

**SURVEY QUESTION BANK: Topic Overview 4 (February 2011)** 

# MEASURING RELIGIOSITY USING SURVEYS

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Introduction: Why is religion important and can it be quantified?

A number of important debates are underway which require good evidence to underpin them. Is society secularising or are we in a post-secular age of religious revival? Is there a large community of people who don't go to church, but still believe in God? Is alternative spirituality growing? Are women still more religious than men, and in what ways? Are the children of South Asian immigrants more religious than their parents? How many Catholics are there in Britain, in formal membership terms (by baptism) or fully-practising? How does religion affect health, social and economic outcomes?

Religion is a highly complex phenomenon. It covers a variety of meanings as well as being multidimensional in construct, being cultural, organisational, personal, and behavioural. This is clear from the variety of disciplines which cover or overlap with religion: theology, philosophy, sociology of religion, cultural history, economics of religion, anthropology, psychology, demography, political science, law, and international relations.

However, many other social phenomena are also complex. We also have to use descriptors and categories that others understand in everyday and scholarly life alike: 'Wafa is a devout Muslim'; 'James goes to the chaplaincy more than he used to'; 'He's not religious, just spiritual generally'. Qualities and categories such as religious denomination, place of worship, frequency of worship or type of religiosity can accordingly be quantified so long as we are *clear about what they mean*. Measurement also requires discipline and use of definitions which can be justified to others and replicated by them.

Even for those who prefer qualitative methods for those cases which surveys find hard-to-reach, such as minority communities and niche interest groups, analysis of data is a useful additional tool. Most researchers are specialists in particular methods, but mixed-method research – often by teams of researchers - can be very valuable in producing results that are both rich and deep. Chaves (1997) offers a model of what can be achieved by combining evidence from a variety of sources (surveys, a census time series, interviews, archival records, and published reports by participants and observers).

# 1. Religion versus religiosity

For some people, religious affiliation is purely nominal or used as an identifier to distinguish themselves from members of other religious groups. By contrast, others have a serious personal commitment. Therefore surveys often seek to capture both religious adherence (also called religious identity or religious affiliation) and degree of religious commitment, or 'religiosity'. Religiosity is bound up with attitudes, behaviour and values, while religious affiliation is more like ethnicity, something that for most is part of their family, community or cultural heritage, rather than being chosen by them.

While quantification of religiosity is possible (with a large scholarly literature testament to this) there are no clear standards regarding what aspects should be measured. A number are relevant: belief, practice, formal membership, informal affiliation, ritual initiation, doctrinal knowledge, moral sense, core values, or how you are regarded by others. Further, different aspects may relate to fundamentally different types of religiosity.

It is important then to consider from the outset of empirical analysis how best to 'operationalise' religion. For those designing surveys, the task to measure religiosity efficiently, using the most powerful but smallest number of items, is even more taxing given resource constraints: depending on the interview methods and sample size, each additional question can have significant cost implications.

The American researcher Charles Glock suggested that religiosity had five core dimensions: belief, knowledge, experience, practice and consequences. Gerhard Lenski in 1961 proposed a different set of four dimensions: doctrinal orthodoxy and 'devotionalism', and associational religiosity (within the church setting) and communal religiosity outside the church setting.

Since then a number of researchers developed survey questions corresponding to these dimensions, to create scale measures of each. Others however argue that various measures of religiosity make up a single, unidimensional scale, of which belief is the core component (Clayton 1971). While recent evidence supports the view that religiosity can be measured

on a unidimensional scale (Voas 2009), it remains true that religion has multiple facets that, for theoretical reasons, you may wish to analyze separately.

It has become conventional to focus on three aspects of religious involvement: belief, practice and affiliation. Belief in God, an afterlife or a transcendent order is fundamental to most religions. Religious behaviour - such as prayer or attendance at services – may be a more exacting standard, requiring a commitment of time. Some people may attend purely for family or social reasons, and other highly religious people may not be able to do so for physical reasons, but generally it is reasonable to assume that practice and belief correspond.

Finally, the growth over time in the number who say that they have no religion has turned the acceptance of a denominational label into a simple indicator of religiosity. It is also possible to have religion as an important aspect of personal identity without participating actively, being a formal member of a faith community, or even agreeing with basic tenets of the relevant faith.

# 2. How do surveys measure religiosity?

# 2.1 Varieties of measurement

Social surveys provide a fundamental resource in religious research. *Cross-sectional studies* – which form the majority - collect data on a cross-section of the population at a single point in time. This can help us understand how religiosity relates to various correlates: sex, age, relationship status, education, employment status, social class, region of residence, and ethnic background. The ideal approach is a panel or *longitudinal study*, revisiting people recurrently, but these surveys are expensive.

A cross-sectional study conducted on a regular basis can include the same questions at each survey. However, the sample is not the same from one survey to the next, and hence there is an additional source of uncertainty: if there are differences, is it because things have changed or simply because new people have been interviewed?

Nevertheless, cross-sectional survey respondents can be asked to reconstruct their family, education or work histories so that we can try to establish religious change over time. Interviewers can ask about religion of upbringing, parents' religious affiliation and practice, and attendance at age 11 or 12. Survey respondents also often provide responses for partners, children and other household members for a variety of issues.

# 2.2. Difficulties with collecting data

Religion can be a sensitive subject: minority groups may be reluctant to identify themselves for fear of persecution or being misunderstood. Others may find the questions too personal. Others still may find them too dull, particularly where there is a large battery of items. 'Social desirability bias' can affect responses, so that people may not admit to unusual beliefs or practices – or conversely exaggerate their religious conformity, or frequency of churchgoing.

Further, some questions may not make much sense to people. Answers on specific doctrines or religious ideas - the Trinity, the resurrection of Jesus, reincarnation - may be difficult to interpret if the concepts are not understood by everyone. Another problem relates to the question, 'What is your religion?' How formal does this have to be – being a fully paid-up member of a local church, or is simple allegiance enough? If the way such questions are understood varies systematically by age, class or culture, then the results may be misleading. Comparisons over time and cross-nationally will also be difficult.

# 2.3 Difficulties with measuring and interpreting religiosity

# 2.3.1 Measuring affiliation

Most people are able to specify their religious background, but different people will see affiliation in different ways: as a freely-chosen voluntary association on the one hand, or a permanent or semi-permanent characteristic akin to nationality (which you can retain as part of your identity even if converting or moving elsewhere) on the other.

Responses on religious affiliation are heavily influenced by the wording and context of the question. For example, the 2001 Census of Population shows 72 percent of people in England and Wales, and 65 percent of those in Scotland, defined themselves as Christian. On the census form for England and Wales, religion followed the questions on country of birth and ethnicity, so that it appeared to be a supplementary question on the same topic. The wording 'What is your religion?' combined with tick-box options that listed world religions (Buddhist, Christian, Hindu, Jewish, Muslim, Sikh, Other) invited the respondent to specify a communal background rather than a current affiliation. However, the religion question used on the census form in Scotland preceded (rather than followed) those on ethnicity; was worded in a less leading way; and also offered answer categories for specific Christian denominations. Perhaps as a result, people were nearly twice as likely as in England to give their affiliation as 'none'.

By contrast, the affiliation question used in the British Social Attitudes (BSA) survey is in the context of a wide-ranging enquiry into opinion and practice, and worded 'Do you regard yourself as belonging to any particular religion?' The respondent has to interpret for themselves what 'belonging' might mean; for most it probably implies current affiliation.

Thus although half the English population have been baptised in the Church of England, fewer than a third identify themselves as Anglican. For all religions combined, the 2001 BSA survey gave a total of 58 percent in England and Wales, a stark contrast with the Census result of 79 percent (aged 18 and over) in the same year.

#### 2.3.2 Attendance

People exaggerate their attendance at religious services to a surprising degree. In a major study, Hadaway et al. (1993) compared self-reported attendance from polls with actual counts of people in church, finding substantial differences. The latest research suggests that about 22 percent of Americans attend religious services in any given week, in contrast to the 40 percent usually found from opinion polling (Hadaway and Marler 2005). A similar phenomenon has been found in Britain (Brierley 2000).

There are important lessons here for survey researchers. Such an unambiguous question is interpreted far more subtly. Hadaway and Marler point out that when Gallup asks 'Did you, yourself, happen to attend church or synagogue in the last seven days?' the respondent has to choose, symbolically, between the type of person who attends regularly and the type who does not. If being 'a churchgoer' is part of your personal identity, it may be difficult to respond on the same side as those who are unreligious or irregular in attendance. Subjective feelings of regularity are therefore being captured. How this reflects the respondent's personal religiosity is interesting but complicated: recurrent intention but failure is not quite the same as recurrent activity.

A second issue is that attendance has different meanings in different religious contexts. For example, Roman Catholics are required to attend church weekly, whereas Anglicans are not, and so it is possible to be a religious and compliant Anglican while attending church less often than a Roman Catholic. Highly religious Jewish and Muslim women may express their piety within the household rather than in public places of worship. Some places of worship have a dual character as social and religious spaces; it may also be that it is stretching a term to label a prayer-room as a public place of worship akin to a large temple or cathedral. This means that data on attendance have to be treated with care, alongside other indicators of religious practice.

## 2.3.3 Belief

Opinion polls in Britain show high levels of belief *across the board*, including reincarnation, horoscopes, clairvoyance, ghosts and so on (see, for example, the belief tables at <u>British Religion in Numbers</u>). It doesn't follow that these beliefs make any practical difference to the people claiming them. Research suggests that people who claim to believe in astrology, for example, rarely act in accordance with published advice (Spencer, 2003).

## 2.3.4 Reliability

For all measures of religion and religiosity, the reliability of people's responses over time can be surprisingly low. A comparison of waves 1 and 9 (1991 and 1999) of the British Household Panel Survey shows that the frequency distribution of religious affiliation is static; however, a remarkable 27 percent of respondents interviewed in both surveys supplied different religious labels at the two dates. Some may well have converted or transferred from having a clear affiliation to being atheist, but it is likely that many were just unclear. The line between Church of England or Church of Scotland and 'none' is fuzzy. Lim et al. call such people *liminal nones*: 'they stand halfway in and halfway out of a religious identity' (Lim et al 2010).

For some measures of religion and religiosity, the very small numbers in certain categories make the data sensitive to coding and similar errors. In Scotland, the published total of people writing in 'another religion' on the 2001 census form was about 27,000. A later, more detailed count commissioned by the Pagan Federation revealed that most of those respondents described themselves as Jedi Knights, and many of the remainder specified a Christian denomination and so belonged in a different category. Only 5,400 (or 20 percent of the number published) genuinely belonged to 'another religion', most being Pagans or Spiritualists.

Religion is often viewed as a purely private matter in Western countries. Notably, it is illegal for the government to collect data on either ethnicity or religious adherence in France. Special legislation was required in Britain before the religious affiliation question could be included on the Census in 2001. Parliament stipulated that, uniquely for the Census, the question should be voluntary, to respect individual and community sensitivity to the recording of religious identity. Indeed, there is some evidence that non-response was higher than average in areas with a substantial Jewish population.

#### 3. Major datasets for secondary analysis

The temptation for junior researchers is to devise their own questionnaire and run their own survey. This can run foul of poor sampling and questionnaire design, and also means that the rich heritage of earlier and ongoing surveys - run at great expense - is not being tapped.

The following comprise a selection of useful data sources for researchers interested in religion in Britain and Europe. The online data resources referred to here are listed after the bibliography.

## 3.1 British and Scottish Social Attitudes Surveys

The BSA is an annual representative cross-sectional survey of c. 3,000 British adults, aged 18 and over, carried out in most years since 1983 (the exceptions are 1987 and 1992). Data on the regularity of attendance and the respondent's affiliation were collected in all survey years, with data collected on religious beliefs in selected years from 1991. Past own and past parental attendance was asked in 1991, 1998 and 2008. Notably, in 2008 the BSA was the vehicle for the ISSP Religion III module, the Faith Matters UK battery of items, and the NORFACE consortium-funded extension of the ISSP module.

The Scottish Social Attitudes Survey is similar to the BSA, and has run annually since 1999, taking a sample of c. 1,600 exclusively from Scotland. A special module on religion was included in 2001. The Young People's Social Attitudes (YPSA) survey is a further extension which ran in 1994, 1998 and 2003, sampling around 600 twelve to nineteen year olds who lived in the households of BSA respondents. About half of the questions asked in the YPSA are identical to those asked of adults, allowing comparisons not only across generations but also between parents and children in the same household.

Britsocat.com provides an online tool for analysis of the British Social Attitudes data, allowing frequencies, examination of data over time, and crosstabulations by age, sex, region, religious group, social class and so forth. Answers are for nationally-representative samples of the population. This is an excellent resource: over 20,000 questions have been put to respondents at various times over the course of the 1983-2008 surveys, and this can help experienced and new researchers alike to browse what is available.

#### 3.2. British Household Panel Survey

The BHPS is a longitudinal household survey which started in 1991 and ran until 2008, when it was integrated into the UK Household Longitudinal Study, also known as *Understanding Society*. The BHPS comprised a constant panel of c. 6,500 adults aged 16 and over. It asked respondents their regularity of attendance in waves 1, 3-5, 7, 9, 11, 14, 16 and 18; affiliation in 1, 7, 9, 14, 15 and 18; religious group membership in waves 7, 9, 11, 13 and 17; religion of upbringing in 15; and whether religious belief makes a difference to their lives in waves 9, 14 and 18.

*Understanding Society,* its successor, began in 2009 and is the largest panel study in the world, covering 40,000 households or 100,000 individuals. The first wave was released in December 2010, with items on affiliation, religion of upbringing, attendance, and whether religious belief makes a difference. It will be particularly valuable because it has an ethnic minority oversample, which seeks to capture 1000 adults from the five main ethnic minority groups: Indian, Pakistani, Bangladeshi, Caribbean and African. This will provide us with good coverage of minority world religions.

# 3.3 Labour Force Survey/Annual Population Survey/Integrated Household Survey

The Integrated Household Survey (IHS) is a composite survey, collected since 2008, of core questions included on other survey vehicles. During 2008 the questions were run on relatively small surveys (the General Lifestyle Survey, Living Cost and Food Survey, Opinions Survey and English Housing Survey). In 2009 the core questions were introduced to the Labour Force Survey (LFS) and Annual Population Survey (APS), as well as the Life Opportunities Survey. Together an annual sample size of 450,000 is achieved, allowing good-quality information to be produced for the local authority level and Nomenclature of Units for Territorial Statistics (NUTS) level 3, meeting a demand for locally-specific data. Currently, the IHS has experimental status; the Office for National Statistics intends to publish the rolling IHS dataset quarterly, and to be designated a 'National Statistic' by the UK Statistics Authority in 2012.

The Annual Population Survey (APS) was recently designed to gather critical social, economic and demographic data between the censuses for local areas. It comprises some of the Quarterly Labour Force Survey (LFS) (waves 1 and 5) as well as data from the Annual Local (Area) Labour Force Survey (LLFS) boosts for England, Scotland and Wales. It aims to sample at least 510 economically-active residents in English local authorities, or 450 in London boroughs. Data are available from 2004 onwards.

The Labour Force Survey has run since 1973, when it was established to meet European Community requirements for reliable employment data. It has collected quarterly data since 1992, through a five-quarter rolling panel (namely, respondents are included for five successive quarters and the sample replenished by new replacements as respondents exit). Each sample wave comprises about 11,000 households. Together, the LFS and APS comprise the major components of the IFS. In turn, the LFS feeds into the APS. Both datasets predate the IHS.

Regarding religion, LFS respondents have, since 2004, been asked, 'What is your religion even if you are not currently practicing?' The answers are coded as Christian, Buddhist, Hindu, Jewish, Muslim, Sikh, any other religion, and no religion at all. It is asked of proxies as well as respondents in person.

The LFS/APS/IHS data will allow collection of data on religion over time at the level of local authorities. Currently, microdata are available for downloading and online analysis from the Economic and Social Data Service.

## 3.4 Citizenship Survey

The Citizenship Survey (known at first as the Home Office Citizenship Survey or HOCS until taken over by the Department for Communities and Local Government) ran biannually from 2001 to 2011 before being cancelled on efficiency grounds. Its aim was to gather evidence on community cohesion, race and faith, volunteering, and civic renewal. The surveys had a relatively large sample of 15,000, including ethnic minority 'booster' samples of 5000, and the 2003 survey also sampled children.

The 2001 and 2003 studies included items on religious affiliation; whether the Government and employers were doing enough to protect religious rights; whether the respondent needed to take holidays on religious holy days and whether their employer provided for this; availability of prayer facilities at work; whether religious leaders were available as a source of advice and information for the upbringing of children; whether religion was an important aspect of personal identity; and membership of clubs, including religious organisations.

The 2005 study covered perceptions of religious prejudice in Britain compared with five years ago; participation in clubs, including religious organisations; perceptions of religious discrimination experienced by the respondent and members of other religious groups in the abstract; current religious affiliation and whether the respondent was currently practising.

The 2007 and 2009 studies covered perceptions of racial and religious harassment; perceptions of discrimination due to religion in accessing employment; activity in religious clubs and societies; religious discrimination in Britain compared with five years ago; perceived recipients of discrimination; Government protection of religious groups; affiliation, current practice, and ability to practise freely in Britain; effect of religion on residential choice, employment choice, choice of friendships, and schooling of children; perceptions of extent of religious and ethnic mixing; perceptions of whether Britishness and distinct religious and cultural identities are compatible; and importance of religion to the respondent's sense of self.

A final Citizenship Survey will be conducted in 2011.

#### 3.5 British Election Studies

The British Election Studies have run since 1964, sometimes involving a complex set of panel studies in the lead up and following particular elections. They form one of the longest-running social surveys in Britain, with religion variables available for most election-years, specifically own religion (all except February 1974), church attendance or level of current practice (all except February 1974, 2001 and 2005), parental religious affiliation (1964, 1966), religion of upbringing (1992, 1997), practice as a child (1974, 1979), whether

religion comprised one of two given reasons for not having voted (1987, 1992), self-assessed religiosity (1997), attitudes to separate religious education for immigrant children (1997), attitudes to the funding of religious schools (1997), and attitudes to the status of blasphemy laws (1997). The 2010 study captured religious adherence, and also included an oversample of ethnic minority members available for analysis, with items on importance of religion, frequency of attendance at places of worship, frequency of prayer and other private religious activity, and religious tradition for Muslim respondents.

## 3.6. European Social Survey

The European Social Survey (ESS) covers over 30 nations. The project is a multinational partnership in which the standards of design, execution and cross-national comparability are exceptionally high. Four waves are currently available, from 2002, 2004, 2006 and 2008, and it is intended to carry on collecting data every two years. Data are collected using personal interviews supplemented by short self-completion questionnaires. A great deal of expert attention has been devoted to sampling strategy, translation, methods, and quality assurance, with the highest possible level of cross-national comparability

The ESS provides better coverage of religion than most general purpose surveys, covering the three main areas of affiliation (current or past identification), practice (attendance at religious services, prayer, organisational participation and support) and belief (self-rated religiosity, importance of religion). While the questions on how religious the respondent is and how important religion is to him/her do not measure beliefs directly, it seems likely that there is a strong association between these variables and strength of religious belief.

# 3.7 European Values Study and World Values Survey

The European Values Study grew out of studies carried out in ten countries in Western Europe in 1981, and forms an important and high-quality survey of socio-political attitudes and values since conducted in 1990, 1999, and 2008. It provides insights into the ideas, beliefs, preferences, attitudes, values and opinions of citizens all over Europe, and is a unique investigation into how Europeans think about life, family, work, religion, politics and society. The fourth wave in 2008/2009 covered 46 European countries, from Ireland to Azerbaijan and from Portugal to Norway. In total, about 70,000 people in Europe were interviewed. Data are available for download via the ZACAT portal.

In 1981 the Study's scope was extended to other parts of the world, to investigate change in beliefs, values and attitudes in relation to political, social and economic circumstances. This larger set of surveys is known collectively as the World Values Survey (WVS). Five waves

have been conducted, in 1981-1982, 1990-1991, 1995-1996, 1999-2001, and 2005-2006. The next wave is planned for 2010-2011.

Data collection involves stratified, multistage random samples of adults (aged 18 and over). National sample sizes are typically about 1,000, though they have ranged from 300 to 4,000, depending on the country.

Questions on the survey forms typically include current and past religious affiliation; religious upbringing; frequency of attendance at services; self-perception as a religious person; belief in God, the existence of a soul, hell, or reincarnation; and the importance of religion and God in the respondent's life. Other topics that have been covered at least occasionally include the social, moral and spiritual contribution of churches; the importance of having a religious ceremony to mark birth, marriage and death; the respondent's image of God; prayer; confidence in churches; formal belonging to, and voluntary work for, a religious organisation; the meaning of life; belief in lucky charms and horoscopes; and the role of religion in politics.

The strength of the WVS is its broad international coverage. For many countries, it provides the only readily accessible data on attitudes and values, and the surveys generally include a good set of religious items. However, the samples are relatively small, the quality of the sampling is variable, and data collection has often been done by different groups in different ways in different years, making comparisons difficult. Even for individual countries, differences in sampling, data collection, and question format and layout between survey waves reduce our ability to measure change over time.

## 3.8 International Social Survey Programme

The International Social Survey Programme (ISSP) is a cross-national collaborative programme in which the partner agencies adopt common modules on special topics for incorporation into regular national surveys. The data are then available for international comparative work. It is attractive because it enables comparisons with regions and countries outside of Europe: the USA, Canada, Australia and New Zealand, the Philippines, Japan, South Korea and Taiwan. The modules have concerned the role of government, social inequality, family, changing gender roles, and leisure; religion was the focus in 1991, 1998 and 2008. The religion modules provide important comparative and trend data, having been designed to test the effect of religious beliefs and involvement on sociopolitical attitudes and behaviours, for example those relating to political orientation, cohabitation, marriage and divorce, immigration, social welfare policies, and sexual morality. The most recent module retains many of the questions previously used while adding new items to explore areas that have become especially important in recent years: ethical issues around the beginning and end of life, religious minorities, faith schools, separation of church and state, religious involvement in the public sphere, responses to

extremism, and so on. Again, it is available for download via the ZACAT portal, although in Britain the ISSP modules are run as part of the British Social Attitudes survey and are also available therein.

#### 3.9 Census

The details of the questions asked on the 2001 Census of Population were set out in 2.3.1.

In terms of available data, there are standard output tables showing the values for particular variables in any selected area, such as housing tenure; ethnicity; occupational status; educational status; age profile; proportion of the population married, divorced and so on; health status; and so on. These are available at national and regional level down to the granularity of 'census output areas' with a minimum population of 40 households or 100 residents, and a rough average of 125 households or 300 residents. The area-level data allow 'ecological' analysis – where variables of interest at the area level can be predicted by a combination of others. Such data can be downloaded from Neighbourhood Statistics or CASweb, with geographical boundary data additionally available at CASweb.

Samples of Anonymised Records (SARs) are also released. These samples make it possible to perform multivariate analyses on the census microdata (so called because they consist of individual or household records rather than summary statistics). There are various versions available:

- (i) The individual licensed SAR, a 3 per cent sample of individuals in the UK with 1.84 million records. Each individual record provides information on their age, sex, the region they live in, educational background, employment status, ethnicity, country of birth, and housing situation alongside religious affiliation. The size of the sample means that it's possible to examine minority groups in much greater detail.
- (ii) The Individual Controlled Access Microdata Sample (I-CAMS) provides a more detailed version of the individual SAR and can be accessed, following approval of a research proposal, in a secure environment at the Office for National Statistics (ONS).
- (iii) There is also a Special Licence Household SAR (2001 H-SAR) released for England and Wales only, with a 1 % file providing details on individuals and families in the same household. Access can be obtained through an ONS Special Licence. Users have to agree to protect the data during their research to maintain confidentiality.
- (iv) The Household Controlled Access Microdata Sample (Household CAMS) provides more substantial detail on all variables in each file, and also includes

- data for Scotland and Northern Ireland. The file can be accessed in a secure environment at the ONS, again following approval of a research proposal.
- (v) Finally, the Small Area Microdata file (2001 SAM) is a 5% sample of individuals in the UK, with 2.96 million cases. The local authority is also identified for England and Wales respondents, council area for Scottish respondents, and parliamentary constituencies for Northern Ireland residents. However, because of the greater geographical detail, the individual-level detail is less than in the individual 3% SAR again to protect anonymity.

#### 4. Conclusion

For researchers of religion, and other social scientists interested in the effect of religiosity, there is a wealth of resources available - the product of years of effort and sizeable public and private investments. Furthermore, the data are increasingly accessible through online tools and resources. The data yet unexplored could provide material for several research careers, never mind books.

Survey methods remain an important route to understanding how society works, and provide a powerful and transferable training in method which opens the door to other complex approaches (such as experimental and simulation methods, and analysis of commercial or digital data). The *Understanding Society* programme will also provide unparalleled richness. There is a public appetite for comprehensible data analysis and data visualisation. In the sociology of religion field, the quality and quantity of religious data from social surveys has grown enormously, even as survey methods have experienced increased challenge, providing valuable evidence regarding phenomena which may otherwise be largely hidden and misunderstood.

# Bibliography and data resources

Ayres, Ian, Supercrunchers: Why Thinking-By-Numbers is the New Way to be Smart (New York, 2007)

Brierley, Peter, The Tide is Running Out: What the English Church Attendance Survey Reveals (London, 2000)

Chaves, Mark, Ordaining women: Culture and conflict in religious organizations (Cambridge, MA, 1997)

Clayton, R. R. '5-D or 1?' Journal for the Scientific Study of Religion (1971), vol. 10, pp. 37-40

De Vaus, David, Surveys in Social Research (London, 2002)

Glock, Charles Y., 'On the Study of Religious Commitment', Review of Recent Research on Religion and Character Formation (research supplement to Religious Education, July-August 1962), pp. 98-110

Goldacre, Ben, Bad Science (London, 2008)

Hadaway, C. Kirk and Penny L. Marler, 'How many Americans Attend Worship Each Week? An Alternative Approach to Measurement', *Journal for the Scientific Study of Religion* (2005), 44/3, pp. 307-322

Hadaway, C. Kirk, Penny L. Marler and Mark Chaves, 'What the Polls Don't Show: A Closer Look at US Church Attendance', *American Sociological Review* (1993), vol. 58, pp. 741-752

Lenski, Gerhard, The Religious Factor (New York, 1961)

Lim, Chaeyoon, Carol Ann MacGregor, and Robert D. Putnam, 'Secular and Liminal: Discovering Heterogeneity Among Religious Nones', *Journal for the Scientific Study of Religion* (2010), 49/4, pp. 596–618

Spencer, Wayne, 'Are the Stars Coming Out? Secularization and the Future of Astrology in the West', in Grace Davie, Paul Heelas and Linda Woodhead (eds.), *Predicting Religion: Christian, Secular and Alternative Futures* (Aldershot, 2003), pp. 214-228

Voas, David, 'The rise and fall of fuzzy fidelity in Europe', European Sociological Review (2009), 25/2, pp. 155-68

Voas, David, 'Surveys of Behaviour, Beliefs and Affiliation', in *Handbook of the Sociology of Religion*, ed. James Beckford and N. Jay Demerath (Thousand Oaks, CA, 2007), pp. 128-150

<u>BESIS</u>: an online tool for searching of questionnaires, downloading of tables and so on, currently for the 1964-2005 British Election Studies.

British Election Study 2009-10

<u>Britsocat</u>: an online tool for searching of questionnaires and exploration of data, currently for the 1983-2008 British Social Attitudes surveys.

**CASweb**: Census Area Statistics online resource.

<u>Economic & Social Data Service (ESDS)</u>: data archive and support service hosting a large quantity of datasets, documentation, and teaching materials.

**European Social Survey** 

**European Values Study** 

<u>Neighbourhood Statistics</u>: online resource disseminating official statistics to the general public.

Sars@census.ac.uk

**World Values Survey** 

**ZACAT** portal