistic calculated from the above equation against the appropriate chi-square distribution. To calculate the appropriate distribution, the degrees of freedom (df) for the table were determined. This was done using df = (r - 1) (c - 1), where r = the total number of rows and c = the total number of columns. In addition to the chi-square statistic, the odds ratio (otherwise known as the relative risk) was calculated. This is equivalent to the exponential of  $\beta$  in logistic regression ( $\beta$  being the regression coefficient of a given predictor). Essentially the odds ratio measures the effect size of the association between the variables.

These contingency tables, along with descriptive statistics, will address the first aim of this paper as outlined in Section 1.2.

#### 2.3.2. Logistic regression to investigate characteristics of Clerks

To approach the second aim of the study, techniques needed to be employed which examine which variables had a significant relationship with taking on clerking responsibilities. In order to examine the relationship between these variables, a generalised linear model was sought. The outcome variable that measured those that have, or have had, clerking responsibilities was a binary indicator.

As such, response to the variable followed the Bernoulli distribution (a special case of the binomial distribution where N=1). Such that the probability of a success (Clerk) can be expressed as  $P(\gamma=1)=P$  and the probability of a failure (non-Clerk) can be expressed as  $P(\gamma=0)=1-p$ . This can be rewritten to express the probability of a given value of  $\gamma$ :

$$P(y) = p^{y}(1-p)^{(1-y)}$$

Because of the nature of this distribution, the assumptions of Normal linear regression were violated and a general linear model sought. Specifically a logistic regression model was constructed following the basic model:

$$P(y) = \frac{e^{\beta_0 + \beta_1 x_1 + \dots + \beta_m x_m}}{1 + e^{\beta_0 + \beta_1 x_1 + \dots + \beta_m x_m}}$$

where P(y) = the probability of the outcome y given the values of predictors x,  $\beta_0$  = the constant, m = the total number of predictor variables,  $\beta_m$  = the regression coefficient for the  $m^{th}$  predictor variable,  $x_m$  = the value of the  $m^{th}$  predictor and e = 2.71828, the base of natural logarithms.

A logit function was used to link this with the usual regression equation, so that the linear predictor could be expressed as:

$$logit[y] = ln\left[\frac{p}{1-p}\right] = e^{\beta_0 + \beta_1 x_1 + \dots + \beta_m x_m}$$

The measure of fit, or deviance, for such models was calculated based on the maximum likelihood of the model (rather than least-squared deviations in the case of normal linear regression). In the binomial case this is:

$$D = -2\sum_{i} y_{i} log p_{i} + (1 - y_{i}) log (1 - p_{i})$$

Considering the vast number of potential predictive variables, univariable analyses between each potential predictor and the clerking outcome variable were conducted. The associations between the outcome and individual predictors were modelled using logistic regression. Those that were statistically significant at over 20% (i.e. p > 0.2) were then included in further analysis. This follows recommendations that using the usual 5% level is inappropriate for these kinds of analyses as such stringent levels may well miss predictors of importance to the multivariable model. The advantage of this stage is that both the Wald statistics and coefficients can be compared from the univariable to multivariable models (Hosmer and Lemeshow 2000; Mickey and Greenland 1989). In addition this technique has the advantage of being a statistically based approach to predictor selection.

Having determined the individually significant predictors, a multivariable analysis using logistic regression models was conducted. The logistic regression models were selected using a backwards stepwise approach. Rather than introducing items in a sequential fashion, all items were included in the first instance and sequentially removed from the model. At each stage, the difference between the model with the predictor included and the model with it removed was tested against the chi-square distribution. The advantage of this method over a forwards selection approach is that the models account for all other variables included in the analysis (of a lower order than the predictor being tested). Thus there is less possibility of excluding predictors of importance (Type II error). Once this selection process had been completed, the remaining predictors were all statistically significant (at the standard significance level of 5% or lower) in predicting the outcome. Interaction terms between the predictors were also considered for inclusion. These considerations were based on the same statistical bases as the main effects but with additional practical considerations borne in mind.

Once predictors had been selected for inclusion, how well the final model fit the data was assessed. Because of the discrete nature of the data, the goodness of fit for the final model could not be assessed through the usual (for general linear models/multiple regression) examination of residuals. Instead, the final model's goodness of fit to the data was examined using the Hosmer-Lemeshow statistic (Hosmer and Lemeshow 2000). This tested the observed data against the expected values, once the data had been divided into ten groups. The test can be defined as:

$$G_H^2 = \sum_{j=1}^{10} \frac{(O_j - E_j)^2}{E_j (1 - \frac{E_j}{n_j})}$$

where,  $n_j$  = number of observations for  $j^{th}$  group,  $O_j$  = number of observed cases for  $j^{th}$  group,  $E_j$  = number of expected cases for  $j^{th}$  group. This test was then compared against the appropriate chi-square distribution,  $\chi_8^2$ . This is a lack of fit test, rather than goodness of fit test. As such, a significant result indicates that the model does not fit the data. Further, the Hosmer-Lemeshow statistic was used to calculate the ability of the model to discriminate between those taking on clerking responsibilities and those not. Discrimination was determined by calculating the area under the receiver operating curve. The receiver operating curve (ROC) is otherwise known as the sensitivity vs. (l - specificity) plot. Sensitivity refers to the accuracy of the model to correctly identify positive results (clerks). Specificity refers to the accuracy of the model to correctly identify negative results (nonclerks). The area under the curve (AUC) was calculated as a summary of the ROC, whereby an area close to one indicates good discriminative ability.

Interpretation of the relationship between individual variables found to be significant to taking on clerking responsibilities was made. The parameter estimate given by the final model for any given predictor  $(\beta_m)$  is given on a log-odds scale.

To ease interpretation, the exponential of the coefficient ( $\beta$ ) was taken, transforming the coefficient to the odds scale. The resulting  $e^{\beta}$  represented the increase in odds for the outcome for every unit increase in the predictor.

The logistic regression analyses were conducted using R (version 3.0.1).

# 2.3.3. Latent class analysis to investigate Quaker identities

To investigate Quaker identities (addressing Aim 3), a latent class analysis was conducted. First, decisions needed to be made to determine which of the items to use to identify those respondents that could be considered Quakers. Ultimately, the decision needed to be made between using the item measuring membership status (as derived from Q.9 and Q.10) or those who considered themselves Quaker (Q.20(i)). As can be seen in Table 1, the majority of those in membership consider themselves Quaker (95%). However, 20% of those who consider themselves Quaker are not in membership for whatever reason. Therefore, a positive response to Q.20(i) was taken as indication of being a Quaker for the purposes of further analysis.

Following making the Quaker term operational, a latent class analysis was conducted using the responses only from those who considered themselves to be a Quaker. Latent class analysis (LCA) aims to identify *k*-classes of a single latent variable based on observed manifest variables. Similar to cluster analysis for continuous data, LCA is a technique that can identify homogenous cases within the data. In order to identify groups of religious belief, manifest variables consisted of those items measuring belief and religious practice.

Table 1. Crosstabulation of considering oneself to be a Quaker and membership status.

		Consider self to	be Quaker	Total
		No	Yes	1 otai
M 1 11 C	Attender	79	107	189
Membership Status	Member	25	429	454
Total		104	536	640

The basic latent class model for these purposes can be written as,

$$P(y_i) = \sum_{k=1}^{K} \pi(k) \prod_{j=1}^{J} P(y_{ij}|k)$$

where  $y_i$  = vector of total observed responses, K = number of classes, J = number of manifest indicators,  $\pi(k)$  = probability of belonging to class k,  $P(y_{ij}|k)$  = probability of response  $y_{ij}$  given membership of class k. Most of the data used in the latent class analysis was binary data. To account for this fact, the probability of observing a positive response given membership of class k can be rewritten as

$$P(y_{ij}|k) = (p_{jk})^{y_{ij}} (1 - p_{jk})^{T}$$

The probability of response  $y_{ij}$  given membership of class k ( $P(y_{ij}|k)$ ) is an assumption of conditional independence. Otherwise known as local independence, this assumes that manifest variables are independent within a given class. A simple extension of the basic model can relax this conditional independence assumption. This is appropriate when, for example, two manifest variables are measuring very similar or the same construct(s). This can be done by allowing, for example, two manifest variables to serve as a joint dependent variable conditional on class membership. Allowing this local dependency to be modelled, using direct effects, can lead to a simpler and better classification model. However, the balance must be struck between accounting for dependence without disguising relevant clusters (Vermunt and Magdison 2002). In order to identify these local dependencies, the bivariate correlation residuals for manifest variable pairs were examined. These residuals give an indication as to the difference between the estimated and observed associations between a given pair of manifest variables. Essentially, such measures provide a lower bound estimate of the improvement of fit if the given pair of manifest variables is allowed to covary. As a rule of thumb, those bivariate residuals larger than approximately 3.84 indicate a significant association not adequately accounted for by the model. In the circumstances in which it made sense to, for example where items were measuring essentially the same construct, a direct effect was included in the model for those pairs of manifest variables whose bivariate residual was larger than acceptable.

To estimate the unknown parameters, that is, the class profiles  $p_{jk}$  and class sizes  $\pi$  (k), an iterative approach to the maximum likelihood method was used, which aimed to find estimates for the unknown parameters that maximize the log-likelihood function:

$$log \mathcal{L} = \sum_{i=1}^{N} w_i log f(y_i, \vartheta)$$

where  $f(y_i, \theta)$  = probability density of  $y_i$  given the parameter values under estimation and  $w_i$  = is a case weight used to identify matching response patterns. Missing data can be dealt with within this function. Assuming that data is missing at random then the parameters can be estimated using only the available information. Having estimated these parameters, observations can be given probabilistic assignments to classes:

$$w_{ik} = \frac{\pi_k P(\mathbf{y}_i | k)}{\sum_k \pi_k P(\mathbf{y}_i | k)}$$

where, in this case,  $\mathbf{w}_{ik}$  is the probability that case i belongs to class k.

As this was an exploratory latent class analysis, with the aim of identifying an optimal and interpretable number of classes, analysis was conducted with several different numbers of classes specified. Due to the complex nature of the data set

the usual chi-squared-based goodness of fit tests were not appropriate. Therefore, penalised information criteria, based on the log-likelihood, were calculated. These statistics are penalised by a function of the number of parameters (*npar*) included in the model and were calculated using the following:

$$BIC_{log\mathcal{L}} = -2log\mathcal{L} + (logN)npar$$
 
$$AIC_{log\mathcal{L}} = -2log\mathcal{L} + 2npar$$
 
$$AIC3_{log\mathcal{L}} = -2log\mathcal{L} + 3npar$$
 
$$CAIC_{log\mathcal{L}} = -2log\mathcal{L} + [(logN) + 1]npar$$

The log-likelihood was also used to compare the differences between nested models.

Specifically, the difference in minus twice the log-likelihood  $(-2log\mathcal{L})$  between the two models can be tested. This can be written as  $-2(log\mathcal{L}_{H_0} - log\mathcal{L}_{H_1})$ , where  $H_0$  refers to the more restricted model and  $H_1$  refers to the more general model. In the case of testing between models, the addition of an extra parameter can be tested where  $H_0$  refers to the k-class model and  $H_1$  the (k + 1)-class model. To determine whether this difference is statistically significant, a Monte Carlo technique was employed whereby random data sets were simulated from the k-class model. The (k + 1)-class model was fit to these simulated data sets. Using this technique, eventually the distribution for the null hypothesis is represented and comparisons could be made between this and the observed data. This technique was further used to assess other model restrictions imposed on the solutions.

After decisions were made about the appropriate restraints to the model and the optimum number of classes was chosen, the chosen classes were interpreted using the class-specific marginal probabilities for each manifest variable across each class. Covariates were added to the final model. Unlike covariates that are included in building the model to predict class membership, in this case the covariates were used purely as descriptive measures. The probable means of the covariates in this case were a description of the association between the various covariates and each latent class after the final model was estimated using the manifest variables.

The latent class analysis was conducted in Latent Gold (version 4.5).

#### 2.3.4. Comparisons across time periods

To address Aim 4, comparisons were made across the three questionnaires. For items that were consistently included in the questionnaires across the three distinct time periods (1990, 2003, 2013), frequencies were obtained (Cary, Dandelion and Rutherford 2009). These frequencies were used to construct  $r \times c$  contingency tables. Using the same principles as described in 2.3.1, these tables were tested to determine whether there were significant differences across the years for each of the variables. Further to identification of statistically significant change across the

years, the location of that change was investigated. Contingency tables were sought from each larger table (Rindskopf 2004). Such a procedure may well inflate the chances of a Type I error, rejection of the null hypothesis and accepting an association to be significant when in fact it is not. To counter this, a more conservative alpha level was adopted by performing a Bonferroni adjustment such that:

$$k = \frac{r!}{2!(r-1)!} \times \frac{c!}{2!(c-1)!}$$

This adjustment was used to divide the usual significance level (0.05) to account for the multiple comparisons being made. This technique was chosen over the Cochran-Armitage (chi-square) test for trend (Agresti 2002) because it was not a case of simple increases or decreases between the years; in some cases the frequencies appeared to be going up and down rather than in a clear trend.

#### 3. RESULTS

# 3.1. DESCRIPTIVE AND EXPLORATORY STATISTICS SUMMARISING DOMINANT BELIEFS

To address Aim 1 the methods outlined in Section 2.3.1 were used, a summary of which are presented here. As stated above, of the 819 questionnaires distributed, 649 were returned completed—a response rate of just over 79%. The respondents were aged between 17 and 100 years old (mean = 64.62, standard deviation = 15.83). In terms of gender, respondents were 61% female, 39% male. In terms of other demographics, the respondents were predominately white, well-educated, middle-class retirees. Ninety-nine percent were identified as belonging to a white ethnic group. 71% had received an undergraduate degree, with 32% receiving a higher (masters/ doctoral) degree, and 56% placed themselves in the middleincome bracket. Whilst 28% placed themselves in the low-income bracket, qualitatively several of these annotated the questionnaire to indicate this was because they were retired. Reflective of mean age of the group, over half indicated that they were currently retired (61%). A total of 55% went straight into a professional/technical job after leaving full-time education. Although only 16% were raised Quaker, the majority of respondents (67%) had been regularly attending for over 11 years, with 44% attending for over 25 years. Of the respondents, 84% considered themselves Quaker but only 37% considered themselves Christian. 70% indicated that they were in membership, 29% indicated that they were attenders and the remaining 1% did not indicate either way. Bar charts depicting percentage responses for all the items can be found in Appendix B.

In terms of missing data, neither of the response variables (considering self Quaker and clerking responsibility) featured any missing data. In fact across the data set there were little missing data, with no more than 20% of data missing for any one variable. Of the few variables for which data were missing, as a whole question (with 20 sub-questions) Item 36 had the highest proportion missing. This question asked respondents to indicate, on a ten-point Likert-type scale, to what

extent they thought a given behaviour was morally justifiable or not. Although the proportion of missing data for this item was small (less than 5% for each subitem and the item as a whole), there is evidence to suggest that it is not ignorable. Very briefly, there is evidence to suggest that Quakers use a virtue-based rather than a deontological, ethical approach and so would elect not to answer these types of broad judgments with no further information about the particular circumstance (Scully 2009). Because of this it was decided that this question should be excluded from further analyses. The majority of the remaining missing data was missing by design; some questions were conditional based on characteristics of the respondent. An example of this was seen in Q.13b 'If you believe in God, which of the following best describes God for you?'. There was little other missing data and the decision was taken not to impute the data that was missing. Cases with missing data were excluded from each analysis on a listwise basis (unless otherwise stated).

After investigating the range and frequencies of responses, a series of crosstabulations was performed to further investigate the data. This was done with relation to the chosen main response variable for Aim 3, considering self a Quaker (Q.20(i)), against the other responses. Similarly, contingency tables were produced for clerking responsibilities (derived from Q.26b) against other variables prior to pursuing the statistical analyses addressing Aim 2. There were many contingency tables constructed and a couple of particular interest will be briefly outlined here. With regards to identifying as Quaker, the contingency table of most interest may be considered that which measures the association with belief in God. Although a statistically non-significant association ( $\chi^2$  (2) = 1.083, p = 0.582), it is nonetheless surprising that 14% of those who considered themselves Quaker also indicated that they did not hold a belief in God. This suggests that further analysis on Quaker identity may well be worth conducting: Is this group distinguishable from other Ouakers across the beliefs that they hold? In a similar vein to this, 47% of those who held or had held clerking responsibilities did not regard Business Method to be seeking the will of God. The association between these variables was statistically significant ( $\chi^2$  (1) = 17.763, p < 0.001). This belief is contrary to what is laid out in the Quaker book of discipline (Britain Yearly Meeting 1995) and surely warranted further investigation.

# 3.2. LOGISTIC REGRESSION TO INVESTIGATE THE CHARACTERISTICS OF CLERKS

To address Aim 2, and further to the findings of the exploratory analysis, the characteristics of Clerks were investigated using a logistic regression approach as laid out in Section 2.3.2. Before any analysis was conducted consideration was given to the nature of the data in relation to logistic regression assumptions. None of the variables to be included in the models as predictors were continuous so the linearity assumption did not need to be examined. In addition to this, all errors were independent as each response for any given variable was collected from a different individual.

In the first instance, a univariable analysis was performed in order to decide which variables to include in the multivariable analysis. There were many variables to test against the clerking item and, because of this, they will not all be included here. Fifty-nine of these variables were found to have a statistically significant association to the clerking response, at a more lenient than usual level of 20% ( $p \le 0.2$ ). The results of the univariable analysis for these 59 predictors can be found in Appendix C. Multivariable logistic regression models were then fitted using a backwards selection approach. Twenty-seven cases were removed due to missing data in one (or more) of the predictor variables. Thus the multivariable analysis was conducted on approximately 96% of the cases. Through the backwards selection process 12 predictor variables were found to be significant in the final model (at the 5% significance level). No interactions were found to be significant. The 12 variables are reported, along with their associated adjusted odds ratio and significance values, in Table 2. To assess the fit of the model to the data the Hosmer-Lemeshow test was calculated. This showed that the model fit was acceptable,  $\chi^2$  (8) = 9.697, p = 0.287. The model also showed adequate discrimination, AUC = 0.849 with 95% confidence interval (0.819, 0.878).

The adjusted odds ratio gives an easily interpretable indicator as to the relationship between the response variable and predictor variables. The odds ratio indicates the increase in the outcome variable (clerking responsibilities) for every unit increase in the given dependent variable. For example, those respondents who considered prayer to be opening up to the spirit were over twice as likely to take on clerking responsibilities compared to those who did not (OR = 2.066, 95% CI= 1.326 - 3.218, p = 0.001). This contrasts with those who consider prayer to be meditation, who are 40% less likely to take on clerking responsibilities (OR =0.604, 95% CI = 0.391 - 0.935, p = 0.024). As can be seen from the results detailed in Table 2, several other variables indicate an increase in the likelihood of taking on clerking responsibilities. These include considering oneself to be a Universalist (OR = 2.209, 95% CI = 1.256 - 3.884, p = 0.006) and being retired (compared to being of working age and not in paid employment; OR = 5.658, 95% CI = 1.804 - 17.742, p = 0.003). Membership was included as a predictor as one does not necessarily need to be in membership in order to take on such a role. However, the results show that it is much more likely that those taking on clerking responsibilities would be in membership (OR = 20.117, 95% CI = 8.535- 47.419, p < 0.001). Considering Business Method to be seeking a consensus lowered the chance of taking on clerking duties by about two thirds (OR = 0.312, 95% CI = 0.17 - 0.575, p < 0.001). This should be something of a relief considering this is not what is meant by Business Method. However, neither is business method strictly meant to be seeking the sense of the Meeting and yet this leads to an increased likelihood of having clerking responsibilities, by nearly two times (OR = 1.842, 95% CI = 1.052 - 3.223, p = 0.033). Perhaps conspicuously absent is the predictor that one would expect to be significant to this model considering business method to be the will of God. This will be further discussed in later sections. Other predictors lead to a decrease in likelihood of taking on

clerking responsibilities. Some of these significant predictors appear to be those associated with traditional Christian theology. Positive responses to ideas of transcendence (OR = 0.458, 95% CI = 0.261 - 0.805, p = 0.007), Jesus as the Saviour (OR = 0.267, 95% CI = 0.090 - 0.792, p = 0.017) and belief in the effect of prayer (OR = 0.477, 95% CI = 0.241 - 0.943, p = 0.033) all reduce the likelihood of taking on clerking responsibilities by about 55% or more.

# 3.3. Latent Class Analysis to Investigate Quaker Identities

A latent class analysis was conducted in order to investigate Quaker belief identity (Aim 3). As described in Section 2.3.3, Quakers were identified by those considering themselves Quaker rather than those in membership. Therefore, only those that responded positively to this item (Q.20(i)) were included in the latent class analysis (n = 542). Rather than looking at the broad profiles of Quakers in the data set, a decision was made to investigate the belief profiles. Variables thought to measure this—the majority of the second section of the questionnaire, 'Your Religious Beliefs', plus some items on Quaker practice—were used as manifest variables. In addition to considerations of measurement, and with a mind to future work with the data sets, consideration was also given to the items that were similar across the three waves of the survey (1990, 2003, 2012). In total 71 manifest variables were included in the analysis in the first instance. There was little missing data across the cases, with no clear pattern. Rather than delete the cases with missing data listwise from the analysis, it was decided to include such cases, dealing with these in the likelihood function. Because little research has been done in this field, the analysis could be seen as exploratory rather than confirmatory work. As such it was necessary to determine how many classes gave an appropriate description of the data. This was done over several stages, with determination and examination of the most appropriate model at each stage.

Considering the number of manifest variables, most of which were binary but some of which were ordinal and multinomial, the analysis could be considered complex. As such the usual goodness of fit measure, based on the chi-square distribution, is not appropriate. In any case, interpretation of this statistic would have to have been treated with caution because of the inclusion of missing data.

Although with regards to parameter estimation missing data are dealt with under a missing at random assumption, the chi-square test functions under a missing completely at random assumption (Vermunt 1997), hence caution is needed. Instead, penalised log-likelihood measures, otherwise known as information criterion, were used to determine the optimal number of classes. For illustration, Table 3 shows the results of these statistics for J-class to 6-class solutions for the model which included all manifest variables of interest with no restraints. This analysis was run including a 7-class solution; however, this model was unidentifiable and therefore is not included here. The table illustrates some of the difficulty encountered when choosing the optimal number of classes for this data. The AIC and AIC<sup>3</sup> continued to decrease as the number of classes increased to six.

Item	No. out of	No. out of	Adjusted odds	<i>p</i> -value
0.12/ **\ 5. * * 1	clerks	non-clerks	ratio (95% <i>CI</i> )	0.007
Q.12(vii): Spiritual awareness	32/223	83/399	0.458 (0.261,	0.007
- Transcendence	F (222	27 (200	0.805)	0.047
Q.14a(iii): Jesus - Saviour	5/223	37/399	0.267 (0.09,	0.017
0.46 ( ) B 16 15 15	62 (222	450 (200	0.792)	0.004
Q.16a(v): Prayer - Meditation	63/233	172/399	0.604 (0.391,	0.024
	4.4=.4000	100 (200	0.935)	0.004
Q.16a(xiii): Prayer - Opening	147/233	198/399	2.066 (1.326,	0.001
up to the Spirit			3.218)	
Q.18(iv): Bible - word of God	3/233	14/399	0.239 (0.058,	0.048
as all words are God given			0.99)	
Q.20(iii): Consider self -	50/233	45/399	2.209 (1.256,	0.006
Universalist			3.884)	
Q.20(x): Consider self -	8/233	51/399	0.240 (0.092,	0.004
Humanist			0.63)	
Q.24(ii): Business method -	194/233	303/399	1.842 (1.052,	0.033
Seeking a sense of the			3.223)	
Meeting				
Q.24(iii): Business method -	19/233	101/399	0.312 (0.17,	< 0.001
Seeking a consensus			0.575)	
Member*	217/233	222/399	20.117 (8.535,	< 0.001
			47.419)	
Q.16b: Effect of prayer				
No	48/233	49/399		0.45
Yes	108/233	190/399	0.477 (0.241,	0.033
			0.943)	
Not sure	77/233	160/399	0.423 (0.213,	0.014
			0.839)	
Q.42d(x): Current job				
Not in paid employment	14/233	36/399		< 0.001
Retired	167/233	203/399	5.658 (1.804,	0.003
			17.742)	
In paid employment	52/233	160/399	2.644 (0.817,	0.105
* *			8.551)	

Table 2. Results of logistic regression of multivariable associations on clerking duties.

Conversely, both the BIC and CAIC suggested fewer classes. The BIC was minimised at four classes, whilst the CAIC was minimised at three. The classification error for all n-classes was very small, which gave confidence in all models in terms of appropriately classifying cases.

It was unclear from the information criterion from the initial analysis whether 3 or 4 classes were most appropriate. Another method that could address the apparent conflict between answers derived from the BIC and AIC statistics is the Monte Carlo test. This test assesses the improvement, or otherwise, of a model with restrictions on the same model without restrictions. Initially, however, consideration was given to alternatives that may be affecting the model fit.

<sup>\*</sup>Derived from Q.9 - Q.10.

N-class	AIC	BIC	AIC <sup>3</sup>	CAIC	$L^2$	df	Class Error
1	43671.5814	44040.5814	43757.1885	44126.5814	37792.4909	456	0
2	41143.5628	41882.3485	41315.5628	42054.3485	35092.8652	370	0.0274
3	40470.7301	41578.9087	40728.7301	41836.9087	34248.0325	284	0.0401
4	40035.6534	41513.2249	40379.6534	41857.2249	33640.9559	198	0.0541
5	39823.5901	41670.5545	40253.5901	42100.5545	33256.8925	112	0.0558
6	39672.9657	41889.3230	40188.9657	42405.3230	32934.2681	26	0.0502

Table 3. N-class analysis for unrestrained model.

In order to get a better fit to the data, several alternatives to adding more classes were considered, some of which also address violations of the local independence assumption under which latent class analysis works. Diagnosis of violations of local dependence were assessed by examination of the bivariate residuals. Those bivariate correlation residuals (BVC) of over 3.84 were considered to be inadequately explained by the model. These vary depending on which n-class model is used and so the 4-class model was considered for the purposes of identifying the bivariate residuals for consideration. Before adding direct effects, the decision was taken to remove an item from the model altogether. Q.11, measuring the extent to which the respondent considered themselves spiritual, was removed. This is considered a useful approach when there are many potentially redundant variables (Magdison and Vermunt 2004). Indeed, theoretically this item could be considered redundant and to be measuring, in a more in-depth way, another item included in the analysis (Q.20(xii)). A Monte Carlo test indicated an improved fit to the data with this item removed. Further to this, the BVCs for the manifest variables were examined. For those for which it made theoretical sense, direct effects were added that allowed such manifest variables to covary (Hagenaars 1990), thereby accounting for the residual variance observed for such variables. At each stage, the Monte Carlo test was employed to assess the improvement, or otherwise, of each restraint to the model. This was done using a manually inputted starting seed of the model under examination so as to decrease computation time. Including these constraints, the new model was fit using 1-6 number of classes specified.

Once direct effects had been added to the model, so as to relax the local dependence assumption, comparison of the n-class solutions could be made. The addition of direct effects placed restrictions on the model, resulting in an overall fit that was altered, and so simpler, more parsimonious solutions may have been considered appropriate. Similar to previous results, the AIC/AIC<sup>3</sup> and BIC/CAIC results prompted differing conclusions. Unlike the initial results shown in Table 3, both the BIC and CAIC were now minimised at the 3-class solution. Consideration was then given to the parameters being estimated by this 3-class solution. Some parameters appeared to not have a significant contribution to the model solution and so zero parameter restrictions for these variables were tested using the Monte Carlo approach. The final model syntax detailing all restrictions can be found in Appendix D. Finally, the model comparison statistics for this model were produced for 1 through 6 classes to confirm that the 3-class model was the most appropriate (see Table 4).

N-	AIC	BIC	AIC <sup>3</sup>	CAIC	$L^2$	df	Class
class							Error
1	39578.6489	40055.4234	39689.6489	40166.4234	33498.2513	431	0
2	37829.2968	38585.2636	38005.2968	38761.2636	31618.8992	366	0.0318
3	37391.1054	38426.2645	37632.1054	38667.2645	31050.7078	301	0.0536
4	37117.1397	38431.4911	37423.1397	38737.4911	30646.7421	236	0.0583
5	36987.2659	38580.8396	37358.2959	38951.8396	30386.8983	171	0.0721
6	36864.9820	38737.7180	37300.9820	39173.7180	30134.5844	106	0.0750

Table 4. N-class solutions for final model.

As can be seen from Table 4, the differences in terms of the information criterion for the 3-class and 4-class solutions are neither huge nor clear. Whilst the AIC and AIC<sup>3</sup> continue to decrease as the number of classes increases, as previously, the BIC and CAIC are both minimised at three classes. It is important to remember that exploratory latent class analysis is about creating interpretable groups rather than getting a perfect fit to the data. Bearing this in mind, the profiles of both solutions were examined. This revealed that, heuristically, the 3-class model makes more sense than the 4-class model. The additional class in the 4-class solution appears to partition the data further than is necessary. The 3-class solution appears to give reasonably well-defined groups. The addition of this fourth class makes the patterns produced by the conditional probabilities much less interpretable. Confirmation that the addition of the third class produces a significant improvement over the 2-class model was achieved by testing the change in log-likelihood using the Monte Carlo technique (p < 0.05). In addition to this, a Monte Carlo technique to circumvent the problems of using chi-square with this complicated problem suggests that the 3-class solution fits the data (p = 0.304).

# 3.3.1. Class profiles

The profiles of each group from the final 3-class solution will now be discussed. The profiles essentially consist of the probability of response to each level of each manifest variable given class membership. These conditional probabilities can be used to describe and distinguish the classes from one another. Whilst there are differences between the classes across many of the manifest variables, to make salient distinctions between classes the most striking discrepancies in response patterns will be highlighted. A full profile of religious attitudes and beliefs for each of the classes can be found in Table 7. In addition to distinctions between classes, a conditional probability of 25% and over was used to identify responses of note for a given class. Each of the three classes has been given a simple label which describes the belief system apparently represented by the latent class. These labels are very simple; they are not meant to convey the richness of the profiles but are to be used as convenience of reference in the following descriptions. The classes will be described, not in order of class share but in terms of the most distinctive number of differences. The 'Traditional Quaker' (Class 1) group has about a third of the class share with 32% of cases (approximate n = 173). This group appears to take a traditional Christian approach to theology as will be described. Secondly,

the 'Non-theist Quaker' (Class 2) group will be described. This group only has about a fifth of the class share (at 18%, approximate n = 98) and are striking in their dissimilarity to the Traditional group.

Lastly, the 'Liberal Quaker' (Class  $\overline{3}$ ) group will be described. As will be presented, this group's response pattern is somewhere between the other two groups (but most similar to the Traditional group). This group is the largest, with half of all cases classified into this class (50% of cases, approximate n = 271).

Traditional Quakers (Class 1). As implied by their label, the Traditional Quaker class have the most traditionally Christian response pattern. They are the most likely to hold beliefs congruent with traditional Christian theology. They appear to have a definite belief in God, with a 90% probability that they believe in God. They are also most likely to seek God's guidance often or always (72%, compared to 30% for Liberal and 2% for Non-theist). As embodiment of the belief system they follow, the majority identify as Christian (78%) as well as Quaker. This is considerably more than other self-descriptions possible, although 39% consider themselves 'a spiritual person'. This contrasts with the other two classes. The Liberal class had 25% considering themselves Christian, whereas within the Non-theist class only 13% consider themselves Christian. Further to beliefs about God, they are the class most likely to view Jesus as Christ (40%), Son of God (36%), the Inward Light (31%) and God made human (34%). These figures contrast with the other two classes whose positive responses to the same descriptions of Jesus were less than 5% (for each indicator). Jesus is more likely to be an important figure to Traditional Quakers, with a yes response of 56% (compared with Liberal 16% and Non-theist 14%). Whilst all classes indicated Jesus' teachings were of importance to them, this class showed no real variation, with 85% indicating 'yes' rather than 'it varies'. This group is the only one with over 25% (27%) indicating transcendence as an important aspect of their spiritual awareness. Possibly related to their positive belief in God, as opposed to an agnostic or non-belief, Traditional Quakers are more likely than the other classes to describe using prayer to talk to God (71%), seek communion with the divine (63%), in daily life (30%), praise (37%) and for seeking healing (37%). This compares with conditional probabilities of less than 25% for these items for the other two classes. Traditional Quakers are also the most likely to give a definite positive response to the power of prayer to effect things on Earth (70%). They are the only group with more than 25% indicating that they read the Bible (73%), compared to 19% for cluster 3 and 12% for cluster 2. In terms of activity in Meeting for Worship, this class is more likely to indicate that they pray (60%), commune (32%), seek God's will (47%) as well as union with the Divine (35%) and worship God (27%). The other two classes are less likely to do any of these things, with responses under 25% for these activities.

**Non-theist Quakers (Class 2).** As indicated by the label attributed to this class, those in this class are unlikely to have a strong belief in God. This group is the most likely to positively deny a belief in God (49%, compared to 3% for Tradi-

tional and 9% for Liberal). Further to this they are the least likely to positively believe (9%, compared to 90% for Traditional and 55% for Liberal 55%). Further to this, they are also least likely to seek God's guidance with 65% never seeking this and 34% only sometimes seeking guidance. These figures contrast with those for the other classes, who were much less likely to respond never (1% for Traditional and 11% for Liberal). Jesus is not an important figure to the majority of this class, with 62% responding no (compared to 4% for Traditional and 41% for Liberal). However, similar to the other classes, the teachings of Jesus are at least sometimes important to them (83%, compared to 100% for Traditional and 91% for Liberal). Also similarly to the other two classes, Non-theist Quakers describe prayer as seeking guidance (29%), meditating (37%) and waiting (54%). Unlike the other two classes, these are the only descriptions of prayer that reach levels of over 25%. This class is the most likely to think that prayer does not have the power to effect things on Earth (53%, compared to 1% for Traditional and 9% for Liberal). Despite this, 26% do think prayer can have an effect. Non-theists are likely to have similar views of the Bible as the other two classes. Considering views of the Bible, the item which distinguishes this group from the others is belief in the Bible being the word of God open to interpretation (6%, compared to 63% for Traditional and 25% for Liberal). As such, they are unlikely to read the Bible (6%) but are quite likely to read Quaker Faith and Practice (61%). Unlike the other two classes, Non-theists are unlikely to consider the Spirit to be an important aspect of their spiritual awareness (13%, compared to 80% for Traditional and 59% for Liberal). They are the most likely to consider themselves humanist (28%) and non-theist (25%) over other self-descriptions. They are also more likely to use these descriptions for themselves than are the other two classes (both less than 10% for both responses). Although not over 25%, the Non-theists are the most likely to consider violence to be morally justifiable under some circumstances (21%, compared to 8% Traditional and 10% Liberal). In terms of activity in Meeting for Worship, those in this class are most likely to be 'thinking' over other activities (76%, compared to 52% Traditional and 57% Liberal). They are less likely than the other two groups to be opening up to the Spirit (20%, compared to 73% for Traditional and 61% for Liberal). They are also less likely to consider their activity in Meeting for Worship as being with others in the spirit (40%, compared to 81% for Traditional and 77% for Liberal).

**Liberal Quakers (Class 3).** Liberal Quakers have the largest class size of all three classes, with half of respondents classified into this group. Their response pattern is somewhere between the other two classes. Although this class does not share the same response pattern of either of the other two classes, it appears to be more similar to the Traditional class than the Non-theist. Generally, for the responses for which the Liberal class is similar to the Traditional class, it is in a less strong way. In other words, the Liberal class is more likely to respond in the same direction as the Traditional class but with a smaller percentage of the Liberal class doing so compared to the Traditional class. The majority of the Liberal Quakers

indicate a belief in God (55%) or at least acknowledge the possibility of existence (37%). They are more likely to seek God's guidance than the Non-theists (90% compared to 36%) but less likely than the Traditional class to do this often (30% compared to 72%). Their views of Jesus are most similar to the Traditional class. Whilst they are likely to consider Jesus an important figure at least some of the time (60%, compared to 67% for Traditional and 38% for Non-theist), they are less definite about this than the Traditional group, with only 16% giving a resounding yes (compared to 56% for Traditional and 14% for Non-theist). The importance of Jesus' teachings is similar to both other classes, with 90% indicating that Jesus' teachings are important. Liberal Quakers' description of prayer is somewhere between the patterns of the Traditional and Non-theist classes. Similar to both other classes, they are likely to describe prayer as seeking guidance (52%), meditating and waiting (62%). Unlike the Non-theist class, they are also likely to consider it to be thanking (33%, compared to 12% for on-theist), opening to the Spirit (60%, compared to 15% for Non-theist) and turning to the consciousness of all around (45%, compared to 18% for Non-theist). They are more agnostic than the other two classes when it comes to the effect of prayer, with 49% uncertain (compared to 29% for Traditional and 20% for Non-theist). As a reflection of this, they are most likely to state that their prayer pattern varies (45%) rather than that they never pray (2%, compared to practically no Traditional Quakers and 33% for Non-theist) or pray every day (18%, compared to 49% for Traditional and 10% for Non-theist). This class shows a similar response pattern to the Traditional class in terms of their view of the Bible. Unlike the Traditional class, however, they are unlikely to read it (19%, compared to 73% for Traditional and 12% for Nontheist). They are, however, highly likely to read Quaker Faith and Practice (82%, compared to 88% for Traditional and 60% for Non-theist). They show a similar response to the Traditional class in terms of spiritual awareness, apart from a lack of transcendence for this class (15%, compared to 28% for Traditional and 10% for Non-theist). Generally, their response pattern to the spiritual awareness questions are less strong than those for the Traditional class. The exception is 'connectedness to all things', which is strongest for this Liberal class (59%, compared to 56% for Traditional and 43% for Non-theist). They are nearly as likely as the Traditional class to consider themselves spiritual people (36%, compared to 39% for Traditional and 12% for Non-theist) but much less likely to consider themselves Christian (25%, compared to 78% for Traditional and 13% for Non-theist). Their activity in Meeting for Worship is somewhat similar to that of the Non-theist class. However, they are less likely to be thinking (57%, compared to 52% for Traditional and 76% for Non-theist) and more likely to be opening to the Spirit (61%, compared to 72% for Traditional and 20% for Non-theist).

**Demographics.** To investigate the wider characteristics of the classes, class membership could have been assigned to each case based on the probability of a case belonging to each class given the response pattern of that case; each case is assigned to the class to which they have the highest probability of belonging. Alternatively, and as was done in this case, exogenous variables were included in

the model to informally assess the patterns of probabilities for these demographic variables across the classes. Whilst these variables could have been included in the building of the model as covariates to predict class membership, the research question was focusing on the religious identity of the respondents rather than on their wider identity. Therefore, these exogenous covariates were included after the model was built as purely descriptive measures of the classes in order to obtain demographic summaries. Whilst a brief description will be provided here, full profiles in terms of these covariates can be found in Appendix E. The Traditional and Liberal classes both had a greater proportion of females than males (58% for Traditional and 65% for Liberal) whereas the Non-theist class had a slightly larger proportion of males (53%). All groups were similar in terms of age, educational attainment, religious upbringing and length attending Meeting. Perhaps interestingly, there is a larger proportion of those in the Non-theist class that had a doctorate qualification than either other group (15%, compared to 10% Traditional and 8% Liberal). Of the three classes, those in the Non-theist class were the least likely to be in Membership (66%, compared to 83% for Traditional and 83% for Liberal). This class is also most likely to never have had a role within the Society (31%, compared to less than 20% for the other two classes). Perhaps unsurprisingly, and of interest to this research, they are the least likely group to have taken on clerking roles (28%, compared to 42% for Traditional and 43% for Liberal). Business Method is important to all three classes (with conditional probabilities over 86% for all three) but discrepancies appear with what they consider that Business Method to be. The Non-theist class is the least likely to consider Business Method to be seeking the will of God (11%, compared to 74% for Traditional and 39% for Liberal). They are also the most likely think that the purpose of Business Method is to seek a consensus (30%, compared to 12% for Traditional and 17% for Liberal).

Non-Quaker Profile. Using the responses to the belief questions included in the latent class analysis and the co-variates profiled for each class, a profile was created of those who did not consider themselves to be Quaker. All those respondents who did not tick the 'consider self...Quaker' box were taken to be non-Quaker for the purposes of this analysis. Of these 107 respondents 24% are in membership; this may reflect the fact that there is no distinction to be made here between missing data and a negative response by omission or it may reflect those who are in membership but have an issue with labelling themselves with this term. In any case, the full profile from these respondents can be found in Appendix E. Briefly, in terms of religious belief and practice non-Quakers appear to have a similar response pattern to those in the Liberal class. This is particularly notable in terms of their belief in God (54%, compared to 90% for Traditional, 9% for Non-theist and 54% for Liberal). They appear to be similar to all the Quaker classes in terms of the covariates. Notable discrepancies appear to be in terms of religious upbringing, where fewer have been brought up Quaker (9%, compared to 16% for Traditional, 19% for Non-theist and 18% for Liberal); in length of time

attending, mainly having attended Meeting for less time than the other groups, with 47% indicating that they have been attending for less than four years (compared to 11% for Traditional, 19% for Non-theist and 7% for Liberal); and in terms of roles held (including clerking roles), with many more indicating they have never held a role than those expected to be found in the Quaker classes (67% for non-Quakers, compared to 19% for Traditional, 31% for Non-theist and 19% for Liberal).

# 3.3.2. Class assignment and clerking responsibilities

Further to creating profiles of demographic information for the identified latent classes, each individual case can be assigned a class membership. Cases were assigned membership to the class to which their response pattern indicated they had the highest probability of belonging. This class membership was then added to the record of each case and used as a variable in further analyses. Bearing in mind Aim 2.3.2, investigating the characteristics of Clerks, a univariable analysis was run to investigate associations between class membership and clerking responsibilities. Using the non-Quaker group as a reference category, the results indicate a statistically significant association between class membership and the taking on of clerking responsibilities. The results of the univariable analysis can be seen in Table 5. Those in the Liberal Quaker class appear to be most likely to take on clerking responsibilities, being nearly five times as likely as the non-Quaker group to do so (OR = 4.950, 95% CI = 2.688 - 9.118, p < 0.001). The Traditional Quaker class are also much more likely to take on such responsibilities than the non-Quakers (OR = 4.764, 95% CI = 2.514 - 9.028, p < 0.001). Lastly, the Non-theist class are also more likely, by just over 2 ½ times, to take on clerking responsibilities than non-Quakers (OR = 2.657, 95% CI = 1.303 - 5.419, p =0.007).

Group	No. out of clerks	No. out of non-clerks	Odds ratio	<i>p</i> -value
			(95% CI)	
Non-Quaker	14/230	93/419		< 0.001
Traditional	71/230	99/419	4.764 (2.514,	< 0.001
Quaker			9.028)	
Non-theist	28/230	70/419	2.657 (1.303,	0.007
Quaker			5.419)	
I :h1 O1	117/230	157/419	4.950 (2.688,	< 0.001
Liberal Quaker			9.118)	

Table 5. Univariable tests of associations between latent class membership and clerking responsibilities.

Although small, there appears to be a discrepancy between those who consider themselves Quaker and those in membership; not all those who consider themselves Quaker are in membership and, likewise, not all those in membership consider themselves to be Quaker. To investigate this further, briefly, a similar analysis to the one above was conducted. Nine cases were excluded from analysis due to missing data in the membership variable. Of the remaining 640 cases, 80%

of those who consider themselves to be Quaker were in membership compared to 25% of those who do not consider themselves to be Quaker. Further to this, a univariable analysis investigating the association between class membership and membership status was conducted, with the non-Quaker group as a reference category. The results of this analysis indicate that class membership does have a statistically significant relationship with Society membership status. The results can be seen in Table 6. This indicates that those who consider themselves to be Quaker are much more likely to be in membership of the Society than those who do not consider themselves to be Quaker. Those in both the Traditional class  $(OR = 15.913, 95\% \ CI = 8.685 - 29.157, \ p < 0.001)$  and Liberal class  $(OR = 13.631, 95\% \ CI = 7.918 - 23.467, \ p < 0.001)$  are over ten times as likely to be in membership than those who self-identified into the non-Quaker group. Those in the non-Theist group were also more likely to be in membership than the non-Quaker group, albeit to a lesser extent than the other two Quaker classes  $(OR = 7.674, 95\% \ CI = 4.090 - 14.399, \ p < 0.001)$ .

Table 6. Univariable tests of association between latent class membership and Societal membership status.

Group	No. out of members	No. out of attenders	Odds ratio (95% <i>CI</i> )	<i>p</i> -value
Non-Quaker	25/454	79/186		< 0.001
Traditional Quaker	141/454	28/186	15.913 (8.685, 29.157)	< 0.001
Non-theist Quaker	68/454	28/186	7.674 (4.090, 14.399)	< 0.001
Liberal Quaker	220/454	51/186	13.631 (7.918, 23.467)	< 0.001

Table 7. Quaker class and non-Quaker group religious belief and attitude profiles.

Item	Qu	Quaker Responses			
	Traditional	Non-theist	Liberal	Responses	
Q.12(ii): Spiritual awareness - Love	0.8255	0.5504	0.7464	0.7200	
Q.12(iii): Spiritual awareness -	0.8021	0.1294	0.589	0.4300	
Spirit					
Q.12(iv): Spiritual awareness -	0.7327	0.422	0.5274	0.5000	
Truth					
Q.12(v): Spiritual awareness -	0.7121	0.2641	0.5976	0.4500	
Inward Light					
Q.12(vi): Spiritual awareness	0.5598	0.4263	0.5918	0.5800	
- Connectedness					
Q.12(vii): Spiritual awareness	0.2731	0.1036	0.1499	0.2100	
- Transcendence					
Q.13a: Belief in God (yes)	0.8959	0.0905	0.5431	0.5400	
Q.13a: Belief in God (no)	0.0321	0.4876	0.0884	0.1700	
Q.13a: Belief in God (not	0.0694	0.4218	0.3685	0.2900	
sure)					
Seek God's guidance (never) <sup>a</sup>	0.0092	0.6491	0.1086	0.1800	

C 1 C 12 11	0.260	0.2251	0.5042	0.4700
Seek God's guidance	0.269	0.3351	0.5942	0.4700
(rarely / sometimes) <sup>a</sup>	0.7010	0.0150	0.2072	0.2500
Seek God's guidance	0.7219	0.0158	0.2973	0.3500
(often/always) <sup>a</sup> Q.14a(i): Jesus - Christ	0.4005	0.0245	0.031	0.2000
Q.14a(ii): Jesus - Christ Q.14a(ii): Jesus - Son of God	0.4003	0.0245	0.031	0.2000 0.1700
Q.14a(iii): Jesus - Saviour	0.362	0.0003	0.042	0.1700
Q.14a(iv): Jesus - Saviour Q.14a(iv): Jesus - Ethical teacher	0.1662	0.7025	0.0132	0.4900
Q.14a(v): Jesus – Spiritual teacher	0.4303	0.7023	0.7722	0.5700
Q.14a(vi): Jesus – Just a person	0.7172	0.1064	0.7722	0.0400
Q.14a(vii): Jesus – inward light	0.309	0.1004	0.0439	0.0900
Q.14a(vii): Jesus - God made	0.3436	0.0211	0.0738	0.1600
human	0.3430	0.0201	0.043	0.1600
Q.14a(ix): Jesus - Exemplary	0.3339	0.3339	0.3339	0.2400
human	0.5559	0.3339	0.3339	0.2400
Q.14a(x): Jesus - Containing that of	0.5468	0.2493	0.5793	0.4700
God	0.5400	0.2473	0.3773	0.4700
Q.14b: Jesus - Important figure	0.5648	0.1374	0.1575	0.3300
(yes)	0.5040	0.1374	0.1373	0.5500
Q.14b: Jesus - Important figure (it	0.3969	0.2392	0.4374	0.3200
varies)	0.3707	0.2372	0.4374	0.3200
Q.14b: Jesus - Important figure	0.0384	0.6233	0.4051	0.3500
(no)	0.0301	0.0255	0.1031	0.3300
Q.14c: Jesus - Teachings important	0.8543	0.4004	0.5001	0.5000
(yes)	0.03 13	0.1001	0.5001	0.3000
Q.14c: Jesus - Teachings important	0.1456	0.4244	0.4095	0.3800
(it varies)	0.1 150	0.1211	0.1075	0.3000
Q.14c: Jesus - Teachings important	0.0002	0.1751	0.0904	0.1200
(no)	0.0002	0.17.01	0.0701	0.1200
Q.16a(i): Prayer - Talking to God	0.7055	0.0571	0.2453	0.3100
Q.16a(ii): Prayer - Asking God for	0.1295	0.0291	0.0582	0.0700
change				
Q.16a(iii): Prayer - Seeking	0.6327	0.0012	0.216	0.2600
communion				
Q.16a(iv): Prayer – Guidance	0.7297	0.2857	0.5159	0.4200
Q.16a(v): Prayer - Meditating	0.4135	0.3659	0.3012	0.4800
Q.16a(vi): Prayer - Daily life	0.2958	0.1959	0.1169	0.1600
Q.16a(vii): Prayer - Still & silent	0.7269	0.5405	0.6247	0.5800
waiting				
Q.16a(viii): Prayer - Praise	0.3735	0.0005	0.0347	0.1200
Q.16a(ix): Prayer - Confession	0.2555	0.0032	0.0352	0.1100
Q.16a(x): Prayer- Recollection	0.137	0.0706	0.079	0.1000
Q.16a(xi): Prayer - Seeking healing	0.3658	0.1106	0.1658	0.2400
Q.16a(xii): Prayer - Thanksgiving	0.6221	0.1229	0.3373	0.3000
Q.16a(xiii): Prayer - Opening to	0.7797	0.1488	0.6	0.4100
the Spirit				
Q.16a(xiv): Prayer - Turning in to	0.3794	0.1782	0.4461	0.3200
the consciousness of all				
Q.16b: Prayer effect things on	0.6936	0.2606	0.4197	0.4800
Earth (yes)				
\(\lambda \)				

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Q.16b: Prayer effect things on	0.294	0.2062	0.4921	0.4100
Earth (not sure)				
Q.16b: Prayer effect things on	0.0124	0.5332	0.0882	0.1100
Earth (no)				
Q.16c(ix): Pray (never)	0.0001	0.3304	0.0192	0.0800
Q.16c(vii): Pray (it varies)	0.2408	0.3061	0.4498	0.2800
Pray (once a month or less often) <sup>b</sup>	0.004	0.1143	0.0559	0.0400
Pray (at least once a week) <sup>b</sup>	0.2663	0.158	0.2956	0.2800
Pray (every day/constantly) <sup>b</sup>	0.4888	0.0912	0.1794	0.3100
Q.18(i): Bible - Literal word of	0.0092	0.0092	0.0092	0
God	0.0444	0.0444	0.0444	0.4000
Q.18(ii): Bible - Final word of God	0.0111	0.0111	0.0111	0.1000
Q.18(iii): Bible - Word of God as	0.7985	0.2623	0.5064	0.4900
experienced	0.0205	0.0205	0.0205	0.0100
Q.18(iv): Bible - Word of God as	0.0295	0.0295	0.0295	0.0100
all words are	0.1265	0.0406	0.040	0.7000
Q.18(v): Bible - Authority for belief in God	0.1265	0.0496	0.049	0.7000
Q.18(vi): Bible - History	0.5172	0.5457	0.4200	0.3800
Q.18(vii): Bible - History Q.18(vii): Bible - Myths	0.3172	0.5457	0.4209 0.3518	0.3200
Q.18(viii): Bible - Stories	0.4736	0.5112	0.5585	0.4500
Q.18(ix): Bible - Useful teaching	0.4051	0.3989	0.3363	0.3100
text	0.4031	0.263	0.3439	0.5100
Q.18(x): Bible - Word of God	0.6312	0.0619	0.2245	0.2400
open to interpretation	0.0312	0.0017	0.2243	0.2400
Q.19(i): Read - Bible	0.7252	0.1163	0.1855	0.2700
Q.19(ii): Read - Quaker Faith and	0.7252	0.6094	0.8224	0.5100
Practice	0.0731	0.0071	0.0221	0.3100
Q.20(ii): Self - Christian	0.7772	0.1265	0.2483	0.2200
Q.20(iii): Self - Universalist	0.1734	0.1734	0.1734	0.0700
Q.20(vii): Self - Atheist	0.024	0.024	0.024	0.0500
Q.20(viii): Self - Buddhist	0.0351	0.0351	0.0351	0.0600
Q.20(ix): Self - Agnostic	0.0216	0.1816	0.0681	0.1000
Q.20(x): Self - Humanist	0.0369	0.2845	0.0543	0.1200
Q.20(xi): Self - Non-theist	0.0086	0.247	0.0859	0.0600
Q.20(xii): Self - Spiritual person	0.3855	0.1207	0.3561	0.3000
Q.21(i): Meeting for Worship -	0.595	0.0514	0.2034	0.2200
Praying				
Q.21(ii): Meeting for Worship -	0.1906	0.0145	0.0282	0.0500
Praising				
Q.21(iii): Meeting for Worship -	0.3733	0.4905	0.3703	0.4200
Meditating				
Q.21(iv): Meeting for Worship -	0.6861	0.6284	0.6558	0.5800
Listening				
Q.21(v): Meeting for Worship -	0.3233	0.1707	0.219	0.2500
Communing				
Q.21(vi): Meeting for Worship -	0.471	0.0007	0.1385	0.1100
Seeking God's will				
Q.21(vii): Meeting for Worship -	0.3547	0.0007	0.1646	0.1600
Seeking union with Divine				
·			·	

Q.21(viii): Meeting for Worship -	0.0424	0.0424	0.0424	0.0500
Sleeping				
Q.21(ix): Meeting for Worship -	0.2691	0.0003	0.0202	0.0400
Worshipping God				
Q.21(x): Meeting for Worship -	0.524	0.7588	0.5682	0.5000
Thinking				
Q.21(xi): Meeting for Worship -	0.6019	0.4468	0.5428	0.4500
Waiting				
Q.21(xii): Meeting for Worship -	0.7274	0.2002	0.6147	0.4200
Opening up to the Spirit				
Q.21(xiii): Meeting for Worship -	0.8073	0.4025	0.7856	0.5400
Being with others in Spirit				
Violence can be morally justified	0.0773	0.2131	0.1023	0.1700
(agree/strongly agree) <sup>c</sup>				
Human Nature (essentially good) <sup>d</sup>	0.0352	0.1335	0.0399	0.3500

<sup>&</sup>lt;sup>a</sup>Derived from Q.13c.

#### 3.4. Comparisons Across Time Periods

In order to address Aim 4, the methods outlined in Section 2.3.4 were utilized. Without full access to the original data sets, limited analysis could be done in terms of temporal comparisons of the survey over the three waves (1990, 2003, 2013). For items that were the same over all three questionnaires, proportions of positive responses were obtained. The proportions, along with sample size, were then used to calculate contingency tables by which differences could be tested for statistical significance (total n = 1732). The items which were found to have statistically significant differences (p < 0.05) between the years are documented in Table 8. This table reports the proportion of positive responses to each item in each year. Further to this, the location of difference was sought by extracting 2 × 2 contingency tables and applying the Bonferroni method of correction to the significance value. As such, the table also indicates between which years the significant difference was found. For example, the decrease seen in those attending Meeting considering themselves to be Christian was found to be statistically significant. This decrease was statistically significant across all years; the decrease between 1990 (52%) and 2003 (46%), the decrease between 2003 (46%) and 2013 (37%) and the decrease between 1990 (52%) and 2013 (37%) were all statistically significant differences. A somewhat different example was found in those considering themselves Universalist. Although the differences between 1990 (23%) to 2003 (19%) and 2003 (19%) to 2013 (16%) were not statistically significant, the marked decrease between 1990 and 2013 (from 23% in 1990 to 16% in 2013) was statistically significant. For some items a particular year appeared to be attributable to the statistical significance of difference across the years. For example, praying in Meeting for Worship had decreased significantly in 2013 compared to both of the previous years (29% in 2013, compared to 35% in 1990 and 34% in 2003).

<sup>&</sup>lt;sup>b</sup>Derived from Q.16c.

<sup>&</sup>lt;sup>c</sup>Derived from Q.30(ii).

dDerived from Q.31.

Likewise, this method of testing for difference allowed for inferences to be made about the significance of unusual patterns (unlike the alternative Cochran-Armitage [chi-square] test for trend). The 67% of those opening up to the Spirit in Meeting for Worship in 2003 represented a statistically significant peak in this activity compared to the years either side of it (60% in 1990 and 55% in 2013). Thought of another way, there was no statistical difference between those opening up to the Spirit in 1990 and 2013.

There are several differences and apparent trends that are of note for the current report. Along with a decrease in the number of Christians attending Meeting (as detailed in the preceding paragraph), the significant differences found in relation to belief in God is interesting. There is an apparent trend for those regularly attending Meeting for Worship to not believe in God. This can be seen in the statistically significant increase year on year of those reporting that they do not hold a belief in God (3% in 1990, 7% in 2003 and 15% in 2013). Activities that respondents reported they engaged in within Meeting for Worship seemed to reflect this lack of belief. For worshipping God in Meeting, there was a significant decrease in 2013 (to 9% from 17% in both 2003 and 1990). Compared to 1990, there has been a significant decrease in those seeking God's will in Meeting for Worship (from 33% in 1990 to 25% in 2003 and 20% in 2013). There has been a significant increase, compared to 1990, in those describing their activity in Meeting to be 'listening' (from 53% in 1990 to 66% in 2003 and 65% in 2013). Encouragingly, there was a statistically significant decrease in those sleeping (or at least admitting to sleeping) in Meeting for Worship between 2003 (7%) and 2013 (4%). There appears to have been a shift away from regarding Jesus as God made human (as seen in the significant decrease between 19% in 1990 to 14% in 2013) or containing that of God (as seen in the significant decrease between 64% in 1990 to 50% in 2013). Instead there appears to be more of a lean towards regarding Jesus as an ethical teacher, as seen in the significant increase between 2013 (54%) and the previous years (47% in 1990 and 42% in 2003).

In terms of demographic summaries, the prevalence of higher degrees (that is postgraduate, i.e. masters or doctoral degree) has increased year on year (17% in 1990 to 23% in 2003 to 32% in 2013). Whilst the proportion of those over the age of sixty has increased across the years (37% in 1990, 61% in 2003, 70% in 2013), the proportion of those under the age of thirty has significantly decreased since 1990 (10% in 1990, 2% in 2003, 5% in 2013), indicating an aging population. Proportions for the items that were available for comparison across the surveys but for which no significant change occurred are not reported here. These included considering oneself to be Quaker and considering Jesus to be a spiritual teacher.

There was no statistically significant change in describing prayer as meditation, daily life, recollection and opening up to the Spirit. In terms of Meeting for Worship, communing and seeking union with the Divine were not significantly different between the years. Likewise, the gender profiles of the groups responding to the surveys did not appear to change across the years.

#### 4. DISCUSSION

This section will further discuss the results obtained from the analysis of the survey data and the methods by which the data were obtained. Suggestions of future work are presented here, along with conclusions.

#### 4.1. METHOD, RESULTS AND FUTURE WORK

#### 4.1.1. Questionnaire

The questionnaire as a tool was an effective way, in terms of time and financial cost, to ascertain the beliefs and characteristics of a large number of Quakers. Although self-selection was possible, both at Meeting and on an individual level, the high response rate (nearly 80%) indicates that this sample should represent the population well. This is supported by the demographics of respondents being very similar to those found in national statistics for the Society (Friends House 2012). Unfortunately, there is no way of truly knowing with such postal surveys whether instructions are being followed. For example, it cannot be known if the clerks did follow the instructions for choosing participants. As such it is unknown whether the sample procedure is truly random. It can only be assumed, and not confirmed, that correct procedures were followed. There are several contributory factors to this. First, the respondents were asked publicly by their clerk (someone they know personally) to complete the questionnaire. This would have given the respondent a sense of ownership and responsibility. Further, if the instructions were followed by the clerks, they were reminded in subsequent weeks to complete and return the questionnaire. This may well have added to the social pressure to do so. Secondly, the content of the questionnaire was such that it reflected an ongoing national debate in the Society. Most members and attenders will be aware of this, at least to some extent, and so may have felt that completing the questionnaire would be worthwhile. Thirdly, more intangible than the other explanations is the idea of corporate identity.

Quakerism is very much about the individuals that make up the society and, although they do not discuss their beliefs as much as other groups, they are unlikely to regard such things as private. The testimony of integrity may well play a part here—Quakers are encouraged to speak their truth. Completing the questionnaire may well be one way of doing this. This is not necessarily true for all Quakers. One participant did send a blank questionnaire back with a note explaining the 'private' nature of their beliefs. Although great care was taken over the questions, and a pilot test conducted to trial the order and nature of the content, there were still some issues. Although a lot of the questionnaire measured similar concepts, some questions did appear to be asking too much of the same kind of thing, particularly Q.11, which measured the strength of spirituality, and Q.20(vii), which asked respondents whether they considered themselves to be a spiritual person. Although not overly detrimental to the questionnaire, it did increase time both for the respondents and in terms of inputting the data.

Although the questions were not side-by-side, repeating questions in this manner may irritate the respondents. Ultimately, Q.11 was excluded from these analyses because of this repeat measurement. The volume of free response questions also added to the time for organising the data. Although not used in the analyses included here, along with several of the other questions, these questions can be used in further research. Like other large surveys, the advantage of this survey data is that it can be used to investigate many future research questions. A particular problem arose with Q.36, measuring to what extent the respondent thought certain situations could be morally justifiable or otherwise. It was not considered to be an issue when divised, neither did the item present a problem for the pilot study participants. However, judging from the response overall, the item did appear to be contentious for this group. Many respondents had trouble with at least some aspects of the 20-part item, refusing to answer these items or spoiling their responses. Further investigation did reveal (and perhaps better reasoning whilst devising this item would have revealed) that there was reason to consider this missing data non-ignorable (Little and Rubin 1987). Perhaps unsurprisingly, Quakers take a virtue-based rather than a deontological approach to ethics (Scully 2009). This makes sense in a group where it is personal experience of truth that holds authority over external sources. Thankfully these questions came towards the end of the survey and so should not have had too much of an impact on the respondents' frame of mind for the majority of questions. A better way to investigate these questions may well be in a more in-depth way, whereby items are presented for discussion in context. Many respondents commented that they could not answer questions about the morality of behaviours without more information.

#### 4.1.2. Current findings and future research

The results will be discussed in terms of the research aims, wider Quaker Society and previous research. Whilst the research questions were all addressed in separate analyses it makes sense to discuss them in terms of how they relate to one another, as well as stand-alone pieces of analysis. Before any analysis was undertaken, decisions were made on how to determine what was meant by a Quaker. By including those who were 'merely' attenders, the number of cases for analysis was much larger than it would have been if analysis was conducted solely on those in membership. Additionally this better reflects the actual composition of those regularly attending Meeting for Worship—although the member/attender split, at 70% in membership and 29% attender, does not quite reflect the national makeup of the Society, with 62% members and 38% attenders. This may well be an artifact of the self-selection (in terms of actually responding) nature of the postal method used. Whilst the sampling method was not fully random, overall the sample appeared to represent the population. The proportion of female respondents (61%) reflects recent statistics collected about the whole of British Quakers in Britain Yearly Meeting showing 62% female members/attenders (Friends House 2012).

Table 8. Companisons in rengio		I	T	
Item	1990	2003	2013	Significant differences
	(%)	(%)	(%)	
Higher degree (postgraduate) <sup>a</sup>	16.6	23.1	32.7	Between all years
Age $\leq 30^b$	9.7	2.2	5.3	Between all years
Age $> 60^b$	36.6	61.3	70	Between all years
Q.20(ii): Self - Christian	51.5	45.5	36.5	Between all years
Q.20(iii): Self - Universalist	22.5	18.8	15.6	1990/2013
Q.13a: Belief in God - Yes	74.8	73.5	57.5	1990/2013, 2003/2013
Q.13a: Belief in God - Not sure	21.8	19.5	28.1	1990/2013, 2003/2013
Q.13a: Belief in God - No	3.4	7	14.5	Between all years
Q.14a(x): Jesus - containing God	63.3	49.1	50.2	1990/2003, 1990/2013
Q.14a(iv): Jesus - ethical teacher	46.9	42.1	53.8	1990/2013, 2003/2013
Q.14a(viii): Jesus - God made	19.2	17.1	13.9	1990/2013
human				
Q.16a(i): Prayer - talking to God	42.5	36.3	35	1990/2003, 1990/2013
Q.16a(ii): Prayer - asking God	12.6	8	7.4	1990/2003, 1990/2013
Q.14a(iii): Prayer - communion	32.2	25.5	30.2	1990/2003
Q.14a(iv): Prayer - seek guidance	60.6	50.4	52.2	1990/2003, 1990/2013
Q.14a(vii): Prayer - waiting	51.1	49.5	63.2	1990/2013, 2003/2013
Q.14a( viii): Prayer - praise	23.8	19.4	13.4	1990/2013,2003/2013
Q.14a(ix): Prayer - confession	22.9	14.8	10.2	Between all years
Q.14a(xi): Prayer - seeking	31.7	23.8	22.3	1990/2003, 1990/2013
healing				
Q.14a(xii): Prayer - thanksgiving	60.6	50.4	52.2	1990/2013, 1990/2013
Q.21(i): Meeting - praying	35.4	34	28.7	1990/2013, 2003/2013
Q.21 (ii): Meeting - praising	12.2	13.7	7.2	1990/2013, 2003/2013
Q.21(iii): Meeting - meditating	42.8	46.9	39.8	2003/2013
Q.21(iv): Meeting - listening	52.6	65.9	64.7	1990/2003, 1990/2013
Q.21(vi): Meeting - seek God's	32.6	25	20.2	1990/2003, 1990/2013
will				
Q.21(viii): Meeting - sleeping	5.8	7.3	4.3	2003/2013
Q.21(ix): Meeting - worshipping	17	17.3	8.6	1990/2013, 2003/2013
Q.21(x): Meeting - thinking	64.1	57.2	57.3	1990/2003, 1990/2013
Q.21(xii): Meeting - opening to	59.5	66.8	55	1990/2003, 2003/2013

Table 8. Comparisons in religious beliefs and attitudes between 1990, 2003 and 2013.

the Spirit

The results of the logistic regression for clerking responsibilities showed that membership status greatly increased the likelihood of having taken on these responsibilities. The decision to become a member presumably means that the individual is prepared to commit to and participate fully in the Society (Heron 1992). The concept of business being a process of seeking God's will (Britain Yearly Meeting 1995) was not a significant predictor of clerking responsibilities. On the other hand, considering prayer to be opening up to the Spirit was significant. It is beyond the scope of this study but this may just be an issue of language. Some individuals in the group, especially those from different religious

<sup>&</sup>lt;sup>a</sup>Derived from Q.40.

bDerived from Q.39.

backgrounds, may hold a concept of God that is not congruent with the Quaker view of God. God, the Spirit and the Inward/Inner Light are all variously used, often interchangeably, to describe essentially similar concepts. The language and phrasing of the questions and responses may well have caused individuals to respond negatively. Alternatively, perhaps there is a lack of recognition that Business Meetings are meant to be Meetings for Worship and so should consist of this opening up to the spirit (if that is what they believe to be prayer). To attempt to begin to understand the extent to which this is a language rather than a belief issue, results from the latent class analysis into Quaker beliefs may be of use.

The results of the latent class analysis may well be considered the main contribution of this paper. Whilst by no means clear in terms of model fitting, the eventual solution made sense heuristically. Considering previous work in the area, along with knowledge of the ongoing discussion more informally, three types of Quaker were identified. The Traditional and Liberal Quaker groups can be likened to similar groups (traditional and Inner Light) identified by analysis of the 2003 survey (Cary and Dandelion 2007). Unfortunately the analysis in this study could not be conducted on exactly the same belief variables. This was partly due to the wording of the question of how the respondent would describe God. In the 2013 survey this question was conditional and so not answered (or eligible to be answered) by all respondents, unlike the 2003 survey. This survey also had additional response items to some of these questions and whilst this enhances the detail and completeness of the measure it makes any direct comparison between the surveys less straightforward. The Liberal group being the largest is hardly surprising. It is this group that epitomises modern British Quakerism as understood by the literature. They appear to have some roots in Christian theology but are much less sure than their Traditional contemporaries. This uncertainty reflects the notion of the 'absolute perhaps' in Quaker theology (Dandelion 2008). This notion suggests that truth can only be partially experienced and that the spiritual life is a journey of seeking. Both the Liberal and Traditional groups are those one would expect to find at Meeting for Worship. The most important (apparent) development in Quaker identity lies in that of a discernible non-theist group. Whilst this group must have some interest in the spiritual or spirituality, they appear to have a lack of interest in traditional, and even modern, Quaker theology as understood by the literature. Unlike the Secularised group of the 2003 data, these Non-theists appear to have a distinct lack of belief in God. Returning to the issue of language, it is tempting to explain away this apparent lack of belief in God in terms of language used (that is, this group may believe in God but by a different name). However, this may be inappropriate. This group appears somewhat different to others who call themselves Quaker: as described in the results, they appear to be much less religious all round. This may be the group that Pilgrim referred to as Syncretists, rather than the 2003 Secularised group. Although only comprising of the group at present, this apparent new addition to those that call themselves Quaker is both alarming and surprising. Whilst a decision was made in this case only to include the religious belief and practice questions in building the

latent class model, future work might consider including covariates in the model-building process. Covariates were included in this analysis but only after the model was fitted, as descriptions of the classes found. This was considered appropriate, given the narrow focus of the research question. However, to get a more holistic sense of those attending Meeting, a latent class analysis using these covariates may be conducted. This may, or may not, yield different model solutions to those found in this study.

The analysis into prediction of membership suggested that those who were in the identified non-theist group were somewhat less likely than the others to be in membership. Whilst this appears to be a logical conclusion, the method by which this analysis was done may not be ideal. It may have been more appropriate to model membership status as a covariate in building the latent class model rather than extracting the modal class membership to use as a predictor. Using a probabilistic assignment to place individual cases into a single class may be considered less than ideal. It may be interesting to pursue, in future research, investigation of member and attender beliefs. How they differ may hold the key to understanding the disparity between the rising attender and declining member numbers within the society. Further research could also be undertaken examining differences between the data sets more thoroughly. The most striking difference found in the simple comparisons made in this analysis is the change in the belief in God. It would be interesting to investigate what factors this change is most attributable to. Unfortunately for the current paper, access to the full data sets was not possible. This is something that is likely to become available, opening up the way for more sophisticated analyses to be performed. There is suggestion that the elderly tend to be more devout (Dandelion 1996), with more recent generations more ready to challenge traditionally held belief and choose parts that suit them from a whole range of differing practices (Bourke 2003). As such, with access to the full data set for each year a multilevel model approach to an age-period-cohort analysis could be conducted. This would allow variation not only between the time periods accounting for birth year as well as age, but also the hierarchical nature of individuals being nested within Local Meetings, which are themselves nested within Area Meetings, could also be accounted for.

# 4.2. Conclusions

The questionnaire was and remains a useful tool by which to collect a large amount of data relatively quickly and cheaply. The length and detail of the one produced for this research, whilst not perfect, generated a large amount of useable, interesting data. The relatively large sample, representative of the Society, provided rich data with which to answer the research questions. The data set represents a good sample of those regularly attending Meeting for Worship and whose descriptive statistics alone shed light on issues of interest. The questions of Business Method and religious identity are, perhaps not totally, inadvertently related. Beliefs are borne out in action, a testimony of Quaker practice. Indeed, whilst the details of what Quakers believe are very diverse, perhaps the only underlying belief is that universal to all Quakers is that truth can only be obtained

through experience. Unfortunately this is not something that was directly addressed, or that may even be easily indirectly measured, through the questions asked. It useful to know that Quakers are prepared to answer such long questionnaires. Future work incorporating those items found to be lacking from this incarnation may well be able to be added to future questionnaires.

Quaker identity, in light of the identification of the Non-theist group, may well be considered a problem. This problem for the Society is at what point the diversity of beliefs found amongst those attending manifests itself as diversity of behaviour. As Dandelion stated in his work on the 1990 survey (Dandelion 1996), the behavioural creed that Quakers employ is the only way the group can be maintained. The danger of the Non-theist group, if their numbers keep increasing, is that this conservative approach to behaviour may be disrupted, so disrupting the unity of the group.

### **Notes**

\* Throughout this paper, various specific terms have been used. To ease the reading of the report, and for clarity, a few will be detailed and expanded upon here. Hence, throughout the paper those identifying as Friends will be referred to as Quaker. The term Quaker may refer to either members or attenders. Unless otherwise stated, references to Quakers or the Society refer to those in Britain.

The data from Dandelion's 1990 survey are available from the ESRC Data Archive. The 2003 data was made available through Pink Dandelion.

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#### References

Agresti, A., 2002, Categorical Data Analysis, Hoboken, NJ: Wiley, 2nd edn.

Bourke, R., 2003. Quaker Beliefs: Diverse yet Distinctive, Quaker Studies 7, pp. 227-38.

Bradney, A., and Cowie, F., 2000. Living without Law, Aldershot, UK: Ashgate.

Brierley, P., 1999. *Religious Trends* 1999/2000. No. 2, London: Christian Research Association.

Brierley, P., 2000. The Tide Is Running Out, London: Christian Research.

Britain Yearly Meeting, 1993. Quaker Faith and Practice: The Book of Christian Discipline of the Yearly Meeting of the Religious Society of Friends (Quakers) in Britain, London: Friends House.

Bruce, S., 2001. 'Christianity in Britain, R.I.P.', Sociology of Religion 62, pp. 191-203.

—2003. The Demise of Christianity in Britain', in Davie, Heelas and Woodhead (eds.), *Prediciting Religion*, pp. 53-63.

Burton, P.F., 2005. 'Keeping the Light Shining? The End of British Quakerism Revisited', *Quaker Studies* 9, pp. 249-56.

Cary, M.S., and Dandelion, P., 2007. 'Three Kinds of British Friends: A Latent Class Analysis', *Quaker Studies* 12, pp. 145-56.

Cary, M.S., Dandelion, P., and Rutherford, R., 2009. 'Comparing Two Surveys of Britain Yearly Meeting: 1990 and 2003', *Quaker Studies* 13, pp. 238-45.

- Cary, M.J., and Weber, A.L., 2007. 'Two Kinds of Quakers: A Latent Class Analysis', Quaker Studies 12, pp. 134-44
- Chadkirk, B., 2004. Will the Last (Woman) Friend to Leave Please Ensure that the Light Remains Shining?', *Quaker Studies* 9, pp. 114-19.
- Chadkirk, B., and Dandelion, P., 2008. 'Present and Prevented: A Survey of Membership Activity in Britain Yearly Meeting of the Religious Society of Friends (Quakers)', *Quaker Studies* 12, pp. 253-63.
- Dandelion, P., 1996. A Sociological Analysis of the Theology of Quakers, New York: Edwin Mellon.
- —2002. 'Those Who Leave and Those Who Feel Left: The Complexity of Quaker Disaffiliation', *Journal of Contemporary Religion* 17, pp. 213-28.
- —2004. 'Implicit Conservatism in Liberal Religion: British Quakers as an Uncertain Sect', *Journal of Contemporary Religion* 19, pp. 219–29.
- —'The Creation of Coherence', in P. Dandelion and P. Collins (eds.), *The Quaker Condition*, Newcastle: Cambridge Scholars Publishing, 2008, pp. 22-37.
- Dandelion, P., and Collins, P. (eds.), 2008. *The Quaker Condition: The Sociology of a Liberal Religion*, Cambridge: Cambridge Scholars Publishing.
- Davie, G., P. Heelas and L. Woodhead (eds.), 2003. Predicting Religion: Christian, Secular and Alternative Futures, Aldershot, UK: Ashgate.
- Friends House, 2012. *Tabular Statement: Supplement*, London: Friends House. Retrieved from wwvv.quaker.org.uk/files/Tabular-statement-2013-web.pdf.
- Gosling, S.D., Vazire, S., Srivastava, S., and John, O.P., 2004. 'Should We Trust Webbased Studies? A Comparative Analysis of Six Preconceptions about Internet Questionnaires', *American Psychologist* 59/2, pp. 93–104.
- Hagenaars, J.A., 1990. Categorical Longitudinal Data: Loglinear Analysis of Panel, Trend and Cohort Data, Newbury Park: Sage.
- Heelas, P., Woodhead, L., Sele, B., Szersynski, B., and Tusting, K., 2004. *The Spiritual Revolution: Why Religion Is Giving Way to Spirituality*, Oxford: Blackwell.
- Heron, A., 1992. Caring, Conviction, Commitment: Dilemmas of Quaker Membership Today, London: Quaker Home Service.
- —1999. Our Quaker Identity: Religious Society or Friendly Society? Kelso, UK: Curlew Productions.
- —2000. On Being a Quaker: Membership Past, Present and Future. Kelso, UK: Curlew Productions.
- —2001. The Future of British Quakers, Kelso, UK: Curlew Productions.
- Hosmer, D.W., and Lemeshow, S., 2000. Applied Logistic Regression, New York: Wiley.
- Ives, K., 1980. New Friends Speak: How and Why They Join Friends (Quakers). Chicago: Progressive Publisher.
- Kaplan, D. (ed.), 2004. The SAGE Handbook of Quantitative Methodology for the Social Sciences, Thousand Oaks, CA: Sage.
- Kish, L., 1965. Survey Sampling, New York: John Wiley.
- Little, R.J., and Rubin, D.B., 1987. Statistical Analysis with Missing Data. New York: Wiley.
- Magdison, J., and Vermunt, J.K., 'Latent Class Models', in Kaplan (ed.), *The SAGE Handbook of Quantitative Methodology*, pp. 175–98.
- Mickey, J., and Greenland, S., 1989. 'A Study of the Impact of Confounder Selection

- Criteria on Effect Estimation', American Journal of Epidemiology 129, pp. 125-37.
- Pilgrim, G., 'The Quakers: Towards an Alternate Ordering', in Davie, Heelas and Woodhead (eds.), *Predicting Religion*, pp. 206-25.
- Rindskopf, D., 2004. 'Trends in Categorical Data Analysis: New, Semi-new and Recycled Ideas', in Kaplan (ed.), *The SAGE Handbook of Quantitative Methodology*, pp. 137-50.
- Scully, J.L., 2009. 'Virtuous Friends: Morality and Quaker Identity', *Quaker Studies* 14, pp. 108-22.
- Stopher, P.R., 2012. Collecting, Managing and Assessing Data Using Sample Surveys, Cambridge: Cambridge University Press.
- Stroud, C., and Dandelion, P., 2004. 'British Quakers and a New Kind of End-time Prophecy', *Quaker Studies* 9, pp. 120-25.
- Vermunt, J.K., 1997. Log-linear Models for Event Histories, Thousand Oaks, CA: Sage.
- Vermunt, J.K., and Magidson, J., 2002. 'Latent Class Cluster Analysis', in J.A. Hagenaars and A. L. McCutcheon (eds.), *Applied Latent Class Analysis*, Cambridge: Cambridge University Press, pp. 89-106.
- Weening, H., 1997. *Basic Quaker Beliefs*. Retrieved from www.quaker.org.fwcc/EMES/booklet.html.
- Woodbrooke Quaker Study Centre, 2013. National Quaker Survey 2013: Believing, Belonging and Being in Britain Yearly Meeting: A Project to Better Understand our Shared Identity. Retrieved from http://www.woodbrooke.org.uk/pages/national-quaker-survey.html.

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# **British Quaker Survey 2013**

BQS

# Believing, Belonging and Being in Britain Yearly Meeting:

a project to better understand our shared identity

Dear Friend.

## Believing and Belonging in Britain Yearly Meeting

Many of us are very interested in where British Quakerism is at present and what its future may hold but we often lack very basic information about who we are and what we believe. This survey is a vital piece of that information-gathering. We are very grateful that you are taking the time to fill out this important survey.

There are five sections to the survey. In the first, we ask you about your religious background and upbringing, and your introduction to Quakerism. In the second, we ask about your religious beliefs. The third section explores your attitudes to Quaker practice, the fourth ideas about the world. The fifth section asks basic questions about yourself. Some questions have been borrowed from other surveys so we can compare Friends' responses with the wider population. We will also be undertaking a similar survey with adolescent Ouakers.

The survey is quite long and may take up to an hour to complete but previous experience is that many people have found it helpful in helping them think through their ideas. We hope and trust you find it and interesting and fulfilling exercise.

At the end, you can volunteer to be one of thirty people we hope to interview later in the year. All the results will be held anonymously and confidentially.

When you have finished, please put the survey in the enclosed freepost (no stamp required) envelope) and send it back to us. **We would like it back in the next two weeks.** 

Woodbrooke is planning to run courses based on the results and the information gathered could be very useful to all of us thinking about what it is to be a Quaker; we plan to produce a short booklet based on the survey and interviews which will go to every Meeting.

Please feel free to detach this page.

With many thanks,

Ben Pink Dandelion

For the Survey Group:
Simon Best; Bill Chadkirk; Peter Collins;
Pon Pink Dandelian, Jamifon Hammton and Giral

Ben Pink Dandelion, Jennifer Hampton and Giselle Vincett.

A	Initial experiences	Please do
	s first section we ask you about your religious background and upbringing, our introduction to Quakerism.	not write in this column.
1	What age were you when you first started regularly attending Quaker Meetings?	
		1
2	How long have you attended meeting on a regular basis?	2
	Less than six months Six months to one year One to three years Four to ten years Eleven to 25 years Over 25 years	(i) (ii) (iii) (iv) (v) (vi)
3	What was your religious upbringing?	3
4a religi	Did you come to Friends directly from another church or ous/meditational group/community?	
	□ No □ Yes (Please state which)	4a
4b	If yes, how often did you attend the previous group?	4b
5a	Are you actively involved with another religious/spiritual group?	
	□ No □ Yes (Please state which)	<i>5a</i>
5b	If yes, how often do you attend the group?	5b

What initially attracted you to Quakerism? (You may tick more than one box.)		
Peace and social testimonies/political viewpoint	6	
Form of worship	(i)	
Quaker way of life	(ii)	
Lack of religious dogma	(iii)	
Position of women within the group	(iv)	
Position of gays and lesbians within the group	(v)	
Quaker structure/lack of hierarchy	(vi)	
Company and friendship	(vii)	
Your own curiosity	(viii)	
A feeling of coming home	(ix)	
Quaker writings	(x)	
The idea of the inward light	(xi)	
Born into Quaker family/ attended as a child	(xii)	
Other (Please state below)	(xiii)	
	(xiv)	
Leaflets	7 (i)	
Books		
Family discussion/ upbringing	(ii)	
At children's meeting	(iii)	
In discussion after meeting	(iv)	
In discussion/study groups	(v)	
In discussion with Friends in their homes	(vi)	
Through Quaker Quest	(vii)	
At an enquirers' gathering	(viii)	
By writing to Friends house	(ix)	
Through ministry in Meeting for Worship	(x)	
Through reading 'The Friend'	(xi)	
Through attendance at a Quaker business meeting	(xii)	
By watching and listening to others	(xiii)	
At a social event	(xiv)	
Attending a Course	(xv)	
Other (Please state below)	(xvi)	
	(xvii)	
	(xvii)	

8	If you have spoken in Meeting for Worship, how long after you started attending meeting did this first happen?	
	Haven't spoken in meeting	8
	Less than two months	(i)
	Two - four months	(ii)
	Five months to a year	(iii)
	One to three years	(iv)
	Over four years	(v)
	•	(vi)
9a	How long was it after you started attending Meeting did you apply for membership?	Co
	(If you have never been a member, please go to question 10 instead.)	
	Opted into membership by my parents	9a
	Less than six months	(i)
	Six months to one year	(ii)
	One to three years	(iii)
	Four to ten years	(iv)
	Over ten years	(v)
		(vi)
9b	What age were you when you applied for membership?	
00	What was the main reason that led you to apply for membership?	9b
9c	what was the main reason that lea you to apply for memoership:	
		9c
10	If you have never been a member, what are your main reasons for not applying for membership?	
		10
		10
В	Your Religious Beliefs	
	s section we ask you about your religious beliefs and about your attitudes ds God, prayer, the Bible and Jesus.	
11	Do you consider yourself	
	Very spiritual	
	Moderately spiritual	(i)
	Slightly spiritual	(i)
	Not spiritual at all	(ii)
	1	(iii)
		(iv)

12	Do any of the following express important aspects of your spiritual awareness?		
	(You may tick more than one box.)		
	God	12	
	Love	(i)	
	Spirit	(ii)	
	Truth	(iii)	
	The Inward Light	(iv)	
	Connectedness/joining with all things	(v)	
	Transcendence	(vi)	
	Other (Please write in other terms below)	(vii)	
_	o mor (a reason write in other torms below)	(viii)	
13a	Do you believe in God?		
	□ Yes □ No □ Not sure		
		13a	
13b	If you believe in God, which of the following best describes God for you?  (You may tick more than one box.)	13b	
	A spirit	(i)	
	A being	(ii)	
	The inward light	(iii)	
	Love	(iv)	
_	Father figure Mother figure	(v)	
_	Person figure	(vi)	
	A life force	(vii)	
	A process	(viii)	
	Best not described	(ix)	
	Creative spirit	(x)	
	All loving	(xi)	
	All knowing	(xii)	
	All powerful	(xiii)	
	Unknowable	(xiv)	
	Capable of personal relationship	(xv)	
	A human construct	(xvi)	
	Other (Please write in other descriptions below)	(xvii)	
_	Caret (2.2000 mite in other depertures below)	(xviii)	

13c	Do į	you seek God's	s guidance ii	n m	iaking impor	tant decision	s ın yo	ur life?		
	Alw								13c	
	Ofte								(i)	
		netimes							(ii)	
	Rar								(iii)	
	Nev	er							(iv)	
									(v)	
14a	Whi	ich of the follo	wing best d	esci	ribes your vi	ew of Jesus?				
	(You	u may tick mo	re than one	bo:	x.)					
	Chr	ist							14a	
	The	son of God							(i)	
	Savi	iour							(ii)	
	An e	ethical teacher	•						(iii)	
	A sp	oiritual teache	r						(iv)	
	Just	t a person/not	special						(v)	
		inward light							(vi)	
	God	l made human							(vii)	
		mplary humar							(viii)	
	Con	taining that of	God within	as	we all do				(ix)	
	Oth	er (Please writ	e in other d	esc	riptions belo	w)			(x)	
									(xi)	
				• • • • • •						
14b	Is J	esus an impor	tant figure i	ın y	our life?					
		Yes			It varies			No		
									14b	
14c	Are	the teachings	of Jesus im	por	rtant in your	life?				
		Yes			It varies			No		
									14C	

15	Do you believe in?	
	(You may tick more than one box.)	15
	Ghosts	(i)
	Life after death	(ii)
	Karma	(iii)
	Magic	(iv)
	The possibility of contacting the spirits of the dead	(v)
	Horoscopes/ fortune tellers	(vi)
	The Devil	(vii)
	Heaven	(viii)
	Hell	(ix)
П	Religious miracles	(x)
	Nirvana	(xi)
	The supernatural powers of deceased ancestors	(xii)
	Re-incarnation, that is, that we are born into this world again	(xiii)
	Spirits of the natural world	(xiv)
	None of the above	(xv)
16a	Which of the following best describes what prayer is for you?	
	(You may tick more than one box.)	16.0
		16a
	Talking to/listening to God	(i)
	Asking God to change things	(ii)
	Seeking communion with the divine	(iii)
	Seeking enlightenment/guidance	(iv)
	Meditating	(v)
	Daily life	(vi)
	Still and silent waiting	(vii)
	Praise	(viii)
	Confession	(ix) (x)
	Recollection	(xi)
	Seeking healing	
	Thanksgiving	(xii)
	Opening to the Spirit	(xitt)
	Tuning in to the consciousness of all around you	(xv)
	Other (Please write in other descriptions below)	(XU)
		•••
16b	In your experience can prayer affect the way that things are on earth?	
	No   Not sure   Yes	16b
	If yes, can you say in what way?	

	Every day	16c
	Several times a week	(i)
	Approximately once a week	(ii)
	Approximately once a month	(iii)
	Approximately every 2-3 months	(iv)
	Less often than every 2-3 months	(v)
	It varies a lot	(vi)
	Constantly	(vii)
	Never	(viii)
		(ix)
17	Do you believe that a lucky charm such as a mascot or talisman can protect or help you?	
Defi	nitely no Definitely yes	
	1 2 3 4 5 6 7 8 9 10	
		17
18	Which of the following best describes your view of the Bible? (You may tick more than one box)	,
]	The literal word of God	18
	The final word of God	(i)
	The word of God as experienced by its writers	(ii)
	The word of God in that all words are God-given	(iii)
	A book of authority for belief in God	(iv)
	A book of history	(v)
	A book of myths	(vi)
]	A book of stories	(vii)
	A useful teaching text	(viii)
	The word of God ever open to new interpretation	(ix)
	Other (Please write in other descriptions below)	(x)
		(xi)
19	What do you read to nurture your spiritual life?	
	The Bible	19
3	The Bible Quaker Faith and Practice	19 (i)
]	The Bible Quaker Faith and Practice Advices and Queries	_
	The Bible Quaker Faith and Practice	(i)
19	The Bible Quaker Faith and Practice Advices and Queries	(i) (ii)

20	Do you think of yourself as a	
	(You may tick more than one box.)	20
	Quaker	(i)
	Christian	(ii)
	Universalist	(iii)
	Pagan	(iv)
	Muslim	(v)
	Jew	(vi)
	Atheist	(vii)
	Buddhist	(viii)
	Agnostic	(ix)
	Humanist	(x)
	Non-Theist	(xi)
	Spiritual person	(xii)
	Other (Please state below)	(xiii)

Qua	nis section we ask you about your attitudes towards, and ideas about kerism, Meeting for Worship, your involvement in the wider structure of ain Yearly Meeting, and Quaker Business Method.	
21	What kind of activity best describes what you usually do in Meeting for Worship?	
	(You may tick more than one box.)	21
	Praying	(i)
	Praising	(ii)
	Meditating	(iii)
	Listening	(iv)
	Communing	(v)
	Seeking God's will	(vi)
	Seeking union with the Divine	(vii)
	Sleeping	(viii)
	Worshipping God	(ix)
	Thinking	(x)
	Waiting	(xi)
	Opening up to the Spirit	(xii)
	Being with others in the Spirit	(xiii)
П	Other (Please write in other descriptions below)	(xiv)

What is the main factor that keeps you coming to Meeting?	22
Is the way Quakers make decisions important to you?	
□ Yes □ No	
What do you understand as the Quaker business method?	23
(You may tick more than one box.)	
Seeking the will of God	24
Seeking the sense of the meeting on a particular issue	(i)
Finding a consensus	(ii)
A useful process	(iii)
A process of trust	(iv)
A good idea	(v)
Other (Please state below)	(vi)
	(vii)
Which body of Friends do you feel most part of?	
(You may tick more than one box.)	
Local meeting	25
Area Meeting	(i)
Regional Gathering/ General Meeting	(ii)
Yearly Meeting	(iii)
Young Friends General Meeting	(iv)
The world family of Friends	(v)
A listed informal group.	(vi)
Please state which:	(vii)
None	
Other (Please state below)	(viii)
	(vix)

26a	Which po	rts of th	e Quak	er wor	ld have	you be	een act	ively (	engaged with?	
	(You may	j tick mo	re thar	one b	ox.)					26a
	Local me	eting								(i)
	Area Mee	_								(ii)
	Regional	Gatherii	ng/ Ger	eral M	leeting					(iii)
	Yearly Mo	eeting								(iv)
	Young Fr			,	3					(v)
	The world			ıds						(vi)
	A listed in									(vii)
	(Please st		,			•••••				(viii)
	Other (Pl									(UIII)
					•••••	•••••	•••••	•••••	•••••	
	•••••				•••••	•••••	•••••	•••••		
	•••••				•••••	•••••	•••••	• • • • • • • • • • • • • • • • • • • •		
26b	What rol	os hano i	uou heli	d2						
200	(e.g. Loca	,	_		Meetir	na Trea	ısurer e	etc.)		26b
	(0.900		-9	-,		-9		,		200
	•••••		•••••		•••••	•••••	•••••	• • • • • • • • • • • • • • • • • • • •	•••••	
	•••••					•••••	•••••	•••••		
						•••••	•••••		•••••	
27	Do you p (Please c				financio	ally to				
Local	Meeting:									
	Not at all	Max	. + la l + +	0,,,,	ut ouls	A		Log	s often	27(i)
	Not at all	MOI	nthly	Qua	rterly	AllIII	ually	Les	s often	-/(5
Area	Meeting:									
	Not at all	Moi	nthly	Qua	rterly	Ann	ually	Les	s often	27(ii)
Yearl	y Meeting:									
	Not at all	Moi	nthly	Qua	rterly	Ann	ually	Les	s often	27(iii)
Other	r Quaker pı	ojects?:								
	Not at all	Moi	nthly	Ona	rterly	Ann	nally	Les	s often	27(iv)
				~			,	_50		
28		itual jou	ırney b	-			-		an be helped in erience of other	
Def	finitely								Definitely	
	no								yes	
	1 2	3	4	5	6	7	8	9	10	28

29				loes bei 1 vote, s					eryday	ı life?	
De	finitely	,								Definitely	
	no									yes	
	1	2	3	4	5	6	7	8	9	10	
											29
D	Idea	s abo	ut the	Worl	d						
				u more world.		al ques	tions a	bout yo	our idea	as about hui	man
30	Pleas	se indi	cate to	what e	extent	you ag	ree wit	th these	staten	nents	
'In ce	rtain c	ircum	stance	s, breal	king th	e law c	an be n	norally	justifie	ed'	
	irmly sagree									Firmly agree	
	1	2	3	4	5	6	7	8	9	10	
'In ce	rtain c	ircum	stance	s, viole	nce cai	n be mo	orally ju	ustified	<u>'</u>		30(i)
	irmly sagree						. ,			Firmly agree	
	1	2	3	4	5	6	7	8	9	10	
											30(ii)
31	Whic	h of tl	ne follo	wing b	est des	scribes	your v	iew of	human	nature?	
		ntially	bad								31
	Impe					11	,				(i) (ii)
				ly bad n	or esse	entially	good				(iii)
		ntially	_	ood an	d oggar	atiolly l	and				(iv)
			a view		u essei	itially i	Jau				(v)
				te belov	w)						(vi)
_		. (pice			•						(vii)
32			-		-		_		-	ing truly you think i	t is?
	Very	impoi	rtant								32
		y impo									(i)
	Not v	ery in	nporta	nt							(ii)
	Not i	mport	ant at	all							(iii)
		+ 1rm or	.7								(iv)
	Don'	t Knov	v								(v)

33 Some people think that women are still not treated equally in British society, while others think that efforts to change the status of women have gone too far. Which of the statements below comes closest to your opinion? More should definitely be done to promote equality More should probably be done to promote equality П Changes have probably gone too far Changes have definitely gone too far Don't know

Are you involved with any of the following or do paid work for any of 34a them? (You may tick as many as apply.)

Social welfare services for the elderly, handicapped or deprived people П Religious or church organisations (including Quakers) Education, arts, music or cultural organisations 

Trade unions П Political parties or groups П П

П

Local community action on issues like poverty, employment, housing, racial equality

Conservation, the environment, ecology, animal rights Professional associations Youth work (e.g., scouts, guides, youth clubs)

Third world development or human rights

Sports or recreation П Women's groups Peace movement 

Voluntary organisations concerned with health Other groups

П None

Do you consider this involvement to be part of your Quaker identity? 34b Yes No Not sure

Some people live with partners of the same sex. Using the statements 35

below, please say whether you approve or disapprove of laws that treat

Strongly approve П П Approve

these partnerships somewhat like marriage?

Neither approve nor disapprove 

Disapprove

Strongly disapprove Don't know

(xvi)

34b

34a

34a

Please mark for each of the following whether you think it can never be justified, always be justified, or something in between, using the scales. Claiming state benefits to which you are not entitled: Never Always Never Always Taking and driving away a car belonging to someone else (joyriding):

Cheating on tax if you have the chance:

Never

Taking the drug marijuana or hashish:

Married men/women having an affair:

Someone accepting a bribe in the course of their duties:

Euthanasia (terminating the life of the incurably sick):

Never

Never

Never

Never

Homosexuality: Never

Abortion: Never

Divorce: Never

Never

Never

Suicide:

Lying in your own interest:

Always

36(i)

36(iii)

36(iv)

36(v)

36(vi)

36(vii)

36(viii)

36(ix)

36(x)

36(xi)

36(xii)

36(ii)

Paying ca Never	sh for	service	s to av	oid tax	es:				Always	
1	2	3	4	5	6	7	8	9	10	< ( !!!)
Having ca Never							0		Always	36(xiii)
1	2	3	4	5	6	7	8	9	10	36(xiv)
Avoiding Never	a fare	on pub	lic tran	isport:					Always	
1	2	3	4	5	6	7	8	9	10	06(201)
Prostituti Never	on:								Always	36(xv)
1	2	3	4	5	6	7	8	9	10	
Scientific	experi	ments	on hur	nan en	ıbrvos:	:				36(xvi)
Never	2	3	4	5	6	7	8	9	Always 10	
Genetic n				-		/	Ü	7	10	36(xvii)
Never	_						0		Always	
1	2	3	4	5	6	7	8	9	10	36(xviii)
Artificial Never	insemi	nation	or in-v	vitro fe	rtilizat	ion:			Always	3*(
1	2	3	4	5	6	7	8	9	10	
Death per Never	nalty:								Always	36(ixx)
1	2	3	4	5	6	7	8	9	10	
_	_	J	,	0		,				36(xx)
37 Gene (Please ci					rned a	re you	about e	enviror	nmental issues?	
Not at al	1							Very		
concerne	Concerned									
1		2		3		4		5		37
E Abou	ıt You	ı								
In this fin	al sect	ion we	ask yo	u some	e quest	ions al	oout yo	urself.		
38 Gend	er									
38										
39 Ageyears					20					

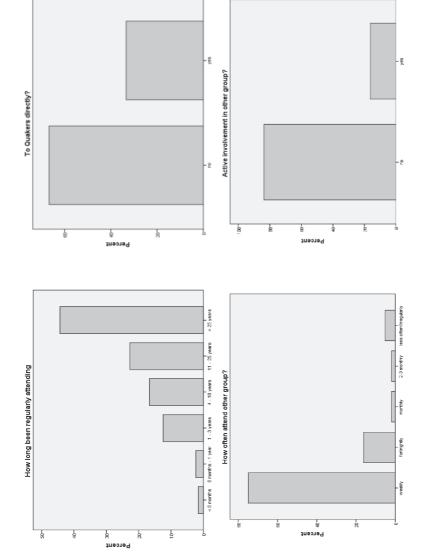
10	Education (Please indicate what educational qualifications you have	
	obtained.)	40
	None	(i)
	CSE/O-level/GCSE/Standards	(ii)
	A-levels/Highers	(iii)
	Degree	(iv)
	Masters	(v)
	Doctorate	(vi)
	Other post-school qualifications (Please state below.)	(vii)
1	Among which group would you place yourself?	41
		(i)
	High income	(ii)
	Middle income	
	Lowincome	(iii)
	Don't know	(iv)
2a	Which type of job did you have in your first job after leaving full-time	
	education?	42a
	Professional and technical	(i)
		(ii)
	Manager and administrator	(iii)
	Clerical	(iv)
	Sales	(v)
	Service	(vi)
	Skilled manual	(vii)
	Semi-skilled or unskilled manual	(viii)
	Farm worker	
	I have never had a job	(ix)
	Can't say	(x)
2b	Which type of job did your father have when you were 16?	42b
	Professional and technical	(i)
	Manager and administrator	(ii)
	Clerical	(iii)
	Sales	(iv)
	Service	(v)
	Skilled manual	(vi)
	Semi-skilled or unskilled manual	(vii)
	Farm worker	(viii)
		(ix)
	He never had a job	(x)
	No Father/Father not present	(xi)
	Can't remember/can't say	(AU)

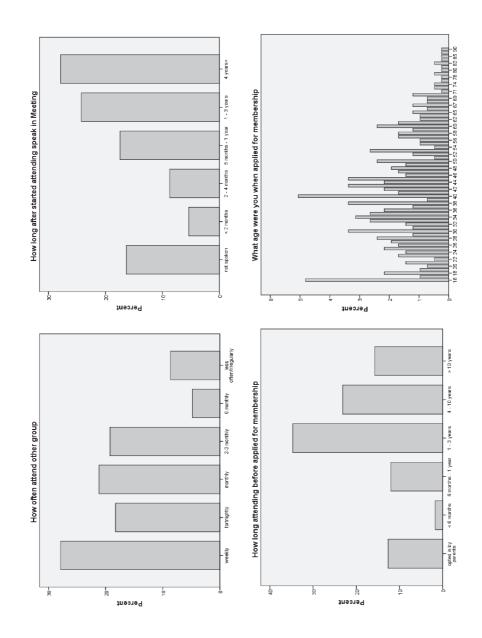
42c	Which type of job did your mother have when you were 16?		
П	Professional and technical	42c	
	Manager and administrator	(i)	
	Clerical	(ii)	
	Sales	(iii)	
	Service	(iv)	
	Skilled manual	(v)	
	Semi-skilled or unskilled manual	(vi)	
	Farm worker	(vii)	
	She never had a job	(viii)	
	No Mother/ Mother not present	(ix)	
	Can't remember/can't say	(x)	
	,	(xi)	
42d	Which type of job do you have now in your current job?	()	
	Professional and technical	42d	
	Manager and administrator	(i)	
	Clerical	(ii)	
	Sales	(iii)	
	Service	(iv)	
	Skilled manual	(v)	
	Semi-skilled or unskilled manual	(vi)	
	Farm worker	(vii)	
	I have never had a job	(viii)	
	Retired	(ix)	
	Can't say	(x)	
	Currently unemployed	(xi)	
		(xii)	
43a	How would you describe your national identity? (Please tick all that apply.)		
	English	43a	
	Welsh	(i)	
	Scottish	(ii)	
	Northern Irish	(iii)	
	British	(iv)	
	Other (Please state below)	(v)	
		(vi)	

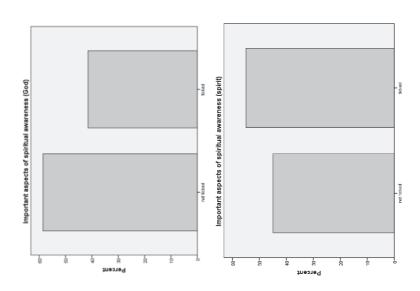
71.	White	43b
]	English / Welsh / Scottish / Northern Irish / British	A A
]	Irish	(i)
]	Gypsy or Irish Traveller	(ii)
]	Any other White background. (Please write below)	(iii)
		(iv)
В.	Mixed / multiple ethnic groups	
]	White and Black Caribbean	В
]	White and Black African	(i)
]	White and Asian	(ii)
]	Any other Mixed / multiple ethnic background. (Please write below)	(iii)
		(iv)
C	Asian / Asian British	
· C.	Indian	~
]	Pakistani	C
]	Bangladeshi	(i) (ii)
_	Chinese	(iii)
]	Any other Asian background. (Please write below)	(iv)
		(v)
		(-)
D.	Black / African / Caribbean / Black British	
]	African	D
]	Caribbean	(i)
]	Any other Black / African / Caribbean background. (Please write below)	(ii)
		(iii)
E.	Other ethnic group	
]	Arab	E
]	Any other ethnic group. (Please write below)	(i)
		(ii)

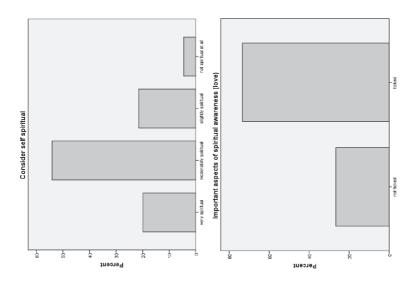
## Thank you for your help!

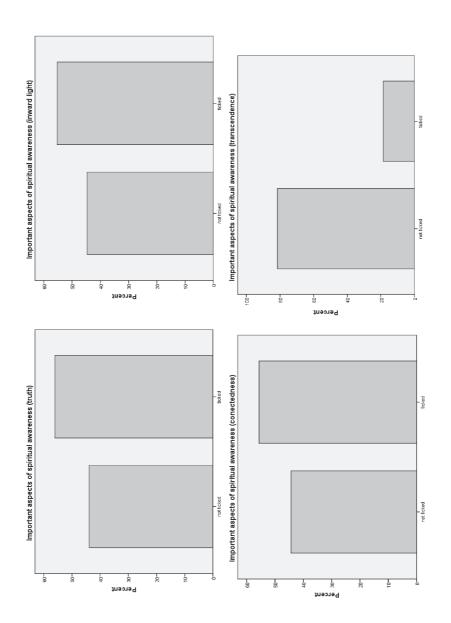
If you would	be prepared to be interviewed, please fill in the following
Name	
Address	
Mobile or ev	ening phone number
Email addre	ss

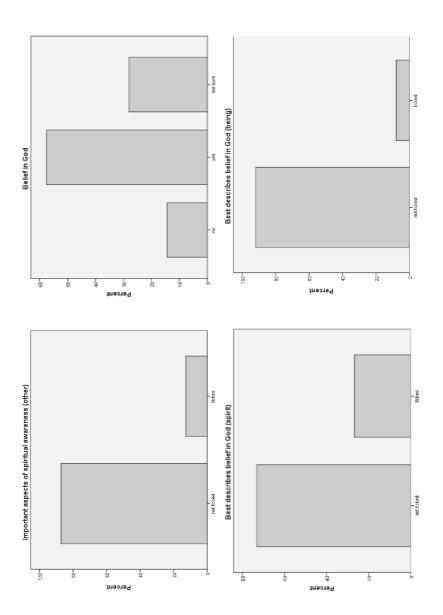


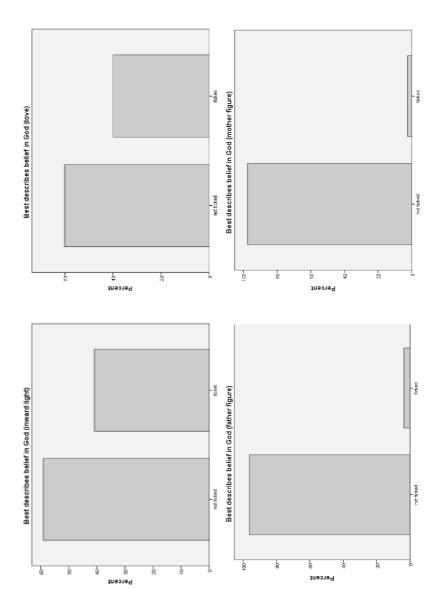


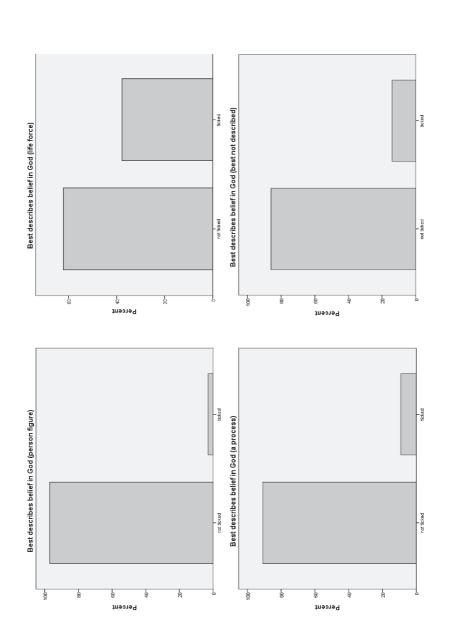


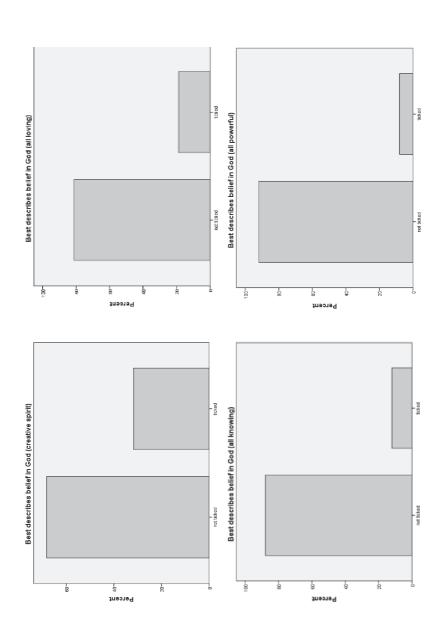


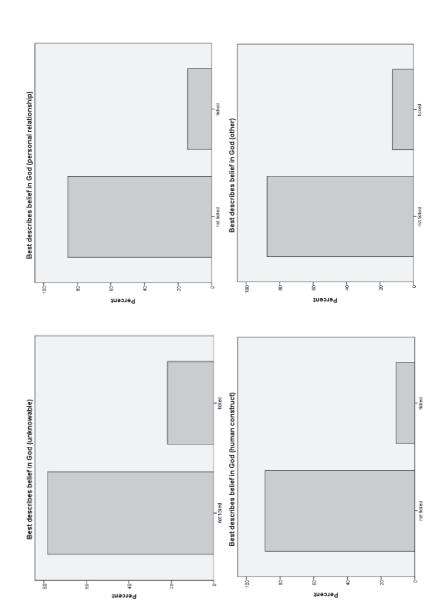


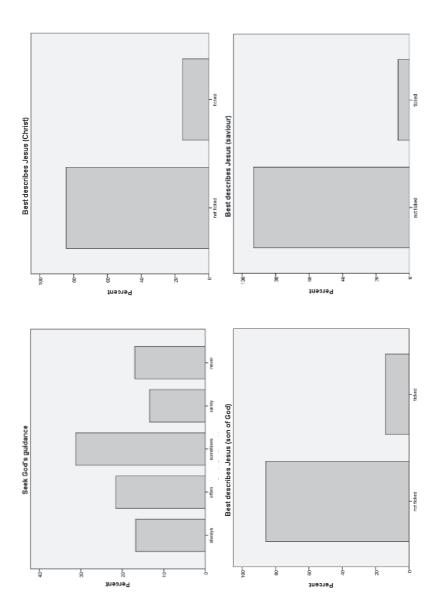


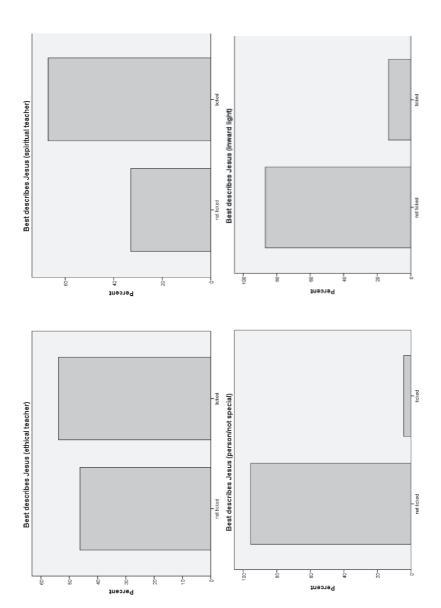


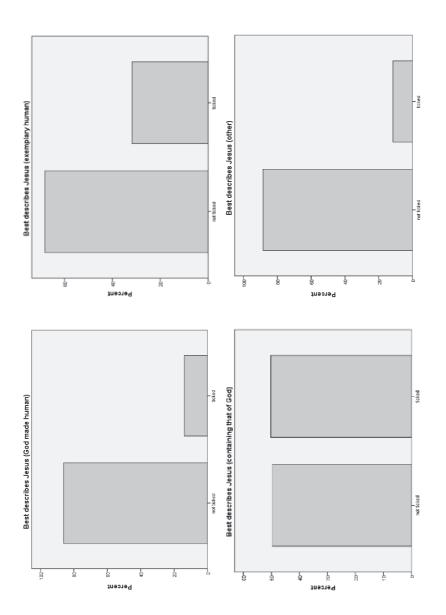


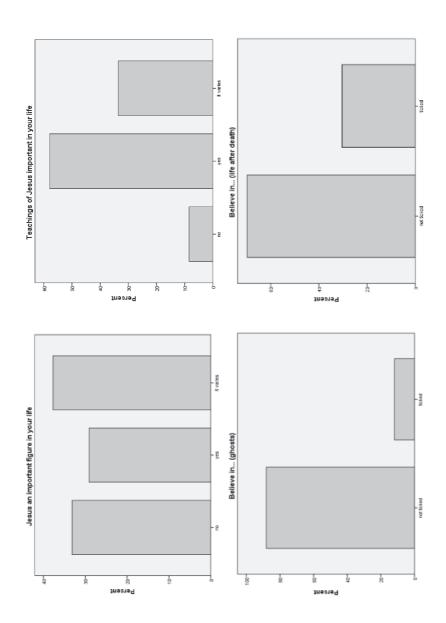


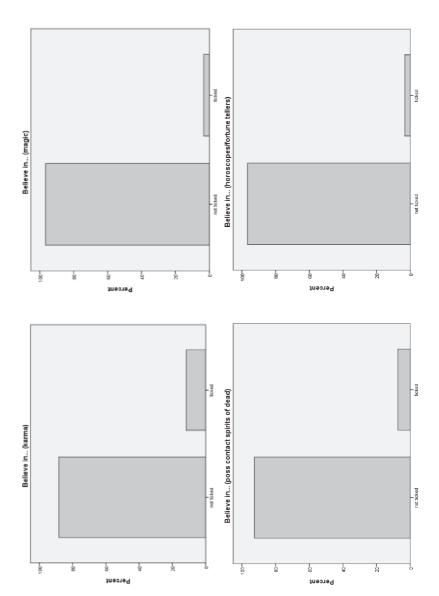


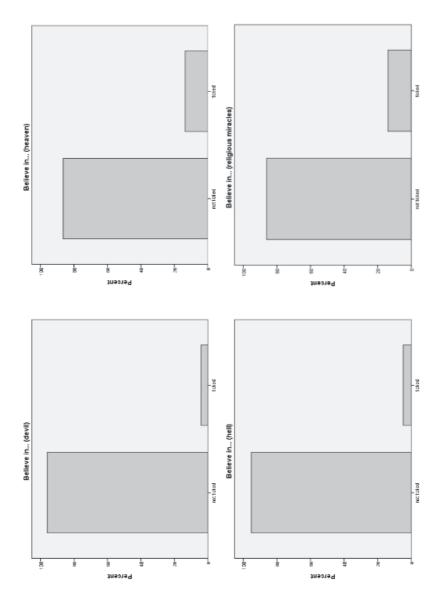


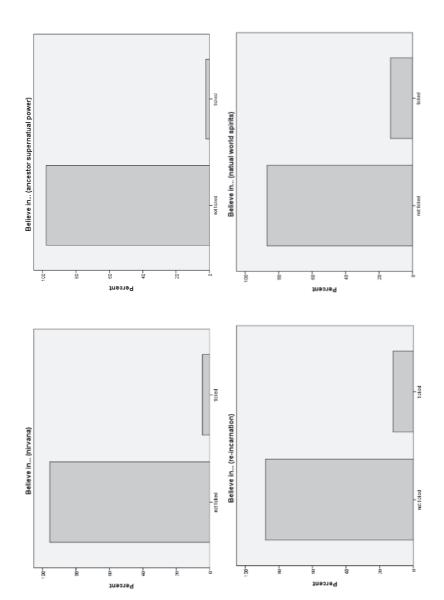


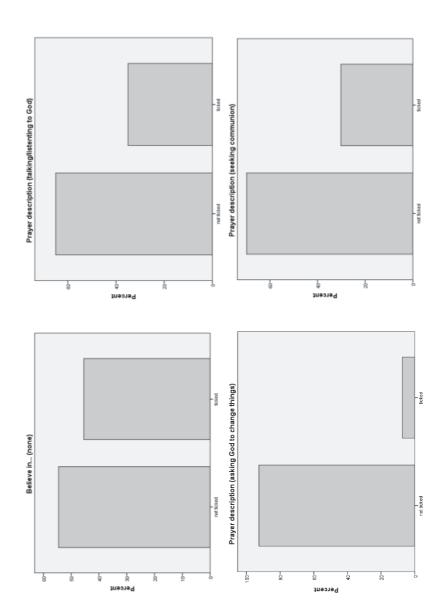


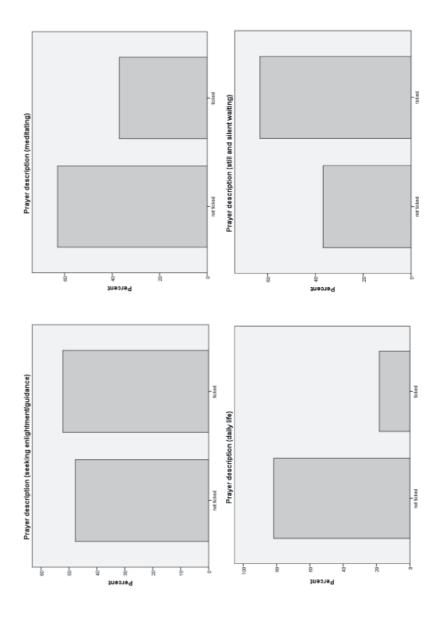


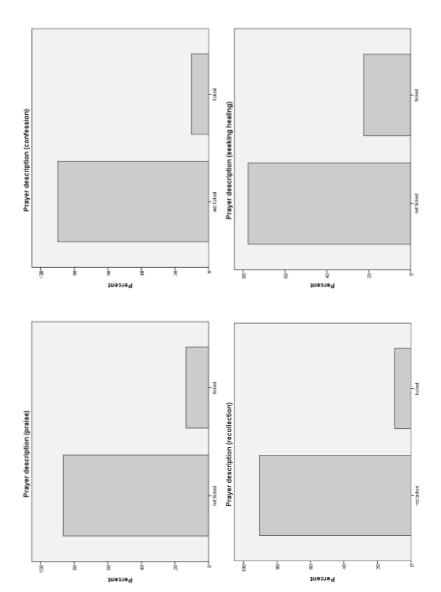


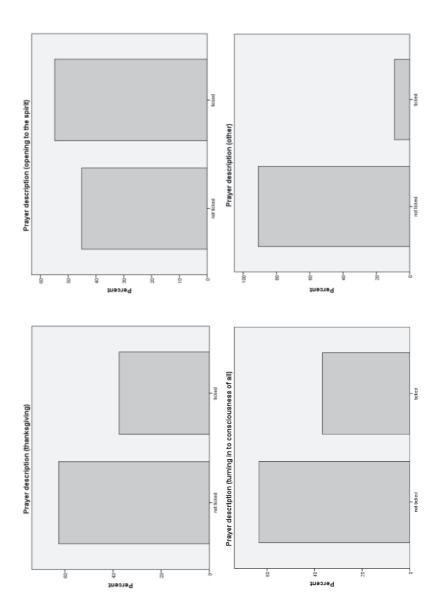


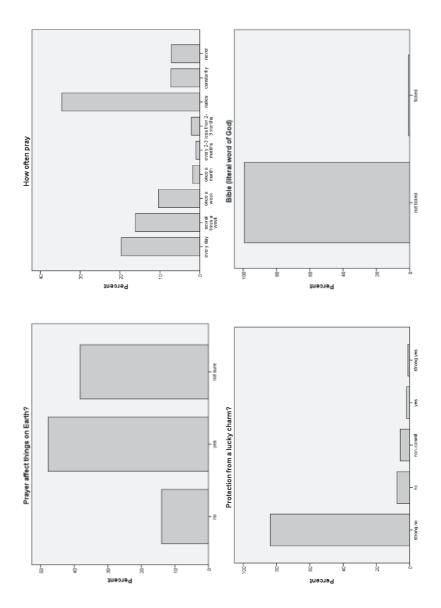


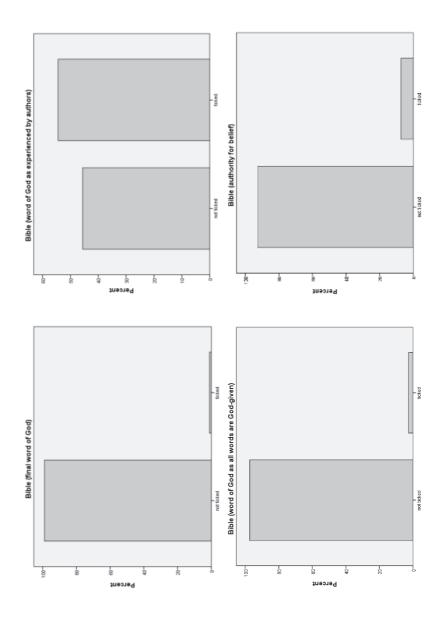


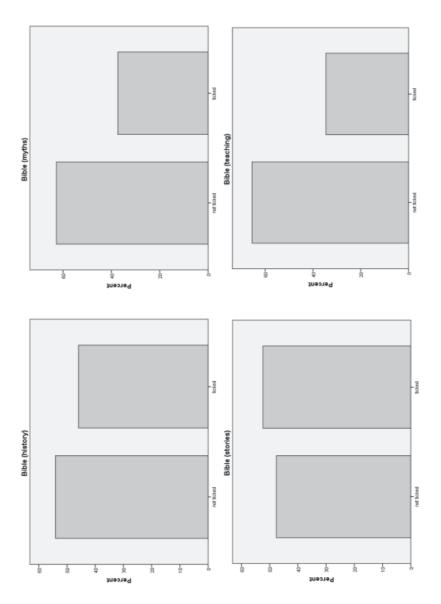


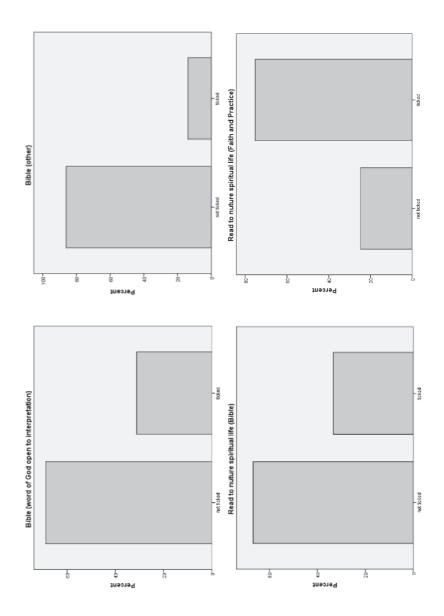


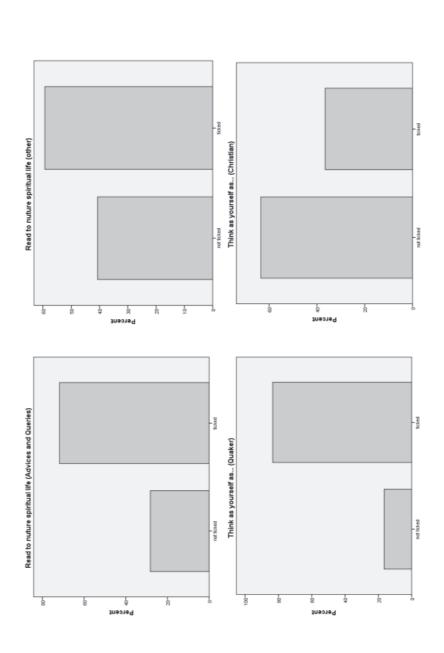


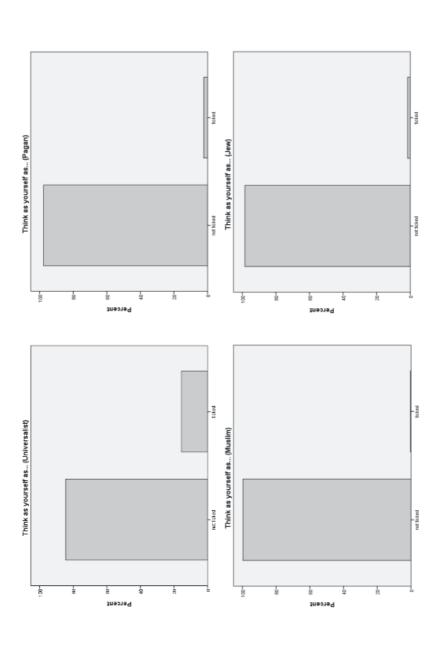


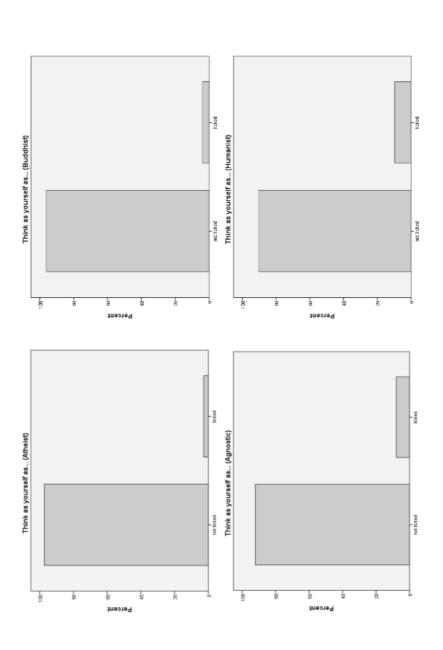


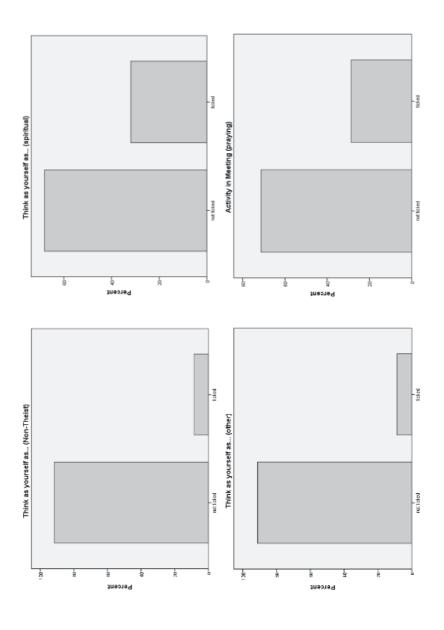


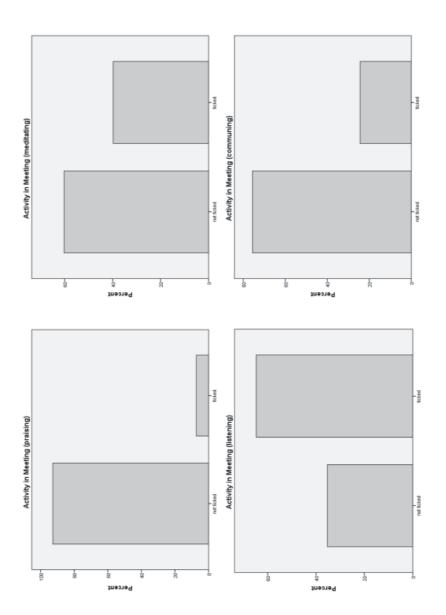


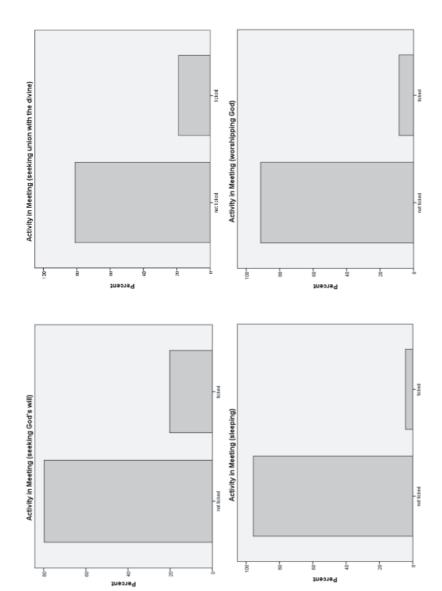


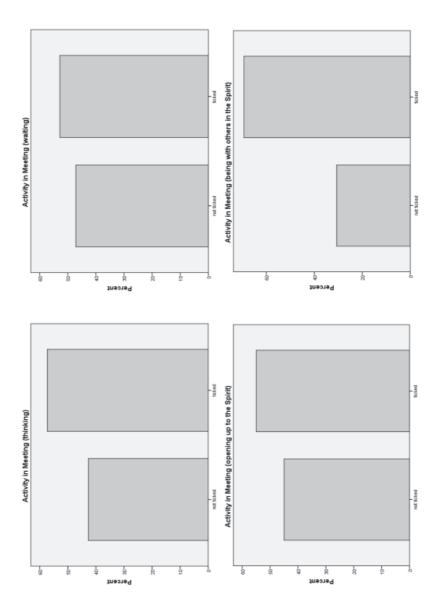


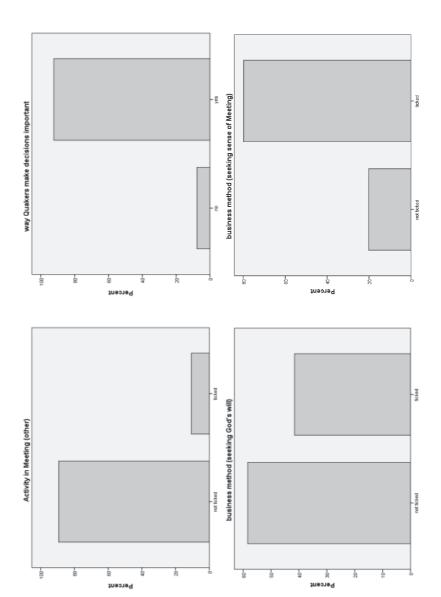


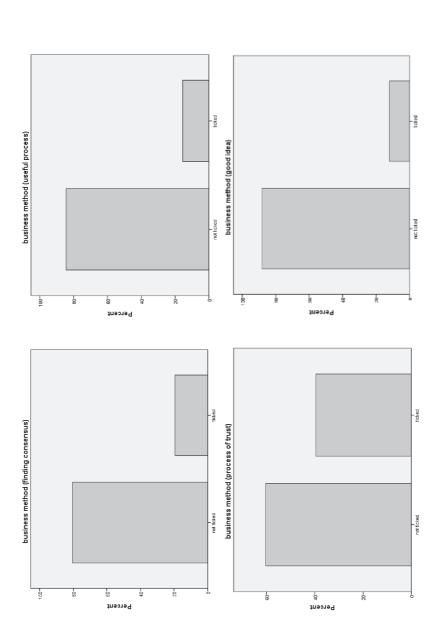


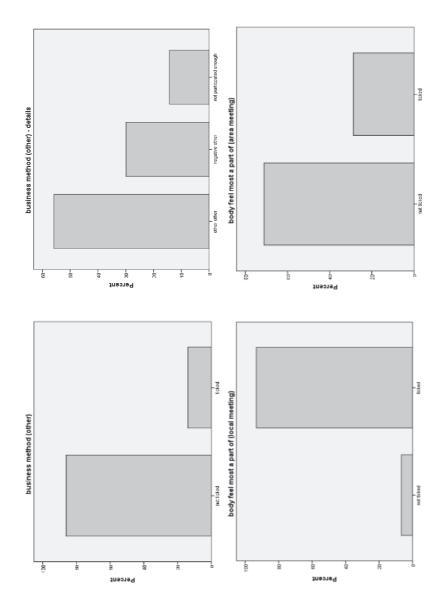


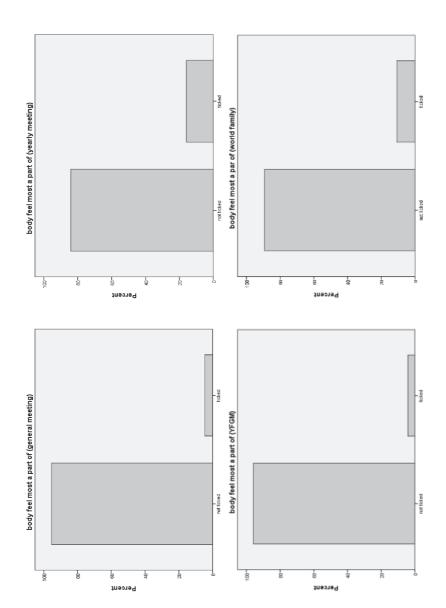


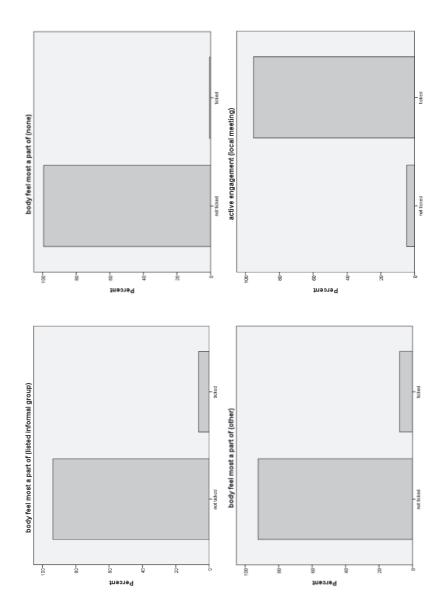


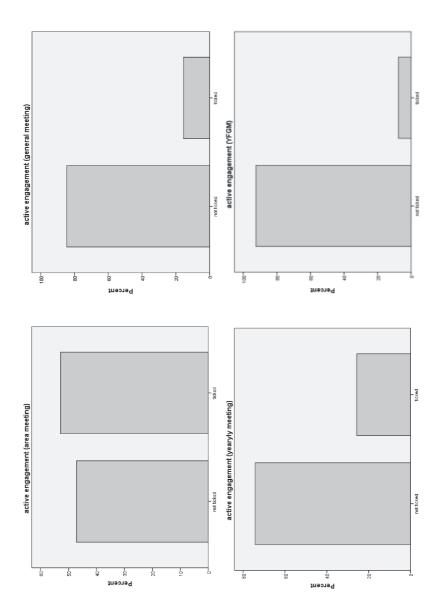


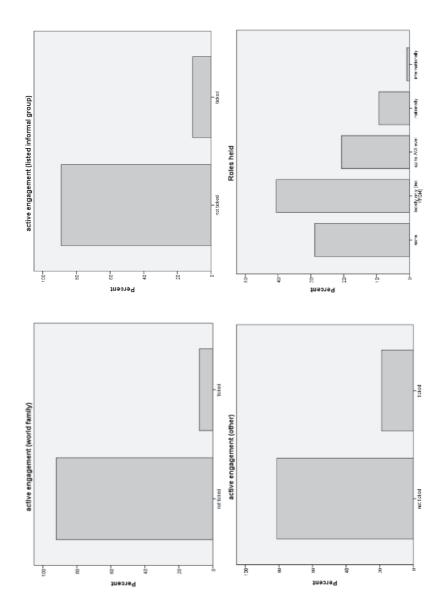


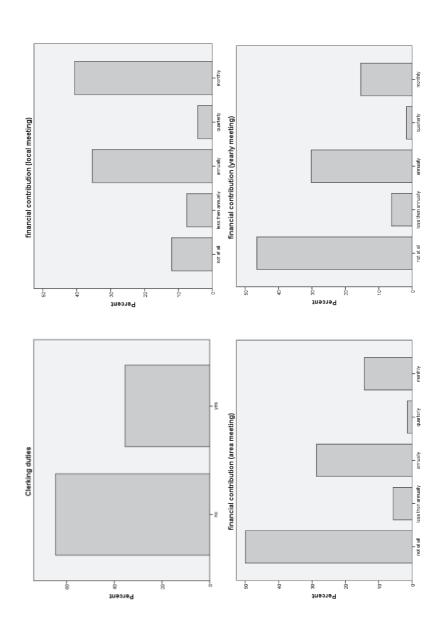


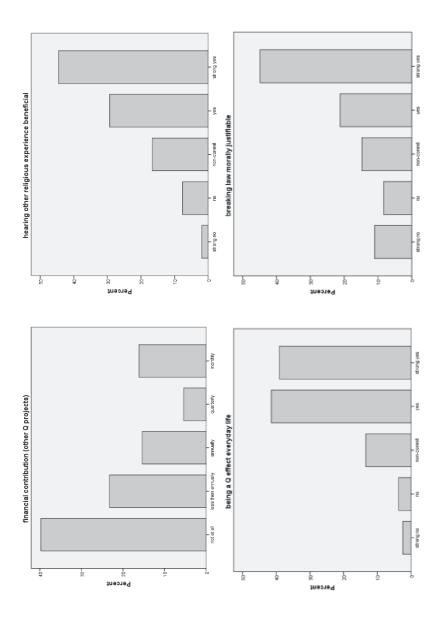


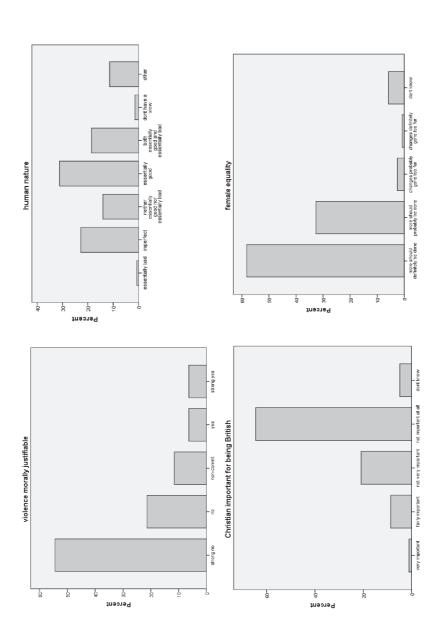


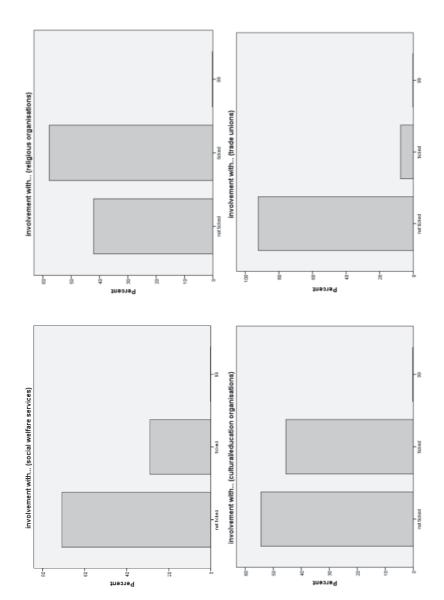


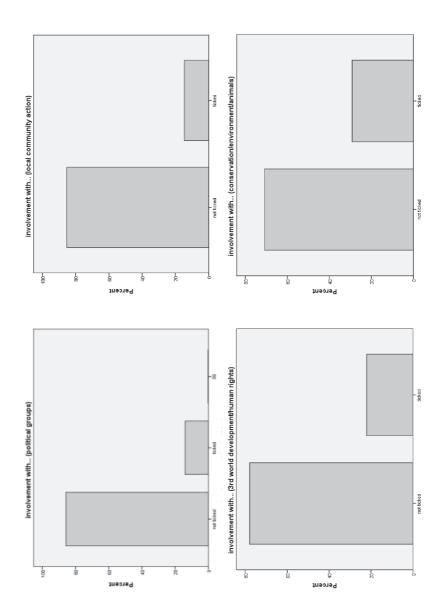


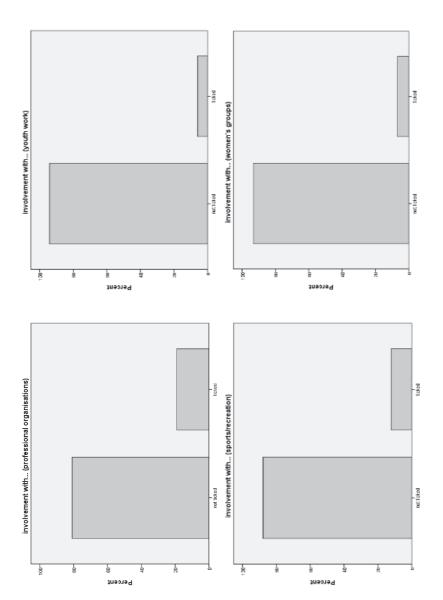


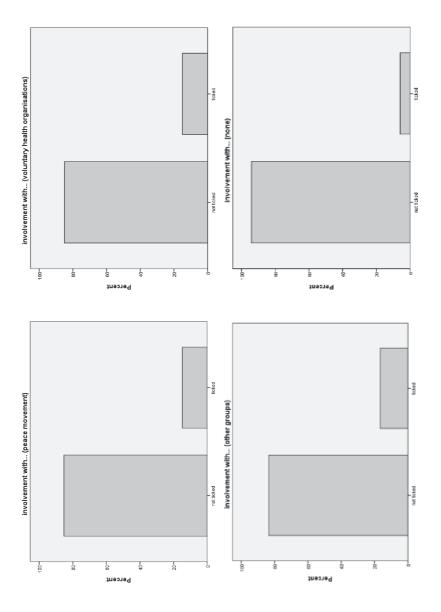


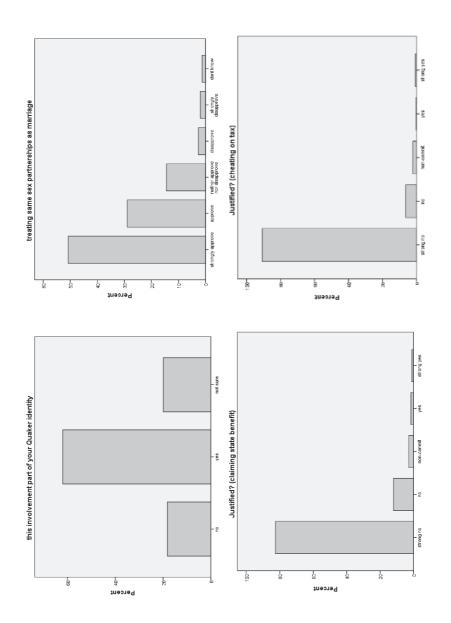


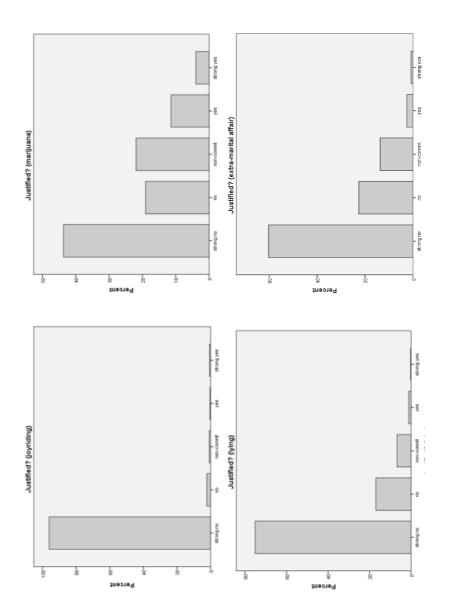


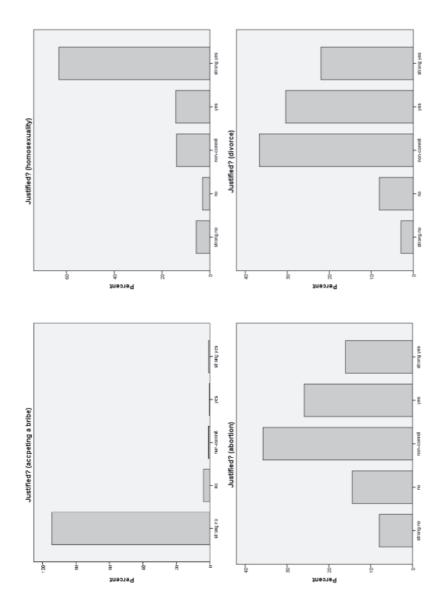


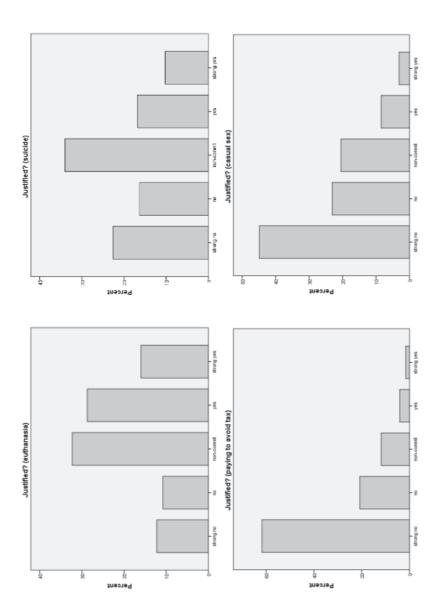


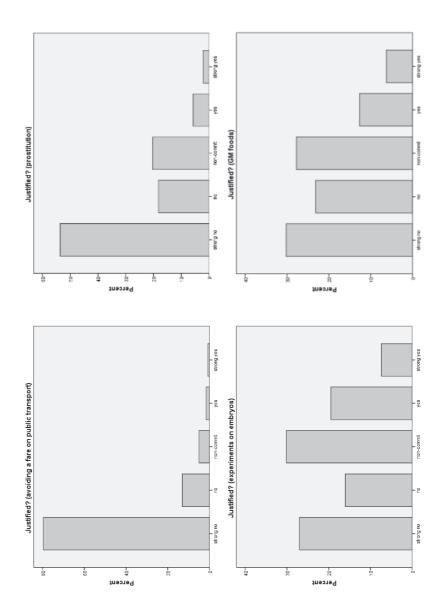


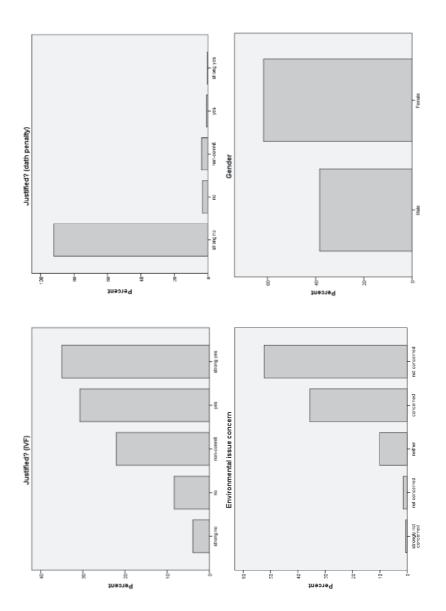


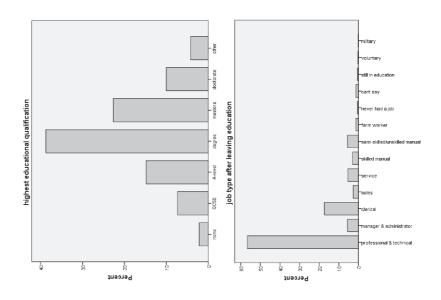


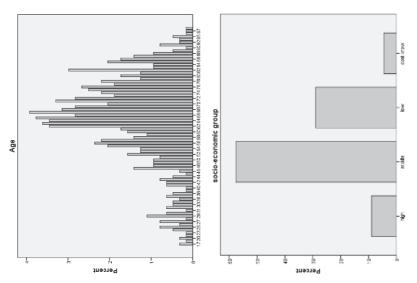


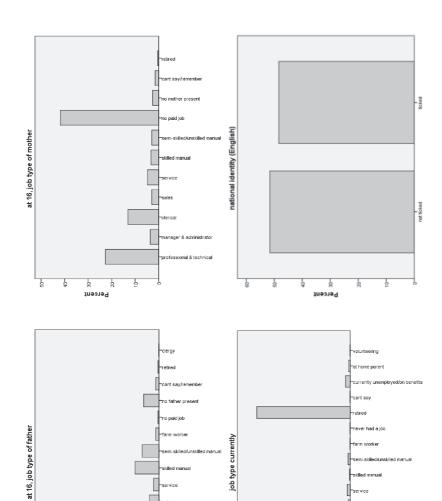








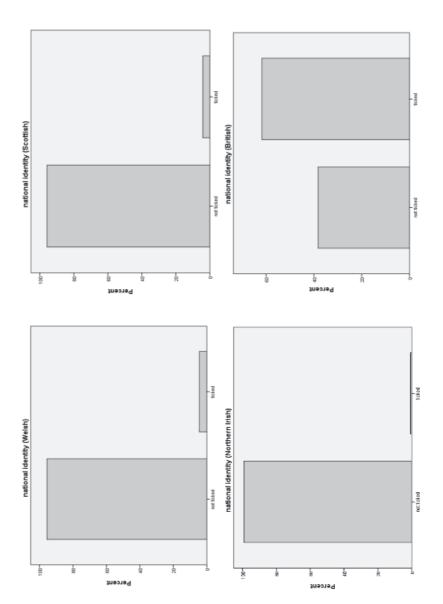


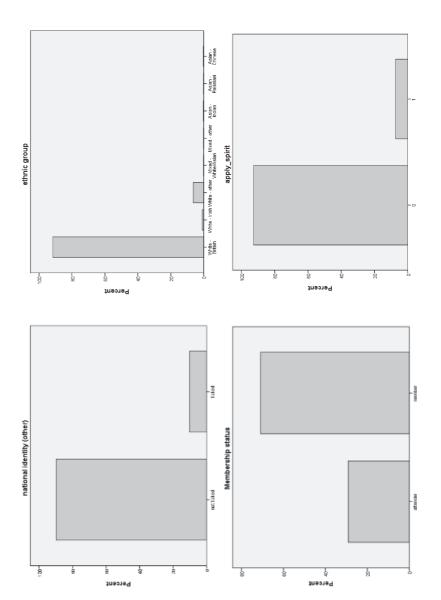


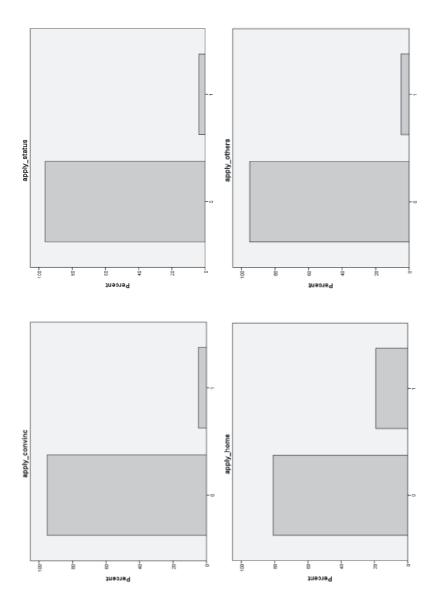
Percent

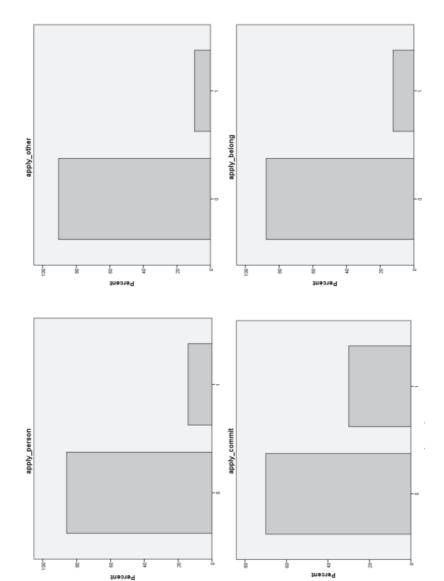
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<u>-</u>

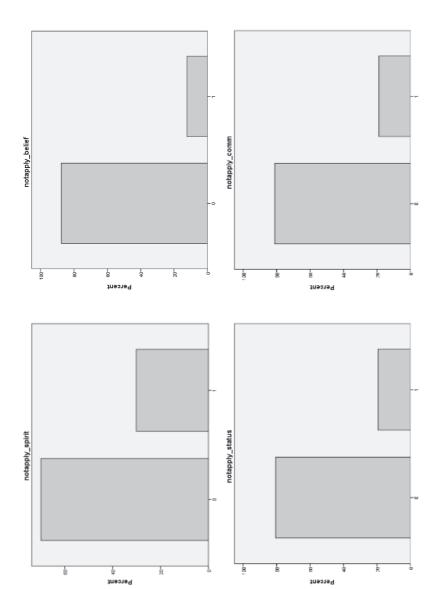


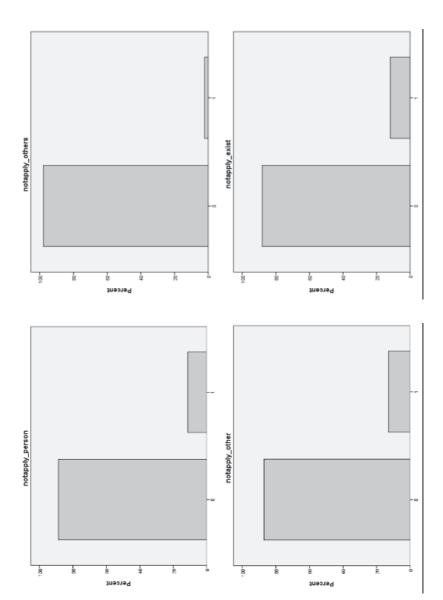


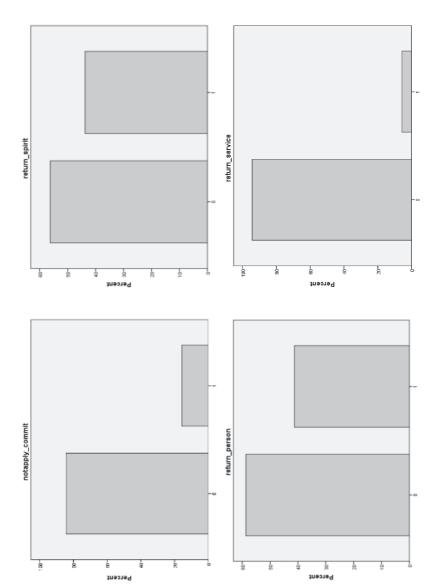


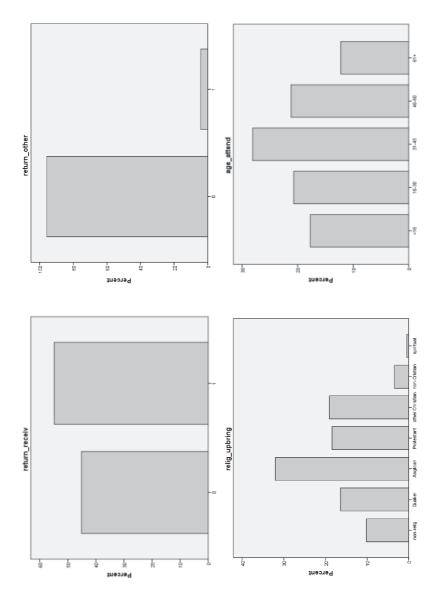


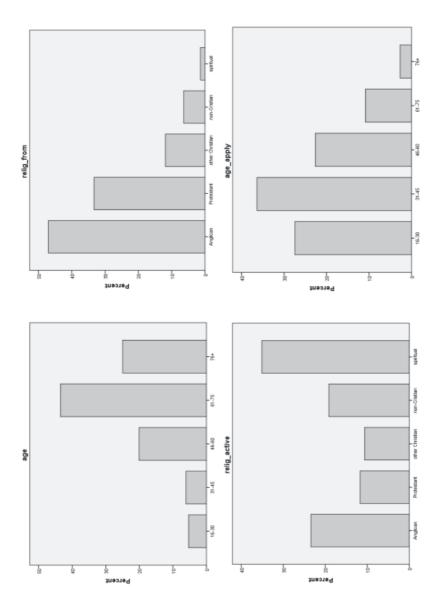
Percent

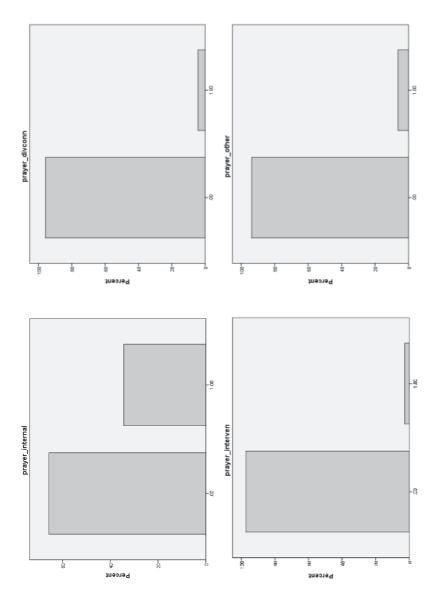


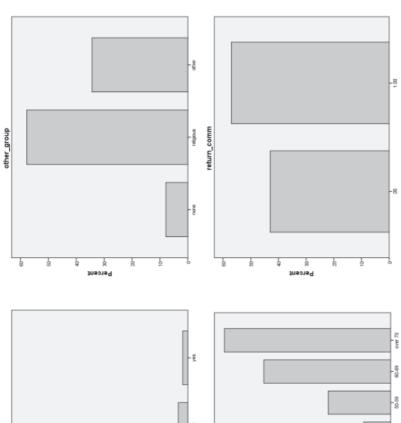


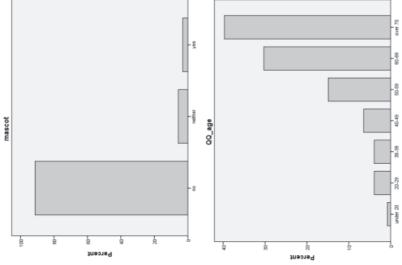












 $\label{eq:APPENDIX} A \text{PPENDIX C} \\ \text{Univariable logistic regression analyses testing association of clerking responsibilities} \\ \text{against predictive variables}.$ 

Item	No. out of clerks	No. out of non-clerks	Odds ratio (95% C.I.)	<i>p</i> -value		
Age started regularly attending <sup>a</sup>						
< 16 years	51/230	62/407	-	< 0.001		
16 - 30 years	66/230	66/407	1.216 (0.735- 2.012)	0.447		
31 - 45 years	75/230	104/407	0.877 (0.545- 1.409)	0.587		
46 - 60 years	30/230	105/407	0.347 (0.201- 0.602)	< 0.001		
≥ 61 years	8/230	70/407	0.139 (0.061- 0.315)	< 0.001		
Q.4a: To Quakers directly from another church	88/229	126/413	1.422 (1.013- 1.995)	0.041		
Q.8: How long attending until sp	oke in Meeting					
Never spoken	13/219	90/412	_	< 0.001		
< 2 months	8/219	26/412	2.130 (0.797- 5.692)	0.132		
2 - 4 months	24/219	31/412	5.360 (2.436 - 11.795)	< 0.001		
5 months ≥ 1 year	30/219	80/412	2.596 (1.267 - 5.318)	0.009		
1 year ≥ 4 years	61/219	92/412	4.590 (2.359 - 8.930)	< 0.001		
> 4 years	83/219	93/412	6.179 (6.179- 3.217)	< 0.001		
$Membership^b$	22/228	232/412	28.707 (12.468- 66.094)	< 0.001		
Q.12: Spiritual awareness – Love	177/230	299/419	1.340 (0.923- 1.946)	0.123		
Q.12(v): Spiritual awareness - Inward Light	146/230	213/419	1.681 (1.209- 2.338)	0.002		
Q.12(vii): Spiritual awareness - Transcendence	35/230	85/419	0.705 (4.58- 1.086)	0.112		
Q.14a(i): Jesus - Christ	25/230	76/419	0.550 (0.339- 0.893)	0.015		
Q.14a(ii): Jesus - Son of God	25/230	67/419	0.641 (0.392- 1.046)	0.074		
Q.14a(iii): Jesus - Saviour	6/230	38/419	0.269 (0.112- 0.645)	0.002		
Q.14a(iv): Jesus - ethical teacher	137/230	212/419	1.438 (1.039- 1.992)	0.028		
Q.14a(v): Jesus - spiritual teacher	172/230	263/419	1.759 (1.23- 2.515)	0.002		
Q.14a(viii): Jesus - God made human	21/230	69/419	0.510 (0.304- 0.855)	0.010		

Q.14a(x): Jesus - containing that of God as we all do	130/230	196/419	1.479 (1.07- 2.044)	0.018
Q.16a(ii): Prayer - asking God to change things	12/230	36/419	0.586 (0.298- 1.149)	0.116
Q.16a(v): Prayer - meditating	63/230	177/419	0.516 (0.364- 0.731)	<, 0.001
Q.16a(vii): Prayer - still & silent waiting	157/230	253/419	1.411 (1.005- 1.982)	0.047
Q.16a(viii): Prayer - praise	25/230	62/419	0.702 (0.428- 1.152)	0.160
Q.16a(xii): Prayer- thanksgiving	99/230	144/419	1.443 (1.038- 2.007)	0.029
Q.16a(xiii): Prayer- opening up to the spirit	151/230	205/419	1.995 (1.43- 2.783)	< 0.001
Q.16b: Prayer effect Earth				
No	38/225	50/405	_	0.190
Yes	109/225	192/405	0.747 (0.461- 1.211)	0.236
Not Sure	78/225	163/405	0.630 (0.382- 1.039)	0.070
Q.18(iv): Bible - all words God given	3/230	14/419	0.382 (0.19- 1.344)	0.12
Q.18(v): Bible - authority for belief in God	12/230	35/419	0.604 (0.307- 1.188)	0.14
Q.18(vi): Bible - history	119/230	1773/419	1.437 (1.041- 1.986)	0.027
Q.18(vii): Bible - myths	95/230	147/419	1.302 (0.936- 1.812)	0.117
Q.19(i): Read - Bible	84/230	132/419	1.251 (0.892-1. 755)	0.194
Q.19(ii): Read - Quaker Faith & Practice	193/230	295/419	2.193 (1.456- 3.302)	< 0.001
Q.19(iii): Read - Advices & Queries	182/230	284/419	1.802 (1.235- 2.631)	0.002
Q.20(i): Consider self - Quaker	216/230	326/419	4.401 (2.446- 7.921)	< 0.001
Q.20(iii): Consider self - Universalist	52/230	49/419	2.206 (1.436- 3.388)	< 0.001
Q.20(vii): Consider self - Atheist	3/230	15/419	0.356 (0.102- 1.243)	0.091
Q.20(ix): Consider self - Agnostic	11/230	40/419	0.476 (0.239- 0.947)	0.031
Q.20(x): Consider self - Humanist	8/230	54/19	0.244 (0.114- 0.521)	<0.001
Q.20(xii): Consider self - Spiritual	66/230	141/419	0.793 (0.559- 1.126)	0.195
Q.21(iii): Activity in Meeting - Meditating	73/230	185/419	0.588 (0.419- 0.825)	0.002

56/230	75/419	1.476 (0.998- 2.183)	0.05
116/230	256/419	0.648 (0.468-	0.009
132/230	211/419	1.328 (0.960-	0.086
147/230	210/419	1.763 (1.267-	0.001
174/230	276/419	1.61 (1.12-	0.01
111/230	173/419	1.326 (0.96-	0.087
86/230	182/419	0.778 (0.559-	0.135
18/230	19/419	1.787 (0.919-	0.084
216/222	350/391	4.217	< 0.001
121/230	149/419	2.012 (1.45- 2.79)	< 0.001
200/230	318/419	2.117 (1.358- 3.302)	0.001
19/230	107/419	0.263 (0.156-	<i>-:</i> 0.001
100/230	157/419	1.284 (0.925- 1.781)	0.134
21/230	56/419	0.651 (0.384-	0.111
		,	l.
0/230	185/419	-	<. 0.001
93/230	172/419	49.939 (11.873-201. 728)	< 0.001
92/230	42/419	202.619 (47.988- 855.524)	< 0.001
		_	
43/230	17 /419	233.971 (52.088- 1050.961)	< 0.001
2/230	3/419	61.667 (6.385- 595.557)	< 0.001
220/230	351/419	4.262 (2.149- 8.454)	< 0.001
159/230	166/419	3.413 (2.426- 4.802)	< 0.001
174/230	173/419	4.418 (3.087- 6.323)	< 0.001
164/230	227/419	2.102 (1.489- 2.966)	< 0.001
	116/230 132/230 147/230 147/230 174/230 111/230 86/230 18/230 216/222 121/230 200/230 19/230 100/230 21/230 93/230 92/230 43/230 2/230 220/230 159/230 174/230	116/230         256/419           132/230         211/419           147/230         210/419           174/230         276/419           111/230         173/419           86/230         182/419           18/230         19/419           216/222         350/391           121/230         149/419           200/230         318/419           19/230         107/419           100/230         157/419           21/230         56/419           0/230         185/419           93/230         172/419           43/230         17 /419           2/230         3/419           220/230         351/419           159/230         166/419           174/230         173/419	116/230         256/419         0.648 (0.468-0.896)           132/230         211/419         1.328 (0.960-1.836)           147/230         210/419         1.763 (1.267-2.452)           174/230         276/419         1.61 (1.12-2.313)           111/230         173/419         1.326 (0.96-1.833)           86/230         182/419         0.778 (0.559-1.081)           18/230         19/419         1.787 (0.919-3.479)           216/222         350/391         4.217           121/230         149/419         2.012 (1.45-2.79)           200/230         318/419         2.117 (1.358-3.302)           200/230         318/419         2.117 (1.358-3.302)           19/230         107/419         0.263 (0.156-0.441)           100/230         157/419         1.284 (0.925-1.781)           21/230         56/419         -           93/230         172/419         (11.873-201.728)           92/230         42/419         (47.988-855.524)           43/230         17/419         (52.088-1050.961)           159/230         351/419         3.433 (2.426-4.802)           474/230         173/419         4.418 (3.087-6.323)           164/230         227/419         2.102 (1.489-4.

Involved with other groups <sup>d</sup>				
None	13/230	38/419	-	< 0.001
Religious	158/230	217/419	2.128 (1.098- 4.127)	0.025
Other	59/230	164/419	1.052 (0.524- 2.110)	0.887
Age <sup>e</sup>				
16 - 30 years	4/226	30/411	-	«: 0.001
31 - 45 years	6/226	33/411	1.364 (0.351- 5.304)	0.65-1
46 - 60 years	32/226	96/411	2.500 (0.818- 7.642)	0.108
61 - 75 years	114/226	163/411	5.245 (1.799- 15.298)	0.002
≥ 76 years	70/226	89/411	5.899 (1.985- 17.532)	0.001
Current employment status <sup>f</sup>				
Not in paid employment	4/230	38/419	_	< 0.001
Retired	174/230	213/419	7.761 (2.717- 22.167)	< 0.001
In paid employment	52/230	168/419	2.940 (1.002- 8.626)	< 0.049

<sup>&</sup>lt;sup>a</sup>Derived from Q.1.

## APPENDIX D

Final 3-cluster latent class model:

Syntax

options

algorithm tolerance=le-008 emtolerance=0.0l emiterations=250 nriterations=50;

startvalues seed=0 sets= 10 tolerance=le-005 iterations=ell;

bayes categorical=l variances=l latent=l poisson=l;

montecarlo seed=0 replicates=500 tolerance=le-008;

quadrature nodes=10;

missing includedependent;

output parameters=effect standarderrors probmeans=posterior profile bivariateresiduals; variables

dependent salove nominal, saspir nominal, satrut nominal, sainli nominal, sacon nominal, satran nominal, god nominal, jechri nominal, jesog nominal, jesav nominal, jeeth nominal, jespir nominal, jepers nominal, jeinli nominal, jegohu nominal, jeexhu nominal, jecogo nominal, jefig nominal, jetea nominal, prtalk nominal, prask nominal, prseek nominal, prguid nominal, prmed nominal, prlife nominal, prwait nominal, prprai nominal, prconf nominal, prreco nominal, prheal nominal, prthank nominal, propen nominal, prcons nominal, preffect nominal, biwoglit nominal, biwogfin nominal, biwogex nominal, biwogall nominal, biauth nominal, bihist nominal, bimyth nominal, bistory nominal, biteach nominal, biwogint nominal, readbi nominal, readfp nominal, selfchri nominal, selfuni nominal, selfath nominal, selfbud nominal,

<sup>&</sup>lt;sup>b</sup>Derived from Q.9 - Q.10.

Derived from Q.22.

<sup>&</sup>lt;sup>d</sup>Derived from Q.34a.

<sup>&</sup>lt;sup>e</sup>Derived from Q.39.

Derived from Q.42d.

selfagn nominal, selfhum nominal, self non nominal, selfspir nominal, mfwpray nominal, mfwprai nominal, mfwmed nominal,

mfwlist nominal, mfwcom nominal, mfwwill nominal, mfwdiv nominal, mfwsleep nominal, mfwworsh nominal, mfwthink nominal, mfwwait nominal, mfwopen nominal, mfwothers nominal, att\_violence nominal, humnat nominal, godguid, proften nominal;

independent attlong nominal inactive, q26b nominal inactive, clerk nominal inactive, q38 nominal inactive, q40 nominal inactive, relig\_ upbring nominal inactive, age nominal inactive, membership nominal inactive, bmimp nominal inactive, bmwill nominal inactive, bmsens nominal inactive, bmcons nominal inactive, bmuse nominal inactive, bmtrust nominal inactive, bmgood nominal inactive;

latent

## Cluster nominal 3; equations

Cluster <- 1; salove <- 1 + Cluster; saspir <- 1 + Cluster; satrut <- 1 + Cluster: sainli <- 1 Cluster; sacon <- 1 + Cluster; satran <- 1 + Cluster; god <- 1 + Cluster; jechri <- 1 + Cluster; jesog <- 1 + Cluster; jesav <- 1; jeeth <- 1 + Cluster; jespir <- 1 + Cluster; jepers <-1 + Cluster; jeinli <- 1 + Cluster; jegohu <- 1 + Cluster; jeexhu <- 1; jecogo <- 1 + Cluster; jefig <- 1 + Cluster; jetea <- 1 + Cluster; prtalk <- 1 T Cluster; prask <- 1; prseek <- 1 + Cluster; prguid <- 1 + Cluster; prmed <- 1 + Cluster; prlife <- 1 + Cluster; prwait <- 1 + Cluster; prprai <- 1 + Cluster; prconf <- 1 + Cluster; rreco <- 1; prheal <- 1 + Cluster; prthank <- 1 + Cluster; prop en <- 1 + Cluster; prcons <- 1 + Cluster; preffect <- 1 Cluster; biwoglit <- 1; biwogfin <- 1; biwogex <- 1 - Cluster: biwogall <- 1; biauth <- 1 + Cluster; bihist <- 1 + Cluster; bimyth <- 1 T Cluster: bistory <- 1 + Cluster; biteach <- 1 + Cluster; biwogint <- 1 + Cluster; readbi <- 1 + Cluster; readfp <- 1 + Cluster; selfchri <- 1 + Cluster; selfuni <- 1; selfath <- 1; selfbud <- 1; selfagn <- 1 + Cluster; selfhum <- 1 + Cluster; selfnon <- 1 + Cluster; selfspir <- 1 + Cluster; mfwpray <- 1 + Cluster; mfwprai <- 1; mfwmed <- 1 + Cluster; mfwlist <- 1; mfwcom <- 1 + Cluster; mfwwill <- 1 + Cluster; mfwdiv <- 1 + Cluster; mfwsleep <- 1; mfwworsh <- 1 - Cluster; mfwthink <- 1 + Cluster; mfwwait <- 1; mfwopen 1 + Cluster; mfwothers <- 1 + Cluster; att\_ violence <- 1 T Cluster; humnat <- 1 + Cluster; godguid <- 1 + Cluster; proften <- 1 + Cluster; jesog <-> jechri ; jesav <-> jechri ; jesav <-> jesog ; jespir <-> jeeth ; jegohu <-> jesog ; jegohu <-> jesav ; jetea <-> jefig ; prask <-> prtalk ; prreco <-> prconf ; prthank <-> prprai ; prthank <-> prheal ; bimyth <-> bihist; bistory <-> bihist; bistory <-> bimyth; biteach <-> bihist; mfwpray < -> pr talk; mfwprai < - > prprai .mfwprai < - > mfwpray ; mfwmed <, - > prmed ; mfwcom <.-> mfwlist ;mfwworsh <-> prprai ; mfwworsh <.-> mfwprai .mfwworsh mfwdiv ;mfwwait <-> prwait; mfwwait <-> mfwlist; mfwopen <-> propen .rnfwopen <-> mfwwait; mfwothers <-> mfwopen ;humnat <-> att\_ violence;

APPENDIX E

Latent class profiles of exogenous covariates for each Quaker class and the non-Quaker group.

	Quaker Responses			Non-Quaker
	Traditional	Non-Theist	Liberal	Responses
Covariates				· ·
Age (16-30) <sup>a</sup>	0.0687	0.0309	0.0557	0.4400
Age (31-45) <sup>a</sup>	0.0861	0.034	0.0503	0.0700
Age (46-60) <sup>a</sup>	0.1846	0.1825	0.1890	0.2600
Age (61-75) <sup>a</sup>	0.4012	0.4796	0.4379	0.4100
Age (76+) <sup>a</sup>	0.2400	0.2531	0.2575	0.2200
Female <sup>b</sup>	0.5849	0.4694	0.6517	0.6700
Q.40(iii): Education (A-level)	0.1392	0.1431	0.1626	0.1300
Q.40(iv): Education (degree)	0.3916	0.273	0.4114	0.4000
Q.40(v): Education (masters)	0.2357	0.2354	0.2178	0.2100
Q.40(vi): Education (doctorate)	0.1037	0.1565	0.0752	0.1000
Religious upbringing (non-religious) <sup>c</sup>	0.1043	0.0729	0.1067	0.1100
Religious upbringing (Quaker) <sup>c</sup>	0.1616	0.1919	0.182	0.0900
Religious upbringing (Anglican) <sup>c</sup>	0.2725	0.3609	0.312	0.3700
Religious upbringing (Protestant)	0.2187	0.1496	0.1595	0.2100
Religious upbringing (other Christian) <sup>c</sup>	0.1925	0.1853	0.1977	0.1600
Religious upbringing (non- Christian) <sup>c</sup>	0.0340	0.0297	0.0302	0.0500
Q.2(iii): Length attending (1yr - 3yr)	0.1015	0.1534	0.0589	0.3000
Q.2(iv): Length attending (4yr - 10yr)	0.1455	0.1216	0.1893	0.1800
Q.2(v): Length attending (l1yr - 25yr)	0.2248	0.2881	0.2240	0.1700
Q.2(vi): Length attending (> 25yr)	0.5100	0.4028	0.5113	0.1800
Member <sup>d</sup>	0.8281	0.6584	0.8176	0.2400
Roles held (none) <sup>e</sup>	0.1911	0.3134	0.1878	0.6700
Roles held (locally) <sup>e</sup>	0.4438	0.4522	0.4272	0.2400
Roles held (up to AM/GM) e	0.2467	0.1572	0.2592	0.0600
Roles held (national) <sup>e</sup>	0.1086	0.0771	0.1173	0.0200
Roles held (international) <sup>e</sup>	0.0099	0.0000	0.0085	0.0100
Clerk <sup>e</sup>	0.4156	0.2809	0.4318	0.1300
Q.23: Business Method - important	0.9011	0.8628	0.9294	0.8300
Q.24(i): Business Method - God's will	0.7374	0.1130	0.3962	0.2200
Q.24(ii): Business Method - sense of Meeting	0.8081	0.8213	0.8486	0.6400
Q.24(iii): Business Method - seek consensus	0.1241	0.3027	0.1726	0.2600

Q.24(iv): Business Method - useful process	0.1464	0.1371	0.1714	0.1500
Q.24(v): Business Method - process of trust	0.3825	0.3908	0.4502	0.2900
Q.24(vi): Business Method - good idea	0.1110	0.0967	0.1424	0.0900

<sup>&</sup>lt;sup>a</sup>Derived from Q.39.

<sup>&</sup>lt;sup>b</sup>Derived from Q.38.

Derived from Q.3.

<sup>&</sup>lt;sup>d</sup>Derived from Q.9 - Q.10.

<sup>&</sup>lt;sup>e</sup>Derived from Q.26b.