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 style of worship. Their worshipping style, characterised by still and silent waiting, allows for a diversity of beliefs to be held that may not 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 disruption of adherence to this behavioural creed and thus disrupt the Society as a whole [34]. 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 [31, 38] (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 to address 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 to 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 of modern British Quakers (Aim 3), can be thought of as the main contribution of this study. The analysis, using questions from the survey about religious beliefs, attitudes and practices, 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. 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, but less strong than, the Traditional Group.
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1 Introduction

1.1 History of Quakerism, from the 17th to 21st Century

The Religious Society of Friends, otherwise known as Quakers, are a religious movement which began in the mid 1600's. The 16th and 17th Centuries were a time of religious Reformation with much movement away from the Catholic Church and Papal authority. The early 16th Century saw the Protestant Reformation in central Europe, particularly in Germany with the actions of Luther as well as in Switzerland under Zwingli [1]. Similarly, around 1534, Henry VIII instigated separation from Papal authority in England with the creation of the Church of England [2]. The reformation in England can be seen as more of a political than theological separation compared to the rest of Europe. In the following time period, many groups separated from this newer church pursuing a more radical or complete reformation [3]. Further to this, the invention of the printing press enabled ordinary people to have direct access to scripture, therefore leading to less of a reliance on the clergy [4]. Many groups emerged as an alternative to the national Church of England, amongst them Baptists, Levellers and eventually Quakers. Quakerism in these early years was considered an alternative to Protestantism.

The very early Quaker movement was characterised by a powerful “convincement” [4]. These Quakers had a strong sense of a direct relationship with a personal God. Scripture was replaced by the direct revelation of Christ as the Inward Light, this was considered the second coming of Christ that the other radical groups appeared to be seeking. This belief was encompassed by their unprogrammed, silent Meetings for Worship. After the initial, early years of the movement, later Quakers sought to more firmly find their place in the world. Second generation Quakers, aware of their forebears revelations, began a period characterised by faithful waiting [4]. They also began to outwardly embody the tenements by which they lived, distinguishing themselves from others in their plain speech and dress (amongst other things). Those that did not abide by these rules were disowned. This typified Quakerism through to the 19th Century. Numbers had been decreasing up until the early 1800s. The advent of Evangelicalism in this time period brought change to Quakerism. Obviously a challenge to existing Quakerism because of the heavy emphasis on scripture, Evangelicalism both revived and divided Quakerism. This division was most keenly felt in the United States, where radically differing groups emerged. Remnants of this are still seen today, embodied in the differences between Meetings with programmed and unprogrammed worship. British Quakers were predominantly of this Evangelical persuasion, although they retained the idea of Inward Light (a non-scriptural concept). This acceptance of scripture created similarities, that previously did not exist, with other Christian groups which Quakers could now relate to and feel a part of. The latter part of the Quaker story, from the 1900’s to present day, is characterised by a move again away from scripture and towards a focus on personal experience. However, they remained
open to the experience other groups unlike the very early Quakers. Dandelion [4, page 8] summarises this later stage well:

“Liberal Quakerism in Britain... claimed to be open to the new Light, and in time would cease to be a wholly Christian group. Today, this branch, which is the dominant one of the ‘unprogrammed’ tradition, is permissive in terms of belief, centered rather on a conformist attitude to forms, worship style for example, as well as a distinctive approach to the nature of theology.”

1.2 Quakerism in the 21st Century

Modern Quakerism takes on many shapes depending on what part of the world you are in. The different types of worship is perhaps the most striking difference between groups. As mentioned in Section 1.1, the rise of Evangelicalism caused a rift that resulted in Meetings that follow an unprogrammed style of worship (the silent worship many in Britain would be most familiar with) and programmed worship (which is more like a traditional church service) [4]. The juxtaposition of these two worshiping styles is most keenly observed amongst American Quakers [5]. In the UK, the movement is very much of the unprogrammed ilk. Meeting for Worship will take place where those present gather together to worship in silence. The idea of waiting, reminiscent of early Quakers, is found here. Those gathered are waiting to be moved by the Spirit/God/Inward Light to speak [6]. Of note here is the varying terminology modern Quakers use to describe their religious experience. This unprogrammed worship distinguishes Quakers as well as representing the characteristics of the structure of the Society. The Society is not hierarchical in that no one person has more authority over another. Roles for the smooth running of the Society are filled by volunteers from within the group. All decisions are also made as a group, whether locally or nationally. This structure harks back to the early movement, anyone can experience a direct relationship with God [4]. This encompasses one of five “testimonies” by which Quakers live, that of equality [6][7].

Although not followers of scripture necessarily, Quakers do have a series of testimonies which guides their lives. Rather than rules which much be obeyed, these testimonies guide how Quakers embody their beliefs in their daily lives. A central characteristic of Quakers is the emphasis on everyday behaviour, often referred to as “faith in action” [7]. The testimonies of peace, simplicity, equality, integrity and community are central to modern Quakerism. Examples of these testimonies being lived out are many. For example, following the peace testimony, Quakers were conscientious objectors during WWII [8]. Traditionally Quakers would not swear oaths, as they lived a testimony of integrity it went against their behavioural code to be misleading or untruthful [6]. So, for example, in a court of law Quakers will not swear an oath on the Bible that they will tell the truth, rather they will affirm that they do tell the truth (an option laid out in law as per the
Oaths Act, 1978). More recently, the testimony of equality led the Society to publicly support gay relationships, being the first Christian group to treat homosexual unions the same as heterosexual unions and leading the call for law reform on marriage as far back as 2009 [9]. These testimonies are laid out in their common book of discipline, Quaker Faith and Practice: The book of Christian discipline of the Yearly Meeting of the Religious Society of Friends (Quakers) in Britain [6].

The book of discipline, Faith and Practice, both guides and represents Quaker beliefs and behaviours. The book can be considered a living document whereby revisions and additions are made to it by Britain Yearly Meeting. Such decisions are made at annual Meetings of the whole (or at least a representative sample of the whole) of the Society. Decisions here, and on a local basis, are made in business meetings known as Meeting for Worship for Business. Like regular Meeting for Worship, the group gathers together in silence. It is in this silence that they seek the will of God to guide their decision making. Again there is no formal hierarchy here, it is believed that this Revelation can come to any of the gathered group. However, there is a clerk who will convene the Meeting, presenting items of business, allowing those with Ministry to speak, and taking minutes once the will of God has been discerned [10]. Business Meeting can be seen as one of the most distinctive and important characteristics of the ways in which Quakers conduct themselves as an organisation. The method itself has received acclaim [11, 12]. Although laid out in the book of discipline, there is little training or direct proselytizing about the method. As with most aspects of the Quaker world it is up to the individual to educate themselves, or at least seek that education from others. For many Quakers Meeting for Worship for Business is important to them but what they are actually doing in the Meetings may differ from what is laid out in Faith and Practice; for some it may be sitting in silence waiting to speak rather than waiting to receive God’s guidance [13]. As such, concern has been raised about the state of the business method [14]. This has sparked reflection, educational texts and campaigns on educating those in this practice of discernment [14, 15].

1.3 Recent Quaker research

Relative to the small size of the group, there has been a lot of research, both in terms of journal articles and books, published about Quakers. Whilst a great deal of this is concerned with historical events and figures, there is a substantial amount on current (20th-21st Century) Quaker affairs. This work on current Quakerism is driven by a few key ideas. That of diversity of belief within the Society [16], increasing secularisation (both within the Society of Friends and British society more generally [17]) and decline in numbers [18]. These concepts are by no means isolated from one another in practice. As will be detailed below, often the decline in numbers can be attributed to the diverse
belief within the Society.

The Annual Tabular Statement is produced by the official umbrella body of Quakers in the UK, Britain Yearly Meeting. This details the numbers of all members and recognised attenders of Meetings across the UK. The 2012 Tabular Statement [18] shows a decline in numbers of members, from 17,765 in 1990 to 13,863 in 2012. Over the same time period the number of recognised attenders appears to have stayed relatively stable. Whilst recognised attenders can play an active part in the Society to a certain extent, Heron [19] raises the question of the strength of commitment of those who decline to apply for membership of the Society. It is the decline in number of members, rather than attenders, that has prompted a national discussion of a “crisis” within the Society. Work concerning this decline, and ultimate end-point of the Society, has been conducted by those such as Burton [20], Chadkirk [21] and Stroud and Dandelion [22] amongst others. Chadkirk’s work, into trends in membership of the Society, recognised a peak in membership in the 1960s. This may be attributable, as he suggests, to the last of the birthright child members coming into adult membership (a practice which was abolished the decade before). Heron [23, 24, 25] 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 Faith and Practice. This would coincide with a growing national sense of spirituality taking the place of religion [10]. Chadkirk estimates an end of the Society, based on the declining trend in membership, in 2032. This estimate is somewhat similar to, albeit at the lower end of, that estimated in work by Stroud and Dandelion [22]. They estimate a “critical minimum” will be reached some time this century (2028-2088). This is a revision of the work presented in Dandelion [26, 27], where an end-point of 2108 was estimated. This kind 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 [28, 29]. Work by Bruce [30, 17] 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, similar enough to be consistent with the end-point(s) estimated for British Quakerism.

There are those, such as Burton [20], who suggest that predictions of an end-point, such as those made by Chadkirk and Stroud and Dandelion, are too simplistic. Burton, in particular, 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 (General Meeting), rather than national (Britain Yearly Meeting), level, Burton found that the situation is not the same across throughout the Society. Whilst he did find 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 [31]. This 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 [32], 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 scriptural creed, and conservative attitude to the organisation of the Society, that unifies contemporary Quakers. In other words, heterogeneity of belief can exist as long as homogeneity of practice is preserved. As described in Section 1.2, the nature of Quaker worship is such that widely differing beliefs can be held amongst individuals. Bourke [16] 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 themselves 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 to suggest that there are some fundamental similarities which are shared by all those calling themselves Quaker, drawing on Weening’s [33] outline of basic Quaker beliefs. 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 is 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 for 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 [31] may, of course, lead to schism within the society just as happened in the mid-1800s. This is alluded to in work predicting some re-invigoration of the Society within pockets of membership [20]. Indeed such schism has been predicted by those concerned with differing Quaker identities [34]. Such a schism, should it happen, is obviously going to be detrimental to the Society as known now but also, with so few numbers, may make any resulting groups untenable in practice. Work in this area, trying to establish types of Quaker so as to better understand potential problems such as these, may also help identify the reason behind declining numbers. The decline is not simply about not attracting new members but also concerns losing existing members. Three distinctive types of British Quakers were identified by Pilgrim [34] in her qualitative work. She termed these groups Exclusivists, Inclusivists and Syncretists, and 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 hold very strong beliefs about how Meetings should be held and who should be allowed to participate (based on belief) so much so 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”. The second group, the Inclusivists, are more like those one would expect from modern British Quakerism. This group are 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 a whole, of their religious identity. Pilgrim predicts, possibly rightly, that the number of the Syncretists are increasing. Should this group get too large, schism may well occur.

Quantitative work has also been undertaken in this field, investigating differing Quaker beliefs, including that by Ives [35] as well as Cary and Weber [36, 37]. 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 of 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 Weber [37] on data collected in a 2003 survey of Quakers in Britain [38]. The 2003 survey was both an extension and revision of Dandelion’s 1990 survey [31]. 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 a modern, liberal, British Quaker. 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.

1.4 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 [39], with wider research questions, the aims of the current paper are presented below.

1.4.1 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 [39]. This first aim concerned creating a comprehensive overview of the data, as an aid to further investigation reported in this paper, future work and dissemination of findings.

1.4.2 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 [40]. As described, the role of the Clerk is central to Quaker Business method. Their presence and role in Business Meeting is crucial. Those inside and outside of membership can take on such responsibilities. 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 the taking on of Clerking responsibilities.

1.4.3 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 (or, more specifically, identities) is of central importance both to this paper, the 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 UK.

1.4.4 Aim 4: Comparisons with other surveys over time

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 in 1990 and 2003 [31, 38] measuring very similar concepts, with the same or similar questions, have been undertaken over the last 25 years. The final aim of this paper is to put 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 in the UK who are a part of Britain Yearly Meeting. In order to set the study in context, firstly, a
(very) brief history of the Quaker movement has been presented in Section 1.1. This has documented the changing nature of this, relatively young, movement. As well as providing a context to which modern Quakerism can be referenced and understood, this introduced some language and issues that are still used and are of relevance to modern day Quakerism. Section 1.2 introduced modern British Quakerism as well as introducing the testimonies, book of doctrine and business method. Section 1.3 explored key issues of research and discussion within current Quaker studies. This section introduced ideas that are addressed by the current research, specifically concerning declining numbers, sectarianism and Quaker identity. Section 1 closed with a statement of aims for the current research. In Section 2, the method of data collection and analysis are detailed. Following this, in Section 3, results of all statistical analyses are reported in the order to which they were described with clear reference to which aim they pertain to. Section 4 presents a discussion of these results in relation to the aims set out in Section 1, as well as in relation to prior research. The methods used in the collection and analysis of the data are also discussed here. Finally, a conclusion along with suggestions for future research is presented.

Throughout the 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. “Quaker” was originally a term of insult [41], officially the group is known as the Religious Society of Friends. Whilst more correct to refer to those in the group as Friends, the group took ownership of the term and hence, throughout the paper will be referred to as Quakers. Quakers may refer to either members or attenders. Members are those who have applied and been accepted into membership of the Society. Attendees are those who regularly attend a Meeting for worship to the extent that they are considered as belonging to the group but are not officially in membership. When capitalised, Meeting refers to a Meeting for Worship. Meetings are also conducted for church affairs [18], the Meetings for Worship for Business will generally be referred to as Business Meetings. Members are in membership to a specific Local Meeting but, in turn, are part of Britain Yearly Meeting, the official name of the Society in the UK. This consists of several regionally based Area Meetings, which in turn are made up of the Local Meetings. Unless otherwise stated, references to Quakers or the Society refer to the situation in the UK.

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 [31, 38]. Many of the questions were taken from these prior surveys,
with additional questions coming 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 sub-questions). Each section was signposted by a heading relevant to the questions contained therein, along with a brief description of what the respondent was going to be asked about. 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 of 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 any information provided would be held confidentially. Respondents were also given 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 may be 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 it was deemed appropriate to conduct a pilot study. This 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 a couple of minor alterations were made to a couple of the questions. The pilot study was also useful in terms of estimating how long future respondents might expect to take completing 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 that could be completed over the internet. However, feedback from consultation of 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 \[42\]. Further to this, the pilot group, along with feedback from previous studies, suggested that the length and nature of the content makes having a physical item more preferable. A paper document can be left and returned to more easily (if only psychologically) than something to be completed online. Having a tangible paper copy of the questionnaire encouraged respondents to take their time filling it in, possibly resulting in more thought out 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. The costs of administering 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 nor 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 \[43\]. 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 \[38\] (described in Cary and Dandelion \[37\]).

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 smaller than larger 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 present). 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 B. 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 and 240 not used. 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 [44]. 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 [45].

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 1.4.1, 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 is calculating the difference between the number of observed counts in each cell of the table against the number of expected counts. If considering the most simple scenario of a 2 x 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, using the chi-square statistic:
\[ \chi^2 = \sum_{i=1}^{2} \sum_{j=1}^{2} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \]

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 risk score) 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 measured 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 1.4.1.

2.3.2 Logistic regression to investigate characteristics of Clerks

To approach the second aim of the study, Aim 1.4.2, techniques needed to be employed which examined 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 \(P(y = 1) = p\) and the probability of a failure (non-Clerk) can be expressed as \(P(y = 0) = 1 - p\). This can be rewritten to express the probability of a given value of \(y\):

\[ P(y) = p^y(1 - p)^{1-y} \]

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:

\[ P(y) = \frac{e^{\beta_0 + \beta_1 x_1 + \ldots + \beta_m x_m}}{1 + e^{\beta_0 + \beta_1 x_1 + \ldots + \beta_m x_m}} \]

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

$$\text{logit}[y] = \ln \left( \frac{p}{1-p} \right) = \beta_0 + \beta_1 x_1 + ... + \beta_m x_m$$

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. $p \leq 0.2$) 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 [46, 47], as well as being a statistically based approach to predictor selection.

Having determined the individually significant predictors, a multivariable analysis, again 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 to a forwards regression 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 $p=0.05$) in predicting the outcome. Interaction terms between the predictors were also considered for inclusion, based on such statistical bases as the main effects but also with practical considerations borne in mind.

Once predictors had been selected for inclusion and all are found to be significant, how well the final model fits 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.
This tested the observed data against the expected values, once the data had been divided into ten groups. The test can be defined as:

\[ G^2_H = \sum_{j=1}^{10} \frac{(O_j - E_j)^2}{E_j(1 - E_j/n_j)} \]

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, \( \chi^2_8 \). This is a lack of fit, rather than goodness of fit, test and, as such, a significant result indicates that the model does not fit the data. Further to the Hosmer-Lemeshow statistic being calculate the ability of the model to discriminate, between those taking on clerking responsibilities and those not, was examined. Discrimination was determined by calculating the area under the receiver operating curve. The receiver operating curve (ROC) is otherwise known as the sensitivity vs (1-specificity) plot. Sensitivity refers to the accuracy of the model to correctly identify positive results (Clerks) and specificity the accuracy of the model to correctly identifying negative results (non-clerks). 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 1.4.3, a latent class analysis was conducted. Firstly, decision needed to be made as to how to determine which of the items to use to identify those respondents which 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
Table 1: Crosstabulation of considering oneself to be a Quaker and membership status.

<table>
<thead>
<tr>
<th>Membership Status</th>
<th>Consider self to be a Quaker</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Attender</td>
<td>79</td>
<td>107</td>
</tr>
<tr>
<td>Member</td>
<td>25</td>
<td>429</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>536</td>
</tr>
</tbody>
</table>

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.

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 $y_i = \text{vector of total observed responses}$, $K = \text{number of classes}$, $J = \text{number of manifest indicators}$, $\pi(k) = \text{probability of belonging to class } k$, $P(y_{ij}|k) = \text{probability of response } y_{ij} \text{ given membership of class } k$. 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

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

The probability of response $y_{ij}$ given membership of class $k$ 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 variable 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 [50]. In order to identify these local dependencies, the bivariate correlation residuals for manifest variable pairs were examined. The residuals gave 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 a given pair of manifest variables were 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. These aimed to find estimates for the unknown parameters that maximize the log-likelihood function:

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

where \( f(y_i, \vartheta) \) = 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:

\[
w_{ik} = \frac{\pi_k P(y_i|k)}{\sum_k \pi_k P(y_i|k)}
\]

where, in this case, \( w_{ik} \) 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 criterion, 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:

\[
\begin{align*}
\text{BIC}_{\log L} &= -2\log L + (\log N) npar \\
\text{AIC}_{\log L} &= -2\log L + 2npar \\
\text{AIC}_{3\log L} &= -2\log L + 3npar \\
\text{CAIC}_{\log L} &= -2\log L + ([\log N] + 1) npar
\end{align*}
\]

The log-likelihood was also used to compares the differences between nested models. Specifically, the difference in minus twice the log-likelihood (-2\( \log L \)) between the two models can be tested. This can be written as \(-2(\log L_{H0} - \log L_{H1})\), 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 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 1.4.4, comparisons will be 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 [48]. 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 [49]. Such a procedure may well inflate the 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 [51] 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 1.4.1 the methods outlined in Section 2.3.1 were used, a summary of which are presented here. 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, this study had 61% female. 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 32% a higher (masters/doctoral) degree, and 56% placed themselves in the middle income 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 was asking 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 sub-item 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, rather than deontological, ethical approach and so would elect not to answer these types of broad judgments with no further information about the particular circumstance [56]. 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 cross-tabulations were performed to further investigate the data. This was done with relation to the chosen main response variable for Aim 1.4.3, 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 1.4.2. There were many contingency tables constructed, 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 Quakers across the beliefs that they hold? On 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 [6] and surely warranted further investigation.

3.2 Logistic regression to investigate the characteristics of Clerks

To address Aim 1.4.2, 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% ($p \leq 0.2$). 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 somewhat 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.
Table 2: Results of logistic regression of multivariable associations on clerking duties.

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

<sup>a</sup>Derived from Q.9-Q.10.
3.3 Latent class analysis to investigate Quaker identities

A latent class analysis was conducted in order to investigate Quaker belief identity (Aim 1.4.3). 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 [31, 38]. 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 such cases 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 [52] hence caution is needed. Instead, penalised log-likelihood measures, otherwise known as information criterion, was used to determine the optimal number of classes. For illustration, Table 3 shows the results of these statistics for 1-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$_C$ continued to decrease as the number of classes increased to six. 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. 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 [53]. 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 [54]; 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

<table>
<thead>
<tr>
<th>N-class</th>
<th>AIC</th>
<th>BIC</th>
<th>AIC$^3$</th>
<th>CAIC</th>
<th>$L^2$</th>
<th>df</th>
<th>Class Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43671.5814</td>
<td>44040.5814</td>
<td>43757.1885</td>
<td>44126.5814</td>
<td>37792.4909</td>
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<td>0</td>
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<td>2</td>
<td>41143.5628</td>
<td>41882.3485</td>
<td>41315.5628</td>
<td>42054.3485</td>
<td>35092.8652</td>
<td>370</td>
<td>0.0274</td>
</tr>
<tr>
<td>3</td>
<td>40470.7301</td>
<td>41578.9087</td>
<td>40728.7301</td>
<td>41836.9087</td>
<td>34248.0325</td>
<td>284</td>
<td>0.0401</td>
</tr>
<tr>
<td>4</td>
<td>40035.6534</td>
<td>41513.2249</td>
<td>40379.6534</td>
<td>41857.2249</td>
<td>33640.9559</td>
<td>198</td>
<td>0.0541</td>
</tr>
<tr>
<td>5</td>
<td>39823.5901</td>
<td>41670.5545</td>
<td>40253.5901</td>
<td>42100.5545</td>
<td>33256.8925</td>
<td>112</td>
<td>0.0558</td>
</tr>
<tr>
<td>6</td>
<td>39672.9657</td>
<td>41889.3230</td>
<td>40188.9657</td>
<td>42405.3230</td>
<td>32934.2681</td>
<td>26</td>
<td>0.0502</td>
</tr>
</tbody>
</table>
so simpler, more parsimonious solutions may have been considered appropriate. Similar to previous results, the AIC/AIC$^3$ 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 the 3-class model was the most appropriate (see Table 4).

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$^3$ 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 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 well over 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 prayer as talking to God (71%), seeking communion with the divine (63%), daily life (30%), praising (37%) and seeking healing (37%). This compares with conditional probabilities of less than 25% to 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%). Both other 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 Traditional 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 the other two classes are (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, 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 are 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 Non-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 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 everyday (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 Non-theist). 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 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 their wider identity. Therefore, these exogenous covariates were included after the model was built as purely descriptive measures of the classes 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 classes) 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 labeling 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 to. 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
Table 5: Univariable tests of association between latent class membership and clerking responsibilities.

<table>
<thead>
<tr>
<th>Group</th>
<th>No. out of Clerks</th>
<th>No. out of non-Clerks</th>
<th>Odds ratio (95% C.I.)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Quaker</td>
<td>14/230</td>
<td>93/419</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Traditional Quaker</td>
<td>71/230</td>
<td>99/419</td>
<td>4.764 (2.514, 9.028)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Non-theist Quaker</td>
<td>28/230</td>
<td>70/419</td>
<td>2.657 (1.303, 5.419)</td>
<td>0.007</td>
</tr>
<tr>
<td>Liberal Quaker</td>
<td>117/230</td>
<td>157/419</td>
<td>4.950 (2.688, 9.118)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

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, at just over $2\frac{1}{2}$ times, to take on clerking responsibilities than non-Quakers (($OR = 2.657$, 95% $CI = 1.303 - 5.419$, $p = 0.007$).

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 3.3.2. 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.

<table>
<thead>
<tr>
<th>Group</th>
<th>No. out of members</th>
<th>No. out of attenders</th>
<th>Odds ratio (95% C.I.)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Quaker</td>
<td>25/454</td>
<td>79/186</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Traditional Quaker</td>
<td>141/454</td>
<td>28/186</td>
<td>15.913 (8.685, 29.157)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Non-Theist Quaker</td>
<td>68/454</td>
<td>28/186</td>
<td>7.674 (4.090, 14.399)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Liberal Quaker</td>
<td>220/454</td>
<td>51/186</td>
<td>13.631 (7.918, 23.467)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Quaker Responses</th>
<th>Non-Quaker Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Q.12(ii): Spiritual awareness - Love</td>
<td>0.8255</td>
<td>0.5504</td>
</tr>
<tr>
<td>Q.12(iii): Spiritual awareness - Spirit</td>
<td>0.8021</td>
<td>0.1294</td>
</tr>
<tr>
<td>Q.12(iv): Spiritual awareness - Truth</td>
<td>0.7327</td>
<td>0.422</td>
</tr>
<tr>
<td>Q.12(v): Spiritual awareness - Inward Light</td>
<td>0.7121</td>
<td>0.2641</td>
</tr>
<tr>
<td>Q.12(vi): Spiritual awareness - Connectedness</td>
<td>0.5598</td>
<td>0.4263</td>
</tr>
<tr>
<td>Q.12(vii): Spiritual awareness - Transcendence</td>
<td>0.2731</td>
<td>0.1036</td>
</tr>
<tr>
<td>Q.13a: Belief in God (yes)</td>
<td>0.8959</td>
<td>0.0905</td>
</tr>
<tr>
<td>Q.13a: Belief in God (no)</td>
<td>0.0321</td>
<td>0.4876</td>
</tr>
<tr>
<td>Item</td>
<td>Quaker Responses</td>
<td>Non-Quaker Responses</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Q.13a: Belief in God (not sure)</td>
<td>0.0694</td>
<td>0.4218</td>
</tr>
<tr>
<td>Seek God’s guidance (never)</td>
<td>0.0092</td>
<td>0.6491</td>
</tr>
<tr>
<td>Seek God’s guidance (rarely/sometimes)</td>
<td>0.269</td>
<td>0.3351</td>
</tr>
<tr>
<td>Seek God’s guidance (often/always)</td>
<td>0.7219</td>
<td>0.0158</td>
</tr>
<tr>
<td>Q.14a(i): Jesus - Christ</td>
<td>0.4005</td>
<td>0.0245</td>
</tr>
<tr>
<td>Q.14a(ii): Jesus - Son of God</td>
<td>0.362</td>
<td>0.0005</td>
</tr>
<tr>
<td>Q.14a(iii): Jesus - Saviour</td>
<td>0.1662</td>
<td>0.0119</td>
</tr>
<tr>
<td>Q.14a(iv): Jesus - Ethical teacher</td>
<td>0.4503</td>
<td>0.7025</td>
</tr>
<tr>
<td>Q.14a(v): Jesus - Spiritual teacher</td>
<td>0.7172</td>
<td>0.415</td>
</tr>
<tr>
<td>Q.14a(vi): Jesus - Just a person</td>
<td>0.0065</td>
<td>0.1064</td>
</tr>
<tr>
<td>Q.14a(vii): Jesus - Inward light</td>
<td>0.309</td>
<td>0.0211</td>
</tr>
<tr>
<td>Q.14a(viii): Jesus - God made human</td>
<td>0.3436</td>
<td>0.0201</td>
</tr>
<tr>
<td>Q.14a(ix): Jesus - Exemplary human</td>
<td>0.3339</td>
<td>0.3339</td>
</tr>
<tr>
<td>Q.14a(x): Jesus - Containing that of God</td>
<td>0.5468</td>
<td>0.2493</td>
</tr>
<tr>
<td>Q.14b: Jesus - Important figure (yes)</td>
<td>0.5648</td>
<td>0.1374</td>
</tr>
<tr>
<td>Q.14b: Jesus - Important figure (it varies)</td>
<td>0.3969</td>
<td>0.2392</td>
</tr>
<tr>
<td>Q.14b: Jesus - Important figure (no)</td>
<td>0.0384</td>
<td>0.6233</td>
</tr>
<tr>
<td>Item</td>
<td>Quaker Responses</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Q.14c: Jesus - teachings important (yes)</td>
<td>0.8543</td>
<td>0.4004</td>
</tr>
<tr>
<td>Q.14c: Jesus - teachings important (it varies)</td>
<td>0.1456</td>
<td>0.4244</td>
</tr>
<tr>
<td>Q.14c: Jesus - teachings important (no)</td>
<td>0.0002</td>
<td>0.1751</td>
</tr>
<tr>
<td>Q.16a(i): Prayer - Talking to God</td>
<td>0.7055</td>
<td>0.0571</td>
</tr>
<tr>
<td>Q.16a(ii): Prayer - Asking God for change</td>
<td>0.1295</td>
<td>0.0291</td>
</tr>
<tr>
<td>Q.16a(iii): Prayer - Seeking communion</td>
<td>0.6327</td>
<td>0.0012</td>
</tr>
<tr>
<td>Q.16a(iv): Prayer - Seeking guidance</td>
<td>0.7297</td>
<td>0.2857</td>
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<tr>
<td>Q.16a(v): Prayer - Meditating</td>
<td>0.4135</td>
<td>0.3659</td>
</tr>
<tr>
<td>Q.16a(vi): Prayer - Daily life</td>
<td>0.2958</td>
<td>0.1959</td>
</tr>
<tr>
<td>Q.16a(vii): Prayer - Still &amp; silent waiting</td>
<td>0.7269</td>
<td>0.5405</td>
</tr>
<tr>
<td>Q.16a(viii): Prayer - Praise</td>
<td>0.3735</td>
<td>0.0005</td>
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<td>Q.16a(ix): Prayer - Confession</td>
<td>0.2555</td>
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<td>Q.16a(x): Prayer - Recollection</td>
<td>0.137</td>
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<td>Q.16a(xi): Prayer - Seeking healing</td>
<td>0.3658</td>
<td>0.1106</td>
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<tr>
<td>Q.16a(xii): Prayer - Thanksgiving</td>
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<td>0.1229</td>
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<tr>
<td>Q.16a(xiii): Prayer - Opening to the Spirit</td>
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<td>0.1488</td>
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<tr>
<td>Q.16a(xiv): Prayer - Turning in to the consciousness of all</td>
<td>0.3794</td>
<td>0.1782</td>
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<tr>
<td>Item</td>
<td>Quaker Responses</td>
<td>Non-Quaker Responses</td>
</tr>
<tr>
<td>------------------------------------------</td>
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</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Q.16b: Prayer effect things on Earth (yes)</td>
<td>0.6936</td>
<td>0.2606</td>
</tr>
<tr>
<td>Q.16b: Prayer effect things on Earth (not sure)</td>
<td>0.294</td>
<td>0.2062</td>
</tr>
<tr>
<td>Q.16b: Prayer effect things on Earth (no)</td>
<td>0.0124</td>
<td>0.5332</td>
</tr>
<tr>
<td>Q.16c(ix): Pray (never)</td>
<td>0.0001</td>
<td>0.3304</td>
</tr>
<tr>
<td>Q.16c(vii): Pray (it varies)</td>
<td>0.2408</td>
<td>0.3061</td>
</tr>
<tr>
<td>Pray (once a month or less often)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.004</td>
<td>0.1143</td>
</tr>
<tr>
<td>Pray (at least once a week)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.2663</td>
<td>0.158</td>
</tr>
<tr>
<td>Pray (every day/constantly)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.4888</td>
<td>0.0912</td>
</tr>
<tr>
<td>Q.18(i): Bible - literal word of God</td>
<td>0.0092</td>
<td>0.0092</td>
</tr>
<tr>
<td>Q.18(ii): Bible - final word of God</td>
<td>0.0111</td>
<td>0.0111</td>
</tr>
<tr>
<td>Q.18(iii): Bible - word of God as experienced</td>
<td>0.7985</td>
<td>0.2623</td>
</tr>
<tr>
<td>Q.18(iv): Bible - word of God as all words are</td>
<td>0.0295</td>
<td>0.0295</td>
</tr>
<tr>
<td>Q.18(v): Bible - authority for belief in God</td>
<td>0.1265</td>
<td>0.0496</td>
</tr>
<tr>
<td>Q.18(vi): Bible - history</td>
<td>0.5172</td>
<td>0.5457</td>
</tr>
<tr>
<td>Q.18(vii): Bible - myths</td>
<td>0.3616</td>
<td>0.5112</td>
</tr>
<tr>
<td>Q.18(viii): Bible - stories</td>
<td>0.4736</td>
<td>0.5989</td>
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<tr>
<td>Q.18(ix): Bible - useful teaching text</td>
<td>0.4051</td>
<td>0.283</td>
</tr>
<tr>
<td>Q.18(x): Bible - word of God open to interpretation</td>
<td>0.6312</td>
<td>0.0619</td>
</tr>
<tr>
<td>Item</td>
<td>Quaker Responses</td>
<td>Non-Quaker Responses</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Q.19(i): Read - Bible</td>
<td>0.7252</td>
<td>0.1163</td>
</tr>
<tr>
<td>Q.19(ii): Read - Faith and Practice</td>
<td>0.8754</td>
<td>0.6094</td>
</tr>
<tr>
<td>Q.20(ii): Self - Christian</td>
<td>0.7772</td>
<td>0.1265</td>
</tr>
<tr>
<td>Q.20(iii): Self - Universalist</td>
<td>0.1734</td>
<td>0.1734</td>
</tr>
<tr>
<td>Q.20(vii): Self - Atheist</td>
<td>0.024</td>
<td>0.024</td>
</tr>
<tr>
<td>Q.20(viii): Self - Buddhist</td>
<td>0.0351</td>
<td>0.0351</td>
</tr>
<tr>
<td>Q.20(ix): Self - Agnostic</td>
<td>0.0216</td>
<td>0.1816</td>
</tr>
<tr>
<td>Q.20(x): Self - Humanist</td>
<td>0.0369</td>
<td>0.2845</td>
</tr>
<tr>
<td>Q.20(xi): Self - Non-Theist</td>
<td>0.0086</td>
<td>0.247</td>
</tr>
<tr>
<td>Q.20(xii): Self - Spiritual person</td>
<td>0.3855</td>
<td>0.1207</td>
</tr>
<tr>
<td>Q.21(i): Meeting for Worship - Praying</td>
<td>0.595</td>
<td>0.0514</td>
</tr>
<tr>
<td>Q.21(ii): Meeting for Worship - Praising</td>
<td>0.1906</td>
<td>0.0145</td>
</tr>
<tr>
<td>Q.21(iii): Meeting for Worship - Meditating</td>
<td>0.3733</td>
<td>0.4905</td>
</tr>
<tr>
<td>Q.21(iv): Meeting for Worship - Listening</td>
<td>0.6861</td>
<td>0.6284</td>
</tr>
<tr>
<td>Q.21(v): Meeting for Worship - Communing</td>
<td>0.3233</td>
<td>0.1707</td>
</tr>
<tr>
<td>Q.21(vi): Meeting for Worship - Seeking God’s will</td>
<td>0.471</td>
<td>0.0007</td>
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<td>Q.21(vii): Meeting for Worship - Seeking union with Divine</td>
<td>0.3547</td>
<td>0.0007</td>
</tr>
<tr>
<td>Q.21(viii): Meeting for Worship - Sleeping</td>
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</tr>
<tr>
<td>Item</td>
<td>Quaker Responses</td>
<td>Non-Quaker Responses</td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Q.21(ix): Meeting for Worship - Worshipping God</td>
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<td>0.0003</td>
</tr>
<tr>
<td>Q.21(x): Meeting for Worship - Thinking</td>
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<td>0.7588</td>
</tr>
<tr>
<td>Q.21(xi): Meeting for Worship - Waiting</td>
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</tr>
<tr>
<td>Q.21(xii): Meeting for Worship - Opening up to the Spirit</td>
<td>0.7274</td>
<td>0.2002</td>
</tr>
<tr>
<td>Q.21(xiii): Meeting for Worship - Being with others in Spirit</td>
<td>0.8073</td>
<td>0.4025</td>
</tr>
<tr>
<td>Violence can be morally justified (agree/strongly agree)</td>
<td>0.0773</td>
<td>0.2131</td>
</tr>
<tr>
<td>Human Nature (essentially good)</td>
<td>0.0352</td>
<td>0.1335</td>
</tr>
</tbody>
</table>

- Derived from Q.13c.
- Derived from Q.16c.
- Derived from Q.30(ii).
- Derived from Q.31.

### 3.4 Comparisons across time periods

In order to address Aim 1.4.4, 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 x 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). 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 was a statistically significant peak in this activity compared to the years either side of it (60% in 1990 and 55% in 2013). Though 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). In terms of Meeting for Worship, the activities respondents reported they did 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 an 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 post-undergraduate, 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 increased as well (10% in 1990, 2% in 2003, 22% in 2013). This suggests people with a greater range of ages are regularly attending Meeting. 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 amongst 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 drawn.

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 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 [18]. 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. Firstly, 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
Table 8: Comparisons in religious beliefs and attitudes between 1990, 2003 and 2013.

<table>
<thead>
<tr>
<th>Item</th>
<th>1990 (%)</th>
<th>2003 (%)</th>
<th>2013 (%)</th>
<th>Significant differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher degree (post-UG)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>16.6</td>
<td>23.1</td>
<td>32.7</td>
<td>Between all years</td>
</tr>
<tr>
<td>Age &lt; 30&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9.7</td>
<td>2.2</td>
<td>21.9</td>
<td>Between all years</td>
</tr>
<tr>
<td>Age &gt; 60&lt;sup&gt;b&lt;/sup&gt;</td>
<td>36.6</td>
<td>61.3</td>
<td>70</td>
<td>Between all years</td>
</tr>
<tr>
<td>Q.20(ii): Self - Christian</td>
<td>51.5</td>
<td>45.5</td>
<td>36.5</td>
<td>Between all years</td>
</tr>
<tr>
<td>Q.20(iii): Self - Universalist</td>
<td>22.5</td>
<td>18.8</td>
<td>15.6</td>
<td>1990/2013</td>
</tr>
<tr>
<td>Q.13a: Belief in God - Yes</td>
<td>74.8</td>
<td>73.5</td>
<td>57.5</td>
<td>1990/2013, 2003/2013</td>
</tr>
<tr>
<td>Q.13a: Belief in God - No</td>
<td>3.4</td>
<td>7</td>
<td>14.5</td>
<td>Between all years</td>
</tr>
<tr>
<td>Q.14a(x): Jesus - containing God</td>
<td>63.3</td>
<td>49.1</td>
<td>50.2</td>
<td>1990/2003, 1990/2013</td>
</tr>
<tr>
<td>Q.14a(iv): Jesus - ethical teacher</td>
<td>46.9</td>
<td>42.1</td>
<td>53.8</td>
<td>1990/2013, 2003/2013</td>
</tr>
<tr>
<td>Q.14a(viii): Jesus - God made human</td>
<td>19.2</td>
<td>17.1</td>
<td>13.9</td>
<td>1990/2013</td>
</tr>
<tr>
<td>Q.16a(i): Prayer - talking to God</td>
<td>42.5</td>
<td>36.3</td>
<td>35</td>
<td>1990/2003, 1990/2013</td>
</tr>
<tr>
<td>Q.14a(iii): Prayer - communion</td>
<td>32.2</td>
<td>25.5</td>
<td>30.2</td>
<td>1990/2003</td>
</tr>
<tr>
<td>Q.14a(iv): Prayer - seek guidance</td>
<td>60.6</td>
<td>50.4</td>
<td>52.2</td>
<td>1990/2003, 1990/2013</td>
</tr>
<tr>
<td>Q.14a(vii): Prayer - waiting</td>
<td>51.1</td>
<td>49.5</td>
<td>63.2</td>
<td>1990/2013, 2003/2013</td>
</tr>
<tr>
<td>Q.14a(ix): Prayer - confession</td>
<td>22.9</td>
<td>14.8</td>
<td>10.2</td>
<td>Between all years</td>
</tr>
<tr>
<td>Q.14a(xii): Prayer - thanksgiving</td>
<td>60.6</td>
<td>50.4</td>
<td>52.2</td>
<td>1990/2013, 1990/2013</td>
</tr>
<tr>
<td>Q.21(iii): Meeting - meditating</td>
<td>42.8</td>
<td>46.9</td>
<td>39.8</td>
<td>2003/2013</td>
</tr>
<tr>
<td>Q.21(iv): Meeting - listening</td>
<td>52.6</td>
<td>65.9</td>
<td>64.7</td>
<td>1990/2003, 1990/2013</td>
</tr>
<tr>
<td>Q.21(viii): Meeting - sleeping</td>
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<td>7.3</td>
<td>4.3</td>
<td>2003/2013</td>
</tr>
<tr>
<td>Q.21(x): Meeting - thinking</td>
<td>64.1</td>
<td>57.2</td>
<td>57.3</td>
<td>1990/2003, 1990/2013</td>
</tr>
</tbody>
</table>

<sup>a</sup>Derived from Q.40.
<sup>b</sup>Derived from Q.39.
was such that it reflected an ongoing national debate in the Society. Most members and attenders will be aware of this to some extent at least and so may feel completing the questionnaire worthwhile. Thirdly, more intangible than the other explanations is the idea of corporate identity. Quakerism is very much 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, a 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 was measuring similar concepts some questions did appear to be asking too much of the same kind of thing. Particularly Q.11 measuring the strength of spirituality and Q.20(vii) asking 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 is not overly professional and 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 devised, neither did the item present a problem for the pilot study participants. However, 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, and perhaps better reasoning whilst devising would have, revealed that there was reason to consider this missing data non-ignorable [55]. Perhaps unsurprisingly, Quakers take a virtue rather than deontological approach to ethics [56]. This makes sense in a group where it is personal experience of truth that holds authority over external sources. Thankfully these questions were towards the end of the survey and so should not have had too much of an impact on the respondents frame of mind on the majority of questions. A better way to investigate these questions may well be a more in depth way, whereby items are presented for discussion in context. Many respondent 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 make-up 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/attendees [18].

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 fully commit to the Society [19]. Such commitment implies that the individual is prepared to fully participate in the organisation. The concept of business being a process of seeking God’s will [6] 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 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 because of the language that was used. 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 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 [37]. Unfortunately the analysis in this study could not be conducted on exactly the same belief variables. This was partly due to 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, 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 [57]. 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/ies is 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 appear 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 $\frac{1}{5}$ 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 to only 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. A definite assignment of class membership of a proba-
bilistic assignment 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 of 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 [31], with more recent generations more ready to challenge traditionally held belief and choose parts that suit them from a whole range of differing practices [16]. 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 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 in the UK 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 is 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 may even be indirectly measured easily, by 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 [31], 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.

References


Appendix A
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 towards Quaker practice, the fourth ideas about the world. The fifth sections 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 Quakers.

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 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 to plan to produce a short booklet based on the survey and interviews which will go to every Meeting.

If you have any questions about the survey or need a large print version, please feel free to call me on 01200 426266 or email me at b.p.dandelion@bham.ac.uk. We also have a web page at http://www.woodbrooke.org.uk/believing-belonging-in-britain-yearly-meeting-

Please feel free to detach this page.

With many thanks,

Ben Pink Dandelion
For the Survey Group:
Simon Bent; Bill Chadkirk; Peter Collins; Ben Pink Dandelion; Jennifer Hampton and Giusele Vincett.

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**British Quaker Survey 2013**

Believing, Belonging and Being in Britain Yearly Meeting:

a project to better understand our shared identity

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**A Initial experiences**

In this first section we ask you about your religious background and upbringing, and your introduction to Quakerism.

1. What age were you when you first started regularly attending Quaker Meetings?
   - ☐ Less than six months
   - ☐ Six months to one year
   - ☐ One to three years
   - ☐ Four to ten years
   - ☐ Eleven to 25 years
   - ☐ Over 25 years

2. How long have you attended meeting on a regular basis?
   - ☐ Less than six months
   - ☐ Six months to one year
   - ☐ One to three years
   - ☐ Four to ten years
   - ☐ Eleven to 25 years
   - ☐ Over 25 years

3. What was your religious upbringing?

4a. Did you come to Friends directly from another church or religious/meditational group/community?
   - ☐ No
   - ☐ Yes. (Please state which)

4b. If yes, how often did you attend the previous group?

5a. Are you actively involved with another religious/spiritual group?
   - ☐ No
   - ☐ Yes. (Please state which)

5b. If yes, how often do you attend the group?

---

**B Initial experiences**

In this second section we ask you about your religious background and upbringing, and your introduction to Quakerism.

1. What age were you when you first started regularly attending Quaker Meetings?
   - ☐ Less than six months
   - ☐ Six months to one year
   - ☐ One to three years
   - ☐ Four to ten years
   - ☐ Eleven to 25 years
   - ☐ Over 25 years

2. How long have you attended meeting on a regular basis?
   - ☐ Less than six months
   - ☐ Six months to one year
   - ☐ One to three years
   - ☐ Four to ten years
   - ☐ Eleven to 25 years
   - ☐ Over 25 years

3. What was your religious upbringing?

4a. Did you come to Friends directly from another church or religious/meditational group/community?
   - ☐ No
   - ☐ Yes. (Please state which)

4b. If yes, how often did you attend the previous group?

5a. Are you actively involved with another religious/spiritual group?
   - ☐ No
   - ☐ Yes. (Please state which)

5b. If yes, how often do you attend the group?

---

**C Religious beliefs**

In the second section we ask about your religious beliefs.

1. What initially attracted you to Quakerism?
   - ☐ Peace and social testimonies/political viewpoint
   - ☐ Form of worship
   - ☐ Quaker way of life
   - ☐ Lack of religious dogma
   - ☐ Position of women within the group
   - ☐ Position of gay and lesbians within the group
   - ☐ Quaker structure/lack of hierarchy
   - ☐ Company and friendship
   - ☐ Your own curiosity
   - ☐ A feeling of coming home
   - ☐ Quaker writings
   - ☐ The idea of the inward light
   - ☐ Born into Quaker family/at tended as a child
   - ☐ Other (Please state below)

2. How do you attend meeting?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

3. How do you attend the group?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

---

**D Religious beliefs**

In the third section we ask about your religious beliefs.

1. What initially attracted you to Quakerism?
   - ☐ Peace and social testimonies/political viewpoint
   - ☐ Form of worship
   - ☐ Quaker way of life
   - ☐ Lack of religious dogma
   - ☐ Position of women within the group
   - ☐ Position of gay and lesbians within the group
   - ☐ Quaker structure/lack of hierarchy
   - ☐ Company and friendship
   - ☐ Your own curiosity
   - ☐ A feeling of coming home
   - ☐ Quaker writings
   - ☐ The idea of the inward light
   - ☐ Born into Quaker family/at tended as a child
   - ☐ Other (Please state below)

2. How do you attend meeting?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

3. How do you attend the group?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

---

**E Religious beliefs**

In the fourth section we ask about your religious beliefs.

1. What initially attracted you to Quakerism?
   - ☐ Peace and social testimonies/political viewpoint
   - ☐ Form of worship
   - ☐ Quaker way of life
   - ☐ Lack of religious dogma
   - ☐ Position of women within the group
   - ☐ Position of gay and lesbians within the group
   - ☐ Quaker structure/lack of hierarchy
   - ☐ Company and friendship
   - ☐ Your own curiosity
   - ☐ A feeling of coming home
   - ☐ Quaker writings
   - ☐ The idea of the inward light
   - ☐ Born into Quaker family/at tended as a child
   - ☐ Other (Please state below)

2. How do you attend meeting?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

3. How do you attend the group?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

---

**F Religious beliefs**

In the fifth section we ask about your religious beliefs.

1. What initially attracted you to Quakerism?
   - ☐ Peace and social testimonies/political viewpoint
   - ☐ Form of worship
   - ☐ Quaker way of life
   - ☐ Lack of religious dogma
   - ☐ Position of women within the group
   - ☐ Position of gay and lesbians within the group
   - ☐ Quaker structure/lack of hierarchy
   - ☐ Company and friendship
   - ☐ Your own curiosity
   - ☐ A feeling of coming home
   - ☐ Quaker writings
   - ☐ The idea of the inward light
   - ☐ Born into Quaker family/at tended as a child
   - ☐ Other (Please state below)

2. How do you attend meeting?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting

3. How do you attend the group?
   - ☐ Attending a regular meeting
   - ☐ Attending a Course
   - ☐ Attending a social event
   - ☐ Attending a Meeting
   - ☐ Attending a discussion group
   - ☐ Attending a study group
   - ☐ Attending an event
   - ☐ Attending some other meeting
8 If you have spoken in Meeting for Worship, how long after you started attending meeting did this first happen?

- Didn't speak in meeting
- Less than two months
- Two to four months
- Five to a year
- One to three years
- Over three years
- Over four years

9a How long was it after you started attending Meeting did you apply for membership?

- Applied within six months
- Applied six to ten years
- Applied ten to twenty years
- Applied twenty to fifty years
- Applied more than fifty years

9b What age were you when you applied for membership?

- Under ten years
- Ten to twelve years
- Twelve to fourteen years
- Fourteen to sixteen years
- Sixteen or older

9c What was the main reason that led you to apply for membership?

- Opted into membership by my parents
- Opted into membership by my family
- Opted into membership by my friends
- Opted into membership by my church
- Opted into membership by my community

10 Your Religious Beliefs

In this section we ask you about your religious beliefs and about your attitudes towards God, prayer, the Bible and Jesus.

11 Do you consider yourself...

- Very spiritual
- Moderately spiritual
- Slightly spiritual
- Not spiritual at all

12 Do any of the following express important aspects of your spiritual awareness?

- God
- Love
- Spirit
- Truth
- The Inward Light
- Connectedness/union with all things
- Transcendence
- Other (Please write in other terms below)

13a Do you believe in God?

- Yes
- No
- Not sure

13b If you believe in God, which of the following best describes God for you?

- A spirit
- A being
- The inward light
- Love
- Father figure
- Mother figure
- Person figure
- A life force
- A process
- Best not described
- Creative spirit
- All loving
- All knowing
- All powerful
- Unknowable
- Capable of personal relationship
- A human construct
- Other (Please write in other descriptions below)

14 Do you seek God’s guidance in making important decisions in your life?

- Always
- Often
- Sometimes
- Rarely
- Never

14a Which of the following best describes your view of Jesus?

- Christ
- The son of God
- Saviour
- An ethical teacher
- A spiritual teacher
- Just a person
- Just a special person
- The inward light
- God made human
- Exemplary human
- Containing that of God within as we all do
- Other (Please write in other descriptions below)

14b Is Jesus an important figure in your life?

- Yes
- No
- It varies

14c Are the teachings of Jesus important in your life?

- Yes
- No
- It varies
16. How often do you pray?
- Every day
- Several times a week
- Approximately once a month
- Approximately every 2-3 months
- Less often than every 2-3 months
- It varies a lot
- Constantly
- Never

17. Do you believe that lucky charms such as a mascot or talisman can protect or help you?
Definitely no 1 2 3 4 5 6 7 8 9 10
27(i) Always
27(ii) Sometimes
27(iii) Never

18. Which of the following best describes your view of the Bible?
- The literal word of God
- The final word of God
- The word of God as experienced by its writers
- The word of God in that all words are God-given
- A book of authority for belief in God
- A book of history
- A book of myths
- A book of stories
- A useful teaching text
- The word of God open to new interpretation
- Other (Please write in other descriptions below)

19. What do you read to nurture your spiritual life?
- The Bible
- Quaker Faith and Practice
- Advices and Queries
- Other books (Please list below)

20. Do you think of yourself as a...
- Quaker
- Christian
- Universalist
- Pagan
- Muslim
- Jew
- Atheist
- Buddhist
- Agnostic
- Humanist
- Non-Theist
- Spiritual person
- Other (Please state below)

21. What is the main factor that keeps you coming to Meeting?
- Being with others in the Spirit
- Waiting
- Thinking
- Sleeping
- Seeking union with the Divine
- Seeking God’s will
- Seeking union with the Divine
- Sleeping
- Worshipping God
- Thinking
- Waiting
- Opening up to the Spirit
- Being with others in the Spirit
- Other (Please write in other descriptions below)

22. Do you personally contribute financially to...
- Local meeting
- Area Meeting
- Regional Gathering/ General Meeting
- Yearly Meeting
- Young Friends General Meeting
- The world family of Friends
- A listed informal group
- Other (Please state which)
- Other (Please state below)

23. Is the way Quakers make decisions important to you?
- Yes
- No

24. What do you understand as the Quaker business method?
- (You may tick more than one box)
- Seeking the will of God
- Seeking the sense of the meeting on a particular issue
- Finding a consensus
- A useful process
- A process of trust
- Other (Please state below)

25. Which body of Friends do you feel most part of?
- (You may tick more than one box)
- Local meeting
- Area Meeting
- Regional Gathering/ General Meeting
- Yearly Meeting
- Young Friends General Meeting
- The world family of Friends
- A listed informal group
- Other (Please state which)
- Other (Please state below)

26a. Which parts of the Quaker world have you been actively engaged with?
- Local meeting
- Area Meeting
- Regional Gathering/ General Meeting
- Yearly Meeting
- Young Friends General Meeting
- The world family of Friends
- A listed informal group
- Other (Please state which)
- Other (Please state below)

26b. What roles have you held?
- (e.g. Local Meeting Clerk, Area Meeting Treasurer etc.)

27. Do you personally contribute financially to...
- Local Meeting
- Not at all Monthly Quarterly Annually Less often
- Area Meeting
- Not at all Monthly Quarterly Annually Less often
- Yearly Meeting
- Not at all Monthly Quarterly Annually Less often
- Other Quaker projects?
- Not at all Monthly Quarterly Annually Less often

28. To what extent do you agree with the idea that Quakers can be helped in their spiritual journey by hearing about the religious experience of other religious groups?
Definitely no 1 2 3 4 5 6 7 8 9 10

C. You and Quakerism
In this section we ask you about your attitudes towards, and ideas about Quakerism, Meeting for Worship, your involvement in the wider structure of Britain Yearly Meeting, and Quaker Business Method.
30. To what extent does being a Quaker affect your everyday life? (e.g., the way you vote, shop, what you buy etc.)

<table>
<thead>
<tr>
<th>Definitely no</th>
<th>Definitely yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
</tbody>
</table>

31. In certain circumstances, breaking the law can be morally justified?

<table>
<thead>
<tr>
<th>Family</th>
<th>Firmly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
</tbody>
</table>

32. Gender

33. Age

34. 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 these statements below comes closest to your opinion?

<table>
<thead>
<tr>
<th>More should definitely be done to promote equality</th>
<th>More should probably be done to promote equality</th>
<th>Changes have probably gone too far</th>
<th>Changes have definitely gone too far</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
</tbody>
</table>

35. Social welfare services for the elderly, handicapped or deprived people

36. Some people say that being Christian is important for being truly British. Others say it is not important. How important do you think it is?

<table>
<thead>
<tr>
<th>Very important</th>
<th>Fairly important</th>
<th>Not very important</th>
<th>Not important at all</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
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</tbody>
</table>

37. Some people live with partners of the same sex. Using the statements below, please say whether you approve or disapprove of laws that treat these partnerships somewhat like marriage?

<table>
<thead>
<tr>
<th>Strongly approve</th>
<th>Approve</th>
<th>Neither approve nor disapprove</th>
<th>Disapprove</th>
<th>Strongly disapprove</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

38. Which of the following best describes your view of human nature?

<table>
<thead>
<tr>
<th>Definitely bad</th>
<th>Imperfect</th>
<th>Neither essentially good nor essentially bad</th>
<th>Essentially good</th>
<th>Both essentially good and essentially bad</th>
<th>Don't have a view</th>
<th>Other (please write below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
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<td>[ ]</td>
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</tr>
</tbody>
</table>

39. About You

40. Ideas about the World

<table>
<thead>
<tr>
<th>Paying cash for services to avoid taxes</th>
<th>Having casual sex</th>
<th>Avoiding a fare on public transport</th>
<th>Prostitution</th>
<th>Scientific experiments on human embryos</th>
<th>Genetic manipulation of food stuffs</th>
<th>Artificial insemination or in-vitro fertilisation</th>
<th>Death penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Always</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

41. Generally speaking, how concerned are you about environmental issues? (Please circle as appropriate.)

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Very concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

42. Gender

43. Age
40 Education (Please indicate what educational qualifications you have obtained.)

- None
- CSE/O-level/GCSE/Standards
- A-levels/Highers
- Degree
- Masters
- Doctorate
- Other post-school qualifications (Please state below.)

41 Among which group would you place yourself?

- High income
- Middle income
- Low income
- Don’t know

42a Which type of job did you have in your first job after leaving fulltime education?

- Professional and technical
- Manager and administrator
- Clerical
- Sales
- Service
- Skilled manual
- Semi-skilled or unskilled manual
- Farm worker
- I have never had a job
- Can’t say

42b Which type of job did your father have when you were 16?

- Professional and technical
- Manager and administrator
- Clerical
- Sales
- Service
- Skilled manual
- Semi-skilled or unskilled manual
- Farm worker
- He never had a job
- Retired
- Currently unemployed

42c Which type of job did your mother have when you were 16?

- Professional and technical
- Manager and administrator
- Clerical
- Sales
- Service
- Skilled manual
- Semi-skilled or unskilled manual
- Farm worker
- I have never had a job
- She never had a job
- No Mother/Mother not present
- Can’t remember/can’t say

42d Which type of job do you have now in your current job?

- Professional and technical
- Manager and administrator
- Clerical
- Sales
- Service
- Skilled manual
- Semi-skilled or unskilled manual
- Farm worker
- I have never had a job
- Retired
- Currently unemployed

43a How would you describe your national identity? (Please pick all that apply.)

- English
- Welsh
- Scottish
- Northern Irish
- British
- Other (Please state below)

43b What is your ethnic group?

A. White
- English / Welsh / Scottish / Northern Irish / British
- Irish
- Gypsy or Irish Traveller
- Any other White background. (Please write below)

B. Mixed / multiple ethnic groups
- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed / multiple ethnic background (Please write below)

C. Asian / Asian British
- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background. (Please write below)

D. Black / African / Caribbean / Black British
- African
- Caribbean
- Any other Black / African / Caribbean background. (Please write below)

E. Other ethnic group
- Arab
- Any other ethnic group (Please write below)

Thank you for your help!

If you would be prepared to be interviewed, please fill in the following

Name

Address

Mobile or evening phone number

Email address
May 2, 2013

Dear Friend,

Thank you again for agreeing to take part in the 2013 British Quaker Survey.

We enclose 22 survey forms each with their own freepost envelope for you to distribute on May 12 or the next Sunday you meet, or fewer if you have indicated that this is too many. If you have forms left over, please send them back in one of the freepost envelopes and put ‘Unused’ on the envelope. Then we know how many were handed out.

Here are the instructions as to how we would like you to distribute the forms. If you have children and young people in the meeting, they may like to help.

First, allow any visitors and enquirers to go and have tea/coffee, or keep them out of your count in some way.

Then count round all the members and attenders in the room, giving each person a number.

If at the end you have 22 or less, give everyone counted a form.

If you have more than 22, use the table enclosed to work out who gets the form. Look for your final number or one closest to it along the top row of the table. You will find 22 randomly generated numbers in the column below. Give the 22 forms to the 22 people with those numbers.

Please remind people with forms to get them back within 2 weeks. We would appreciate it if you could remind them the following two Sundays as well please.

We have achieved a 80% response rate in the past and we hope to manage the same or better this time. The results of this survey will help us enormously in understanding where we are as a society.

If you have any queries, do feel free to call me on 01200 426266 or e-mail me at: b.p.dandelion@bham.ac.uk.

Again, many thanks.

Ben Pink Dandelion

For the Survey Team: Simon Best, Bill Chadkirk, Peter Collins, Ben Pink Dandelion, Jennifer Hampton, Giselle Vincett.
Appendix B
Appendix C

Univariable logistic regression analyses testing association of clerking responsibilities against predictive variables.

<table>
<thead>
<tr>
<th>Item</th>
<th>No. out of clerks</th>
<th>No. out of non-clerks</th>
<th>Odds ratio (95% C.I.)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age started regularly attending&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 16 years</td>
<td>51/230</td>
<td>62/407</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>16 - 30 years</td>
<td>66/230</td>
<td>66/407</td>
<td>1.216 (0.735-2.012)</td>
<td>0.447</td>
</tr>
<tr>
<td>31 - 45 years</td>
<td>75/230</td>
<td>104/407</td>
<td>0.877 (0.545-1.409)</td>
<td>0.587</td>
</tr>
<tr>
<td>46 - 60 years</td>
<td>30/230</td>
<td>105/407</td>
<td>0.347 (0.201-0.602)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>⩾ 61 years</td>
<td>8/230</td>
<td>70/407</td>
<td>0.139 (0.061-0.315)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Q.4a: To Quakers directly from another church</td>
<td>88/229</td>
<td>126/413</td>
<td>1.422 (1.013-1.995)</td>
<td>0.041</td>
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<tr>
<td>Q.8: How long attending until spoke in Meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never spoken</td>
<td>13/219</td>
<td>90/412</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>&lt; 2 months</td>
<td>8/219</td>
<td>26/412</td>
<td>2.130 (0.797-5.692)</td>
<td>0.132</td>
</tr>
<tr>
<td>2 - 4 months</td>
<td>24/219</td>
<td>31/412</td>
<td>5.360 (2.436-11.795)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>5 months ⩾ 1 year</td>
<td>30/219</td>
<td>80/412</td>
<td>2.596 (1.267-5.318)</td>
<td>0.009</td>
</tr>
<tr>
<td>1 year ⩾ 4 years</td>
<td>61/219</td>
<td>92/412</td>
<td>4.590 (2.359-8.930)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>&gt; 4 years</td>
<td>83/219</td>
<td>93/412</td>
<td>6.179 (6.179-3.217)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Membership&lt;sup&gt;b&lt;/sup&gt;</td>
<td>22/228</td>
<td>232/412</td>
<td>28.707 (12.468-66.094)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Q.12: Spiritual awareness - Love</td>
<td>177/230</td>
<td>299/419</td>
<td>1.340 (0.923-1.946)</td>
<td>0.123</td>
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<tr>
<td>Q.12(v): Spiritual awareness - Inward Light</td>
<td>146/230</td>
<td>213/419</td>
<td>1.681 (1.209-2.338)</td>
<td>0.002</td>
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<tr>
<td>Q.12(vii): Spiritual awareness - Transcendence</td>
<td>35/230</td>
<td>85/419</td>
<td>0.705 (4.58-1.086)</td>
<td>0.112</td>
</tr>
<tr>
<td>Item</td>
<td>No. out of clerks</td>
<td>No. out of non-clerks</td>
<td>Odds ratio (95% C.I.)</td>
<td>p-value</td>
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<tr>
<td>------</td>
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<tr>
<td>Q.14a(i): Jesus - Christ</td>
<td>25/230</td>
<td>76/419</td>
<td>0.550 (0.339-0.893)</td>
<td>0.015</td>
</tr>
<tr>
<td>Q.14a(ii): Jesus - Son of God</td>
<td>25/230</td>
<td>67/419</td>
<td>0.641 (0.392-1.046)</td>
<td>0.074</td>
</tr>
<tr>
<td>Q.14a(iii): Jesus - Saviour</td>
<td>6/230</td>
<td>38/419</td>
<td>0.269 (0.112-0.645)</td>
<td>0.002</td>
</tr>
<tr>
<td>Q.14a(iv): Jesus - ethical teacher</td>
<td>137/230</td>
<td>212/419</td>
<td>1.438 (1.039-1.992)</td>
<td>0.028</td>
</tr>
<tr>
<td>Q.14a(v): Jesus - spiritual teacher</td>
<td>172/230</td>
<td>263/419</td>
<td>1.759 (1.23-2.515)</td>
<td>0.002</td>
</tr>
<tr>
<td>Q.14a(viii): Jesus - God made human</td>
<td>21/230</td>
<td>69/419</td>
<td>0.510 (0.304-0.855)</td>
<td>0.010</td>
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<tr>
<td>Q.14a(x): Jesus - containing that of God as we all do</td>
<td>130/230</td>
<td>196/419</td>
<td>1.479 (1.07-2.044)</td>
<td>0.018</td>
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<tr>
<td>Q.16a(ii): Prayer - asking God to change things</td>
<td>12/230</td>
<td>36/419</td>
<td>0.586 (0.298-1.149)</td>
<td>0.116</td>
</tr>
<tr>
<td>Q.16a(v): Prayer - meditating</td>
<td>63/230</td>
<td>177/419</td>
<td>0.516 (0.364-0.731)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Q.16a(vii): Prayer - still &amp; silent waiting</td>
<td>157/230</td>
<td>253/419</td>
<td>1.411 (1.005-1.982)</td>
<td>0.047</td>
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<tr>
<td>Q.16a(viii): Prayer - praise</td>
<td>25/230</td>
<td>62/419</td>
<td>0.702 (0.428-1.152)</td>
<td>0.160</td>
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<tr>
<td>Q.16a(xii): Prayer - thanksgiving</td>
<td>99/230</td>
<td>144/419</td>
<td>1.443 (1.038-2.007)</td>
<td>0.029</td>
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<tr>
<td>Q.16a(xiii): Prayer - opening up to the spirit</td>
<td>151/230</td>
<td>205/419</td>
<td>1.995 (1.43-2.783)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Q.16b: Prayer effect Earth</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>No</td>
<td>38/225</td>
<td>50/405</td>
<td>-</td>
<td>0.190</td>
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<tr>
<td>Yes</td>
<td>109/225</td>
<td>192/405</td>
<td>0.747 (0.461-1.211)</td>
<td>0.236</td>
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<tr>
<td>Not Sure</td>
<td>78/225</td>
<td>163/405</td>
<td>0.630 (0.382-1.039)</td>
<td>0.070</td>
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<tr>
<td>Q.18(iv): Bible - all words God given</td>
<td>3/230</td>
<td>14/419</td>
<td>0.382 (0.19-1.344)</td>
<td>0.12</td>
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<tr>
<td>Item</td>
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<tr>
<td>Q.18(v): Bible - authority for belief in God</td>
<td>No. out of clerks: 12/230, No. out of non-clerks: 35/419, Odds ratio (95% C.I.): 0.604 (0.307-1.188), p-value: 0.14</td>
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<tr>
<td>Q.18(vi): Bible - history</td>
<td>No. out of clerks: 119/230, No. out of non-clerks: 1773/419, Odds ratio (95% C.I.): 1.437 (1.041-1.986), p-value: 0.027</td>
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<td>Q.18(vii): Bible - myths</td>
<td>No. out of clerks: 95/230, No. out of non-clerks: 147/419, Odds ratio (95% C.I.): 1.302 (0.936-1.812), p-value: 0.117</td>
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<tr>
<td>Q.19(i): Read - Bible</td>
<td>No. out of clerks: 84/230, No. out of non-clerks: 132/419, Odds ratio (95% C.I.): 1.251 (0.892-1.755), p-value: 0.194</td>
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<tr>
<td>Q.20(iii): Consider self - Universalist</td>
<td>No. out of clerks: 52/230, No. out of non-clerks: 49/419, Odds ratio (95% C.I.): 2.206 (1.436-3.388), p-value: &lt; 0.001</td>
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<tr>
<td>Q.20(vii): Consider self - Atheist</td>
<td>No. out of clerks: 3/230, No. out of non-clerks: 15/419, Odds ratio (95% C.I.): 0.356 (0.102-1.243), p-value: 0.091</td>
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<tr>
<td>Q.20(ix): Consider self - Agnostic</td>
<td>No. out of clerks: 11/230, No. out of non-clerks: 40/419, Odds ratio (95% C.I.): 0.476 (0.239-0.947), p-value: 0.031</td>
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<tr>
<td>Q.20(x): Consider self - Humanist</td>
<td>No. out of clerks: 8/230, No. out of non-clerks: 54/419, Odds ratio (95% C.I.): 0.244 (0.114-0.521), p-value: &lt; 0.001</td>
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<tr>
<td>Q.20(xii): Consider self - Spiritual</td>
<td>No. out of clerks: 66/230, No. out of non-clerks: 141/419, Odds ratio (95% C.I.): 0.793 (0.559-1.126), p-value: 0.195</td>
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<tr>
<td>Q.21(iii): Activity in Meeting - Meditating</td>
<td>No. out of clerks: 73/230, No. out of non-clerks: 185/419, Odds ratio (95% C.I.): 0.588 (0.419-0.825), p-value: 0.002</td>
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<tr>
<td>Q.21(vi): Activity in Meeting - seeking God's will</td>
<td>No. out of clerks: 56/230, No. out of non-clerks: 75/419, Odds ratio (95% C.I.): 1.476 (0.998-2.183), p-value: 0.05</td>
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<tr>
<td>Q.21(x): Activity in Meeting - Thinking</td>
<td>No. out of clerks: 116/230, No. out of non-clerks: 256/419, Odds ratio (95% C.I.): 0.648 (0.468-0.896), p-value: 0.009</td>
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<tr>
<td>Q.21(xi): Activity in Meeting - Waiting</td>
<td>No. out of clerks: 132/230, No. out of non-clerks: 211/419, Odds ratio (95% C.I.): 1.328 (0.960-1.836), p-value: 0.086</td>
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<tr>
<td>Item</td>
<td>No. out of clerks</td>
<td>No. out of non-clerks</td>
<td>Odds ratio (95% C.I.)</td>
<td>p-value</td>
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<tr>
<td>Q.21(xii): Activity in Meeting - Opening up to the Spirit</td>
<td>147/230</td>
<td>210/419</td>
<td>1.763 (1.267-2.452)</td>
<td>0.001</td>
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<tr>
<td>Q.21(xiii): Activity in Meeting - Being with others in Spirit</td>
<td>174/230</td>
<td>276/419</td>
<td>1.61 (1.12-2.313)</td>
<td>0.01</td>
</tr>
<tr>
<td>Return - spiritual&lt;sup&gt;c&lt;/sup&gt;</td>
<td>111/230</td>
<td>173/419</td>
<td>1.326 (0.96-1.833)</td>
<td>0.087</td>
</tr>
<tr>
<td>Return - personal&lt;sup&gt;c&lt;/sup&gt;</td>
<td>86/230</td>
<td>182/419</td>
<td>0.778 (0.559-1.081)</td>
<td>0.135</td>
</tr>
<tr>
<td>Return - service&lt;sup&gt;c&lt;/sup&gt;</td>
<td>18/230</td>
<td>19/419</td>
<td>1.787 (0.919-3.479)</td>
<td>0.084</td>
</tr>
<tr>
<td>Q.23: Way Quakers make decisions important</td>
<td>216/222</td>
<td>350/391</td>
<td>4.217 (1.761-10.099)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Q.24(i): Business Method - seeking God’s will</td>
<td>121/230</td>
<td>149/419</td>
<td>2.012 (1.45-2.79)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Q.24(ii): Business Method - seeking sense of Meeting</td>
<td>200/230</td>
<td>318/419</td>
<td>2.117 (1.358-3.302)</td>
<td>0.001</td>
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<tr>
<td>Q.24(iii): Business Method - finding consensus</td>
<td>19/230</td>
<td>107/419</td>
<td>0.263 (0.156-0.441)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Q.24(iv): Business Method - process of trust</td>
<td>100/230</td>
<td>157/419</td>
<td>1.284 (0.925-1.781)</td>
<td>0.134</td>
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<tr>
<td>Q.24(vi): Business Method - good idea</td>
<td>21/230</td>
<td>56/419</td>
<td>0.651 (0.384-1.106)</td>
<td>0.111</td>
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<tr>
<td>Q.26b: Roles held</td>
<td>None</td>
<td>0/230</td>
<td>185/419</td>
<td>-</td>
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<tr>
<td></td>
<td>Local</td>
<td>93/230</td>
<td>172/419</td>
<td>49.939</td>
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<tr>
<td></td>
<td>Area-wide</td>
<td>92/230</td>
<td>42/419</td>
<td>202.619</td>
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<td></td>
<td>National</td>
<td>43/230</td>
<td>17/419</td>
<td>233.971</td>
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<tr>
<td></td>
<td>International</td>
<td>2/230</td>
<td>3/419</td>
<td>61.667</td>
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</table>

70
<table>
<thead>
<tr>
<th>Item</th>
<th>No. out of clerks</th>
<th>No. out of non-clerks</th>
<th>Odds ratio (95% C.I.)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.27(i): Financially contribute - LM</td>
<td>220/230</td>
<td>351/419</td>
<td>4.262 (2.149-8.454)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Q.27(ii): Financially contribute - AM</td>
<td>159/230</td>
<td>166/419</td>
<td>3.413 (2.426-4.802)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Q.27(iii): Financially contribute - YM</td>
<td>174/230</td>
<td>173/419</td>
<td>4.418 (3.087-6.323)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Q.27(iv): Financially contribute - other Q projects</td>
<td>164/230</td>
<td>227/419</td>
<td>2.102 (1.489-2.966)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Involved with other groups(d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>None</td>
<td>13/230</td>
<td>38/419</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Religious</td>
<td>158/230</td>
<td>217/419</td>
<td>2.128 (1.098-4.127)</td>
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<td>Other</td>
<td>59/230</td>
<td>164/419</td>
<td>1.052 (0.524-2.110)</td>
<td>0.887</td>
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<tr>
<td>Age(e)</td>
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<tr>
<td>16 - 30 years</td>
<td>4/226</td>
<td>30/411</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>31 - 45 years</td>
<td>6/226</td>
<td>33/411</td>
<td>1.364 (0.351-5.304)</td>
<td>0.654</td>
</tr>
<tr>
<td>46 - 60 years</td>
<td>32/226</td>
<td>96/411</td>
<td>2.500 (0.818-7.642)</td>
<td>0.108</td>
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<tr>
<td>61 - 75 years</td>
<td>114/226</td>
<td>163/411</td>
<td>5.245 (1.799-15.298)</td>
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</tr>
<tr>
<td>(\geq 76) years</td>
<td>70/226</td>
<td>89/411</td>
<td>5.899 (1.985-17.532)</td>
<td></td>
</tr>
<tr>
<td>Current employment status(f)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not in paid employment</td>
<td>4/230</td>
<td>38/419</td>
<td>-</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Retired</td>
<td>174/230</td>
<td>213/419</td>
<td>7.761 (2.717-22.167)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>In paid employment</td>
<td>52/230</td>
<td>168/419</td>
<td>2.940 (1.002-8.626)</td>
<td>&lt; 0.049</td>
</tr>
</tbody>
</table>

\(a\) Derived from Q.1.  
\(b\) Derived from Q.9 - Q.10.  
\(c\) Derived from Q.22.  
\(d\) Derived from Q.34a.  
\(e\) Derived from Q.39.  
\(f\) Derived from Q.42d.
Appendix D

Final 3-cluster latent class model:

Syntax

options
algorithm tolerance=1e-008 entropy 0.01 emiterations=250 miterations=50;
startvalues seed=0 sets=10 tolerance=1e-005 iterations=50;
bayes categorical=1 variances=1 latent=1 poisson=1;
montecarlo seed=0 replicates=500 tolerance=1e-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, jegolu nominal, jeexh nominal, jecogo nominal, jefig nominal, jetea nominal, prtalk nominal, prask nominal, prseek nominal, prguid nominal, prmed nominal, prlife nominal, prwait nominal, prprai nominal, preconf nominal, precco nominal, prheal nominal, prthank nominal, propen nominal, prcons nominal, preffect nominal, biwoglit nominal, biwogfin nominal, biwogex nominal, biwogall nominal, biauth nominal, bihist nominal, bimary nominal, history nominal, biteach nominal, biwogint nominal, readbi nominal, readfp nominal, selfchri nominal, selfuni nominal, selfath nominal, selfbud nominal, selfagn nominal, selfhum nominal, selfnon nominal, selfspir nominal, mfwpray nominal, mfwprai nominal, mfwmed nominal, mfwlist nominal, mfwcom nominal, mfwwill nominal, mfwdiv nominal, mfsleep nominal, mfwworsh nominal, mfwthink nominal, mfwwait nominal, mfwopen nominal, mfwothers nominal, att_violence nominal, humnat nominal, godguid, profen 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, bnimp nominal inactive, bmwill nominal inactive, bnsens nominal inactive, bnccons nominal inactive, bnmuse nominal inactive, bnmtrust nominal inactive, bngood 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 +
Appendix E

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

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Quaker Responses</th>
<th>Non-Quaker Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (16-30)</td>
<td>0.0687 0.0309 0.0557</td>
<td>0.4400</td>
</tr>
<tr>
<td>Age (31-45)</td>
<td>0.0861 0.034 0.0503</td>
<td>0.0700</td>
</tr>
<tr>
<td>Age (46-60)</td>
<td>0.1846 0.1825 0.1890</td>
<td>0.2600</td>
</tr>
<tr>
<td>Age (61-75)</td>
<td>0.4012 0.4796 0.4379</td>
<td>0.4100</td>
</tr>
<tr>
<td>Age (76+)</td>
<td>0.2400 0.2531 0.2575</td>
<td>0.2200</td>
</tr>
<tr>
<td>Q.40(iii): Education (A-level)</td>
<td>Quaker Responses</td>
<td>Non-Quaker Responses</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Female $^b$</td>
<td>0.5849</td>
<td>0.4694</td>
</tr>
<tr>
<td>Q.40(iv): Education (degree)</td>
<td>0.1392</td>
<td>0.1431</td>
</tr>
<tr>
<td>Q.40(v): Education (masters)</td>
<td>0.3916</td>
<td>0.273</td>
</tr>
<tr>
<td>Q.40(vi): Education (doctorate)</td>
<td>0.2357</td>
<td>0.2354</td>
</tr>
<tr>
<td>Religious upbringing (non-religious) $^c$</td>
<td>0.1043</td>
<td>0.0729</td>
</tr>
<tr>
<td>Religious upbringing (Quaker) $^c$</td>
<td>0.1616</td>
<td>0.1919</td>
</tr>
<tr>
<td>Religious upbringing (Anglican) $^c$</td>
<td>0.2725</td>
<td>0.3609</td>
</tr>
<tr>
<td>Religious upbringing (Protestant) $^c$</td>
<td>0.2187</td>
<td>0.1496</td>
</tr>
<tr>
<td>Religious upbringing (other Christian) $^c$</td>
<td>0.1925</td>
<td>0.1853</td>
</tr>
<tr>
<td>Religious upbringing (non-Christian) $^c$</td>
<td>0.0340</td>
<td>0.0297</td>
</tr>
<tr>
<td>Q.2(iii): Length attending (1yr - 3yr)</td>
<td>0.1015</td>
<td>0.1534</td>
</tr>
<tr>
<td>Q.2(iv): Length attending (4yr - 10yr)</td>
<td>0.1455</td>
<td>0.1216</td>
</tr>
<tr>
<td>Q.2(v): Length attending (11yr - 25yr)</td>
<td>0.2248</td>
<td>0.2881</td>
</tr>
<tr>
<td>Q.2(vi): Length attending (&gt; 25yr)</td>
<td>0.5100</td>
<td>0.4028</td>
</tr>
<tr>
<td>Member $^d$</td>
<td>0.8281</td>
<td>0.6584</td>
</tr>
<tr>
<td>Role Held</td>
<td>Quaker Responses</td>
<td>Non-Quaker Responses</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Theist</td>
</tr>
<tr>
<td>Roles held (none)(e)</td>
<td>0.1911</td>
<td>0.3134</td>
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<tr>
<td>Roles held (locally)(e)</td>
<td>0.4438</td>
<td>0.4522</td>
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<tr>
<td>Roles held (up to AM/GM)(e)</td>
<td>0.2467</td>
<td>0.1572</td>
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<tr>
<td>Roles held (national)(e)</td>
<td>0.1086</td>
<td>0.0771</td>
</tr>
<tr>
<td>Roles held (international)(e)</td>
<td>0.0099</td>
<td>0</td>
</tr>
<tr>
<td>Clerk(e)</td>
<td>0.4156</td>
<td>0.2809</td>
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<tr>
<td>Q.23: Business Method</td>
<td></td>
<td></td>
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<tr>
<td>Important</td>
<td>0.9011</td>
<td>0.8628</td>
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<td>Q.24(i): Business Method</td>
<td></td>
<td></td>
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<tr>
<td>God’s will</td>
<td>0.7374</td>
<td>0.1130</td>
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<tr>
<td>Q.24(ii): Business Method</td>
<td></td>
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<tr>
<td>Sense of Meeting</td>
<td>0.8081</td>
<td>0.8213</td>
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<tr>
<td>Q.24(iii): Business Method</td>
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<td></td>
</tr>
<tr>
<td>Seek consensus</td>
<td>0.1241</td>
<td>0.3027</td>
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<tr>
<td>Q.24(iv): Business Method</td>
<td></td>
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<tr>
<td>Useful process</td>
<td>0.1464</td>
<td>0.1371</td>
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<td>Q.24(v): Business Method</td>
<td></td>
<td></td>
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<tr>
<td>Process of trust</td>
<td>0.3825</td>
<td>0.3908</td>
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<tr>
<td>Q.24(vi): Business Method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good idea</td>
<td>0.1110</td>
<td>0.0967</td>
</tr>
</tbody>
</table>

\(a\) Derived from Q.39.

\(b\) Derived from Q.38.

\(c\) Derived from Q.3.

\(d\) Derived from Q.9 - Q.10.

\(e\) Derived from Q.26b.