**Godalming College**

Booklet Checked by: \_\_\_\_\_\_\_\_\_\_\_\_\_

Grade: U/S 1 2 3

Comment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Sociology Department**

**A LEVEL ADDITIONAL BOOKLET**

Statistics



**WORKBOOK - RESEARCH METHODS**

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| Name: | Set: | Group: |

**What the specification says**

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| **AQA Specification**  **4.1.2 Methods in Context**  Students must be able to apply sociological research methods to the study of education**.**  **4.1.3 and 4.3.2 Theory and Methods**  Students must examine the following areas:  …   * sources of data, including ... official statistics * the distinction between primary and secondary data, and between quantitative and qualitative data * the relationship between positivism, interpretivism and sociological methods; the nature of ‘social facts’ * the theoretical, practical and ethical considerations influencing … choice of method(s) and the conduct of research   …   * the relationship between theory and methods * the relationship between Sociology and social policy. |

**STATISTICS**

Statistics are a form of numerical data where the objective is to quantify some aspect(s) of an individual, group or society. Statistics provide a wide variety of data that would normally be inaccessible to the sociologist (due to the cost of collection, for example). We can note two main sources of statistical data, although we shall focus predominantly on official statistics in this booklet:

**1. Official statistics** This refers to numerical data collected and published by Governments (for example, crime or marriage statistics).

**Varieties of Official Statistics**

1. **Statistics gathered by government agencies in the course of their work –** e.g., demographic statistics from the registration of births, marriages (and divorces) and deaths, crime statistics from the criminal justice system, exam results, school league tables, etc
2. **Specific surveys –** most obviously the 10 yearly (decennial) national census, but also the Crime Survey for England and Wales, etc.

Many of these sources are easily available online. See:

* <https://www.ons.gov.uk/>
* <http://www.crimesurvey.co.uk/>

Increasingly, with the growth of so-called “***Big Data***”, and the costs of large scale surveys, governments are increasingly reluctant to use survey methods when information can be gathered from the analysis of existing gathered data. For example, the **General Household Survey** was ended in 2007, and replaced by the **General Lifestyle Survey**, itself ended in 2012 as it merged with the **Family Resources Survey**. Recent discussions have even questioned the need for the decennial census.

Among gathered statistics we can also distinguish between **hard** and **soft** varieties:

1. **Hard official statistics** are statistics which cannot be manipulated or changed, such as, statistics on births, marriages and deaths. These are collected and published by the Office for National Statistics.
2. **Soft official statistics** are statistics which can be manipulated or changed based on the way categories are created. These include statistics on crime, poverty and unemployment e.g. in the 1980s and 1990s the government changed the method to measure unemployment over 20 times.

**2. Non-official statistics –** Thisrefers to numerical data collected and published by a variety of public and private organisations (the **Joseph** **Rowntree Foundation**, for example, publishes statistics on poverty whilst the **Sutton Trust** focuses on educational issues). These statistics can cover a wide range of issues. Much of this data is collected using surveys e.g. market research.

Again many of these are available. See, for example:

* <https://www.jrf.org.uk/society>
* <http://www.suttontrust.com/research/>

** Activity:** Looking at the range of statistics below determine whether you think they are Official/Non Official and then hard/soft (for official statistics only).

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| **Statistical data** | **Official/ Non official** | **Hard/Soft** |
| The marriage rate in the UK in 2000 was 5.1 per 1000 of the population. This compares to 7.1 per 1000 of the population in 1981. |  |  |
| In households containing dependent children the average number of children declined significantly from 1960 to 1980 but has been relatively stable at 1.8 since 1981. |  |  |
| On Monday 30th November Tescos had 1,175,000 baskets cheaper at the checkout, as compared to Asda which had 734,500. |  |  |
| In 1961 the average age of marriage in England and Wales was 25.6 years for men and 23.1 years for women. By 2000 this had risen to 30.5 and 28.2 years respectively. |  |  |

**Some advantages of using statistics**

A number of advantages exist when it comes to using official statistics. These include:

* Official statistics are frequently the only available source of data. For example, **Emile Durkheim**, in his study of ***Suicide*** (1897), used official statistics drawn from coroners' reports from different societies to establish that suicide rates varied within and between societies.
* They are readily available and cheap to use. Also, as not much time is spent on primary research, analysis will be fairly quick so the results are fairly up to date. The ready availability of official statistics means the researcher does not have to spend time and money collecting his/her own information.
* Official statistics are often comprehensive in coverage, using either large samples – therefore increasing **representativeness** – or the whole population.
* They often cover a **long time-span**, and therefore allow the examination of trends over time, such as on levels of educational qualifications or crime.
* They can be used for ‘**before and after’** studies, for example, to judge the effect of government policies on reducing inequalities in health or educational achievement.
* Statistics are ideal for the **comparative method** in sociology, because they allow intergroup and international comparisons to be made. One might want to look at working-class and middle-class family sizes, or educational levels, divorce and crime rates in different countries.
* They can provide useful **background material** or a theoretical **context** when sociological researchers are deciding what issues should be studied, and can help in identifying a **hypothesis** for further investigation.
* They avoid any ethical issues, as they are publicly available, and unlikely to breach personal confidences or cause harm to individuals

**Some disadvantages of using statistics**

Many sociologists would argue any statistics, especially official statistics, can’t be taken at face value as they are **socially constructed**, that is, reflecting the ideas of those constructing the statistics. The following criticisms are often levelled at official statistics:

* Official statistics are collected for administrative purposes rather than for purposes of sociological research – so the definitions and classifications adopted may be **unsuitable** for that research.
* As definitions and measurements change so the longer term **reliability** of statistics may be questioned. Government debates as to whether migration statistics should include or exclude foreign students would alter the ability to look at long term trends, and examination reforms will make it difficult to see longer term trends here.
* Researchers may not be able to **verify** the statistics and methods used, as they may be simply presented with processed data (e.g., because of the need for confidentiality, raw census returns are unavailable until 100 years after the data has been gathered – the last set of census returns available are from 1911). This further challenges reliability.
* Official statistics are produced by the state. This means statistics made public may be **‘massaged’** – be not completely accurate or not provide a completed picture – to avoid political embarrassment to the government. For instance, governments might collect statistics on welfare claimants rather than tax evaders.
* **Marxists** and other **conflict theorists** would stress the **ideological** nature of official statistics which will tend to serve the needs of the powerful. Statistical bias may not even be intentional but simply reflect inequality in society.
* Interpretivists argue that statistics cannot be **objective facts** but simply remain social constructions: the product of a process of interpretation and decision-making by those with authority.
* Interpretivists argue that such statistics may **lack validity** because they only provide an overview or snapshot of an issue, rather than the meaning behind the statistics. They also may suffer from a “dark” or “hidden” figure’, whereby some data is missing e.g. in 2011 the Crime Survey found only 38% of crimes revealed by the survey were actually reported to the police. The ‘dark figure’ is the missing 62% of crimes not reported to the police.

**Example 1: Crime statistics**

As we have established, many sociologists use official statistics in their research. There are many reasons why using official statistics can be useful: they are cheap, readily available, and provide detailed quantitative data which is **reliable** and often **representative**. Official statistics also provide data for the whole country. This said, official statistics such as crime statistics have to be treated very carefully by sociologists, because they do not show the full extent of crime in society. This is illustrated in the short *YouTube* video entitled ‘***Crime Statistics & the Dark Figure’***.

**Activity :** Watch the video ‘***Crime Statistics & the Dark Figure’*** (<https://www.youtube.com/watch?v=jzdTiM5wS_c>) and answer the questions below:

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| 1. What does it mean to say that statistics are ‘social constructions’? 2. What is necessary for crimes to be recorded as ‘crimes’ and entered into the statistics? 3. Why might people be reluctant to report crime? 4. What is the term for the ‘unknown figure’ of crime? 5. Can you think of any way of getting more accurate measures of crime (e.g. surveying victims of crime, self-reporting, etc)? |

**Example 2: Suicide Statistics**

The topic of suicide has received a disproportionate amount of attention from sociologists. The first sociologist to write on suicide was **Emile Durkheim** (1897) in his book *Suicide: A Study in Sociology*. Durkheim took advantage of the availability of suicide statistics and believed that they could be used to find the sociological causes of suicide. Durkheim believed he had found a causal relationships between two **social facts,** the level of social isolation and the rate of suicide – the higher the level of social isolation, the greater the likelihood of suicide. Suicide statistics could also be used for a comparative method, making it possible to compare the suicide rates of different countries. For instance, he found that suicide was more common in Protestant countries than Catholic countries,

**Atkinson** (1978) and other interpretivists are wary of using suicide statistics as a **valid** measure of suicide. This is because they are simply social constructions reflecting the behaviours of coroners, doctors, relatives etc. and their definition of suicide. Coroners, for example, have a picture of a typical suicide and a typical suicide victim. Road deaths are rarely seen as suicides whereas deaths by drowning, hanging, gassing and drugs overdose are more likely to be interpreted as suicides. The typical suicide victim is often seen as lonely, friendless, isolated individual with few family ties. Marxists are also critical of how official statistics serve capitalism. John Irvine argues that statistics can be used to help maintain the power of the Bourgeoisie. To summarize, suicide statistics they tell us more about the decision-making processes of the living than the intentions of the dead and the real number of statistics.

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| **QUESTIONS**   1. How does Durkheim’s study illustrate Positivism? 2. How does Atkinson’s study illustrate Interpretivist ideas? |

**Exam Practice:**

Answers on this topic should try to draw from the range of statistics with which you will become familiar with as examples – e.g.,

* **Family**
  + ***Gathered statistics*** including - birth, marriage, divorce, death, infant mortality statistics..
  + ***Government survey material*** including Census data, General Household Survey, Family Resources Survey, etc.
* **Education**
  + ***Gathered statistics*** including Examination statistics (including League Tables),
  + ***Surveys*** (large and small) initiated through Governments (e.g., Ofsted surveys)

And, in your second year, statistics on poverty and inequality, crime and deviance, etc.

**10 Mark Questions**

* **Outline and explain two advantages of using official statistics in sociological research [10 marks]**
* **Outline and explain two problems in using official statistics in sociological research [10 marks]**
* **Outline and explain two advantages of using official statistics in sociological research [10 marks]**
* **Outline and explain two reasons why positivists might favour the use of statistical methods in sociological research. [10 marks]**
* **Outline and explain two reasons why interpretivist sociologists might reject the use of official statistics [10 marks]**
* **Outline and explain two practical factors that might influence the use of official statistics in sociological research [10 marks]**

Essays to follow later

*An example of the sort of question that could appear for methods in context…*

**Read Item C below and answer the question that follows.**

**Item C**

**Investigating pupils’ literacy**

Pupils with poor reading and writing skills generally do badly in school. They may be embarrassed by their literacy problems, lack confidence and have low self-esteem. Such pupils are more likely to be disaffected with school and many are still having difficulties with reading and writing when they leave school.

Sociologists may study pupils’ literacy by using official statistics. Literacy is an important political issue and sociologists can access the statistics on literacy that the government collects. These statistics can be used to establish correlations with other statistical data. However, some literacy statistics are constructed from tests administered by schools and these may give a misleading picture.

**Applying material from Item C and your knowledge of research methods, evaluate the strengths and limitations of using official statistics to investigate pupils’ literacy.**

**[20 marks]**